

**SUSTAINABLE UTILIZATION OF PUBLIC PARKS IN URBAN AREAS: A CASE OF
CHRISTINA WANGARI GARDEN IN THIKA SUB-COUNTY**

GACIHI JACINTA NJAMBI
B.Sc. Surveying and Photogrammetry
University of Nairobi

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DECLARATION

I declare that this is my original work and I confirm to the best of my knowledge that this report has not been presented for an award in this or any other university for examination purposes.

Signature: _____ **Date** _____

GACIHI JACINTA NJAMBI

B63/68586/2011

(Candidate)

This research project makes a part of the requirement for the award of the degree of Masters of Arts in Urban and Regional Planning, University of Nairobi.

Signature: _____ **Date** _____

MRS. MARGARET NG'AYU

(Supervisor)

DEDICATION

To my dearest mother, Salome Wambui Gacihi and my two adopted children George Nduati and Beth Wambui for giving me a reason to live and work hard.

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I take this opportunity to thank all those who made this Planning Research Project a success:

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GLOSSARY OF ACRONYMS

NCBDA	Nairobi Central Business District Association
CBD	Central Business District
UN	United Nations
MCT	Municipal Council of Thika
KNBS	Kenya National Bureau of Statistics
CCTV	Closed Circuit Television
NEMA	National Environment Management Authority
USAID	United States of America Agency for International Development
CBO	Community Based Organizations
NGO	Non-Governmental Organization
UNEP	United Nations Environmental Program
PHA	Public Health Act
PPA	Physical Planning Act
EMCA	Environmental Management Coordination Act
WCS	Wildlife Conservation Society
GIS	Geographical Information Systems
CCN	City County of Nairobi
PPP	Public Private Partnership
EIA	Environmental Impact Assessment
LASDAP	Local Authority Service Delivery Action Plan
LATF	Local Authority Transfer Fund
SPSS	Statistical Package for Social Scientists
UON	University of Nairobi

ABSTRACT

Sustainably utilized and managed Public Parks in Urban areas are significant due to their historic, social, environmental, economical, and aesthetic functions. Thika Sub-County is highly populated with a population of 179,885 and a 4.7% annual growth rate but has only about 7.5 acres of Public Parks in the entire Sub-County. The demand for Public Parks increases as the population increases. Urban development policies afford sustainable utilization of Urban Public parks but this seems disregarded in Thika. It is from this gap that this study is born; to examine sustainable utilization of Public Parks in Thika; a case study of Christina Wangari Garden which is 1.5 acre and located in the Central Business District (CBD) of Thika.

The objectives of this study is to examining type, use and current level of utilization, factors that influence and constrain utilization of Public Parks, existing institutional, policy and legal provisions that guide sustainable utilization. The study employed a scientific methodology to ensure data required was collected effectively. Literature review was used to collect secondary data that was designed to complement objectives of the research. Primary data was collected during site visits where observations, questionnaires, interviews, mapping, photography and focused group discussion methods were applied. The data collected was analyzed and presented in a booklet form.

It was established that Christina Wangari Garden attracts about 2500 visitors daily who include mostly the low income population, students and youths who visit for relaxation, meeting, socializing, visiting smoking zone, public washroom, for commercial activities and engaging with natural environment. Comfort, good state, affordability, centrality/proximity, landmark and security are among the factors that attracted visitors in the park. The park suffers a number of constrains such as congestion, problematic design, lack of vital facilities, inadequate facilities, decay of some facilities, littering, misuse of the park by visitors, insecurity, poor management and poor maintenance/improvement activities. Intervention such as; acquiring land to balance demand and supply for Public Parks, enhancing land banking for future demands, strengthening stake-holding, effective maintenance of Public Parks, supporting adequate funding, professional synergy in parks management, and redesigning of Christina Wangari Garden were recommended to guarantee a sustainably utilized Public Park.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

According to Springgate (2001), a “Public Park” means a public playground, public recreation center or area, and other public areas, created, established, designated, maintained, provided or set aside by the town authority, for the purposes of public rest, play, recreation, enjoyment or assembly, and all buildings, facilities and structures located thereon or therein. If a Public Park is located in an urban area, it is referred to as “an urban Public Park”. Ward-Perkins, (1974) noted that common features of urban Public Parks include playgrounds, gardens, hiking, running and fitness trails or paths, bridle paths, sports field and courts, public restrooms, boat ramps and/or picnic facilities, depending on the budget and natural features available. According to Owens, (1991) ,sustainable utilization of Public Parks can be defined as, maintenance and perpetuation of parks (present and potential) uses, modifications, and developments of its environment and living resources that can cater for the present and future generations.

Historically, urban parks emerged from public spaces that were used as grazing land in cities or towns. Before the modern urbanism, forum was mainly the urban park and public place. It was a gathering place of great social significance, and often the scene of diverse activities, including political discussions and debates, rendezvous, meetings, et cetera. In that case, it supplemented the function of a conciliabulum. It was also a marketplace (Judith A 1983).Most scholars classify Urban public parks according to their location, function and size. Heerwagen, (1990) established these four main types of parks; Neighbourhood Parks, Community Parks, City Wide Parks and Parkettes.

Maina (2011) observed that most Public Parks in Kenya have not been utilized effectively. Today, in most parts of Africa and particularly Kenya, the existing public parks were designed during the colonial period. He also noted that such Public Parks were designed in 1940s when most Kenyan towns had very low population, since then the population has increased by over 500% while the condition and the size of Public Parks have barely improved or changed. Maina (2011) added that since public parks do not have economic benefit at short run, they are hardly funded by most municipal councils in Kenya. Public parks are perceived as a waste of valuable

land that can be utilized for real estate or business that can increase revenue. The urban community perceives Public Parks as a place for relaxation of the desperate people or those who have nothing else to do. That explains why in most parks one finds street families and the homeless sleeping. Some parks are also encroached by business activities or are used to dispose solid waste. Public Parks help in creation of Social capital when people interact with one another and build community from a social perspective. (Yuen, 1995). A well-planned park system contributes to healthier citizens by ensuring people are more active therefore reducing diseases such as obesity and chronic diseases such as type II diabetes and heart ailments. Public parks such as wildlife habitats and unique landforms facilitate preservation and protection of Natural capital (Yuen, 1995). Parks preserve a lasting natural legacy that enhances a community's awareness and appreciation of the natural world (Inskip, Leonard 1960). Public Parks provide positive economic benefits, through increasing property values, increase revenues and also attract commercial activities, (Inskip, Leonard 1960). Finally, according to Goodman et al (1968), Parks improve the image and character of a community as well as enrich its history. They revitalize individuals and communities.

Poor management and maintenance of Public Parks, inadequate facilities or lack of facilities for group of users such as the physically challenged, insecurity, poor accessibility or location in the city, lack of awareness, congestion, environmental degradation and lack of beautiful attractive features are the main constrains to utilization of Public Parks according to Maina (2011). In Kenya, the physical planning handbook (2008) which is the guide for urban planners requires a Public Park to be located at the central part where the town users can access it with minimum difficulties. It also provides that for a population of 10,000 persons one or two hectares size Public Park or garden can be provided. A public park in one hectare piece of land requires a maximum of 50 users at every given time to control over use. Facilities in public parks and garden should be friendly to all users including the disabled, children and the elderly. They should provide shades, seats, toilets, kiosk, trash containers, and water points and so on, depending on the interest of the users. The management of parks should ensure proper maintenance; repair and control the use. Most of these requirements seem not to have been implemented in the country. In Kenya there seems to be a huge gap between the policy

requirement of public goods (such as public parks, public schools and so on) and what is provided on the ground by the County government and other government agencies.

Several institutions should influence sustainable utilization of Christina Wangari garden in Thika including: Thika Sub-county, NEMA, Thika Town business community among others while the legislations that affect the utilization of parks include: Physical planning Act CAP 286, Environmental Management and Coordination Act CAP (No. 8 of 1999), Urban Areas and Cities Act 2010, Public Health Act Cap 242 among others. Urban Planners have come up with different approaches to facilitate sustainable utilization of urban Public Parks especially those that are located at the town's CBD. The most famous approach is place keeping. The concept of 'place-keeping' is the long-term management of places to ensure that the social, environmental and economic quality and benefits can be enjoyed by future generations. 'Place-keeping' encompasses aspects of long-term open space management (Wild et al., 2008). This includes maintenance, partnerships, funding and evaluation. It means retaining, maintaining and enhancing the qualities and benefits – social, environmental and economic – of places through long-term management. Place-keeping is underpinned by the broader concept of sustainability: both have the aims of creating places that people want to spend time in now and in the future (Wild et al., 2008). This inherently involves the provision of places that support the needs and aspirations of present and future generations (UN, 2002).

In conclusion, the tradition and modern urban community appreciate the need of Public Parks especially in urban areas though it is clear that over time the manner of utilization of Public Parks have been changing over time with changing lifestyle of urban population. This therefore indicates that the type of uses of Public Parks is likely to change in future. In Kenya, parks have been abandoned and planning approaches should be applied to revitalize Public Parks in urban areas so that the perception of urban population on Public Parks can change positively. Finally, it can be noted that there exists a huge gap between the policy and legislations requirements and their implementation in urban areas, this setback has caused a secondary gap between the benefits afforded by the community and the would be benefits from a sustainable and effectively utilized and managed Public Park. In Kenya, the local community especially the middle and high

income population barely benefit from Public Parks while in developed Nation such as England all income groups benefits a lot from Public Parks.

1.2 Statement of the Problem

Urban Public Parks are significant due to their social, environmental, economical, historic and aesthetic functions. In order to achieve these functions effectively, planning, management and utilization of any given park should be enhanced in a very professional manner. Thika town is the 6th largest town in Kenya in terms of population with day time population estimated as 179,885 persons (KNBS 2012) and its projected this population will raise to 195,706 persons by 2015. It also has a high rate of population growth of about 4.7% per year necessitating needs of effective and sustainable utilization of parks in the town. The prevailing conditions of Public Parks in Thika town raise a critical question in regard to their provision and utilization particularly due to its location from the capital city of Kenya, Nairobi. The town has two public gardens in its CBD; Christina Wangari Garden and Mama Ngina garden. Christina Wangari garden which is a sub-county Public Park was designed during the colonial period when the town accommodated less than 10,000 persons. The population of the town has increased by over 30 times while the size of the garden in the CBD remains unchanged.

In Thika town, Public Parks located in the central business district suffer from a number of challenges that range from social, economic and physical. Christina Wangari garden suffers a number of challenges such as high number users than the carrying capacity of park. This can be categorized by presence of very high number of users crowded in the park and the bare land observed on the park lawn. These results to environmental degradation and also makes it hard for maintenance and improvement activities. Thika town for example is a district town and requires a huge park of about 100 acres but only less than 10 acres is provided. Weak capacity of Thika Sub-county in terms of funds and expertise responsible for management is another problem that the Public Park is facing. The interaction with Thika sub-county officials responsible for management of public spaces in Thika during the reconnaissance visit noted the budgetary allocation for management of Public Parks in Thika town is about 25% of the required standards. This problem can be traced back to lack of professional approach in administration of

the park. For example it was observed that the proposal that is submitted by the park management officers to Thika Sub-County budgetary committee is below average since it only concentrates on simple physical maintenance but does not look at the problems of social or economic scope. There is no synergy among different experts in the Sub-County, for example the Sub-County physical planner does not have any input in the management of the parks. Lack of a policy framework for management of Public Parks in Thika as a result of weak professional approach. Underfunding and weak professional approach is characterized by poor conditions of Public Park and abandonment of Public places such as Mugumo garden that is so rich in cultural and historical concept of freedom from colonial government in Kenya.

Due to poor conditions of Public Parks in Thika and in other parts of the country, they have been perceived as a waste of potential land for development of business premises. Public parks are mainly utilized by the street families/homeless and low income urban population. The low income population visits the park due to desperation since they can't afford to pay any cash to visit a private park. Middle income and high income are more selective and therefore consider aspects such as comfort thus prefer visiting Private Park such as Blue Post in Thika that is more comfortable and secure. Due to the capitalized nature of Kenya people, the middle and high income urban population, the local politicians and even the official from government institution view Public Parks as wastage of potential land. This has resulted to encroachment of Public Parks by business activities. Christina Wangari garden is occupied by a number of business persons while other parks such as Moi garden that was located in the CBD of Thika town was totally encroached and converted to private land where commercial premises were built. The government or community institutions entitled in management and protection of Public Parks do not do enough in protecting the parks since their perception about the significant of public park is negative therefore consider it less important than other competing land uses such as commercial. Negative perception has generally resulted to deliberate space use conflict and the observable poor condition of the public park.

Poor utilization and management is a major challenge facing Public Parks in Thika. A part of the park is utilized as a zone for temporal collection of solid waste that is generated in the town. The make the park un-conducive for the users due to the odour smell. Due to weak supervision the

users are involved in vices in the park, for example, the street children usually do not use the available toilet for long calls since it is paid for or it is closed at night .Access of Christina Wangari garden at night and at the day time by street children is a security issue characterized by high cases of theft at day time and robbery at night.

The design of Public Park is very significant in attracting users in the park. The design of the park which is only 1.5 acres attracts over 2,200 passersby every hour while the width of walking paths is one meter, resulting to congestion, disruption of calm environment of the park and conflict between hawkers and passersby along the path. The neighbouring roads drain the surface run off in to the park. Vital facilities such as trash containers are lacking in the park while facilities for the physically challenged, children and the elderly are not incorporated in the design. Facilities such as seats, security light and water points are poorly distributed or their demands does not match the supply while the other facilities are poorly located such as gates, smoking zone and public toilets. In Kenya, Policy and Legislations exist that regulate and guide planning and utilization of Public Parks in the country. For example, Physical Planning Handbook, Vision 2030 and Nairobi Metro Plan explain the planning standard and need for managing public parks sustainability but it is unfortunate that the policies have not been implemented in Thika town.

Two main gaps can be noted; there is a huge gap between the policy and the legislative requirement and the conditions of Public Parks in Thika town raising questions on level of capacity of Thika Sub-County on implementation and enforcement of international, national and local planning guidelines. There is also a big gap between the benefits that can be yielded from a sustainably utilized and managed public park and Christina Wangari garden which seems not to be reaping the benefits outlined above, due to the challenges it faces, the opportunity cost it suffers is the background against which the study sets out to examine utilization of public parks within the study area. This Kind of study can help in planning and enhancing effective and sustainable utilization of Christina Wangari garden if their recommendations are fully implemented as well as other Public Parks in urban areas.

1.3 Research Questions

- i. What are the types and current uses and level of utilization of Christina Wangari Garden?
- ii. What are the factors that influence the utilization of Christina Wangari Garden?
- iii. What are the constraints in effective utilization of the Christina Wangari Garden?
- iv. What are the existing institutional, policy and legislative provisions that guide sustainable utilization of public parks in Municipal council of Thika?
- v. What measures should be explored to ensure sustainable utilization of Christina Wangari Garden?

1.4 Research Objectives

- i. To investigate the type and current use and level of utilization of Christina Wangari Garden.
- ii. To find out the factors that influences the utilization of Christina Wangari Garden.
- iii. To establish the constraints in effective utilization of the Christina Wangari Garden.
- iv. To examine the existing institutional, policy and legislative provisions that guide sustainable utilization of public parks in Municipal council of Thika.
- v. To propose measures that should be applied to ensure sustainable utilization of Christina Wangari Garden.

1.5 Study assumptions

- i. Public parks in Thika Town will be mostly preferred due to affordability.
- ii. The population of Thika town will continue growing due to in migration and natural growth thus there will be increasing need for urban Public Park.

- iii. Due to enhanced connectivity between Thika and Nairobi, the trickle down of functions from Nairobi to Thika will increase. This will equally propel the demand for Public Parks in Thika town.
- iv. There will be more commitment and political will towards improvement of Thika town due to devolution of power to county government and through the implementation of cities and urban areas act 2010.

1.6 Study Scope

The data scope will be guided by research objectives. Data will cover the current uses and level of utilization of Christina Wangari Garden. It will also examine factors influencing utilization of the garden and investigate constrains and opportunities associated with the garden. It will finally address the policy, legal and institutional framework that guides the development, utilization and management of the garden. This data will help in proposing possible interventions that may be applied to ensure effective and sustainable utilization of the parks. By implementing these recommendations that will be generated from the study, this may improve the spirit of public participation as well as their sense of enjoyment; the garden will become their most preferable leisure zone to realize optimal benefits of a park.

The geographical scope will cover Christina Wangari Garden that is located in Central Business District of Thika town as mapped by Thika sub-county. It's defined by Commercial Street, Uhuru Street, Kwame Nkrumah road and Kenyatta highway. It will also include the busy commercial activities that are around the park. Basically it will cover office, business and other land use activities located 100 meters round the park. It will address physical characteristics of such areas.

1.7 Justification of the Study

Thika Town is experiencing rapid commercial, industrial, educational and residential development due to the suitable location, only 40km from Nairobi along the main corridor that connects the capital City of Kenya (Nairobi) and the Northern part of the Country and also with

Countries such as Southern Sudan and Ethiopia. The upgrading of Thika Super Highway that has increased connectivity between Nairobi and Thika has resulted to massive trickle down of activities and functions from the Nairobi City to Thika town resulting to increased population. This Sudden metamorphosis of Thika Town has resulted to increased demand of public goods such as public open spaces especially in the CBD of the Thika town which is getting more populated day after the other.

Urban Public Parks are basically preferred than private park since they are more affordable especially to the low income urban population that constitutes about 60% of urban resident in Kenya. Public Parks are generally declining in the country, which would ultimately make them uncompetitive against other land uses. Benefits associated with parks will continue to be missed especially on the backdrop of Kenya's physical development mechanisms which exhibit apparent weakness in guiding sustainable parks that will accrue huge opportunity cost. Public Parks and gardens in urban areas are vital land uses that need to be incorporated in every urban planning activity. Well managed and planned Public parks are significant for developing social capital when people meet and interact, it also contributes to healthy community, help in preservation and protection of Natural environment, contribute to economic growth, improving image, pride and character of the town community, improving the form and beauty of a town and acts as a recreational and relaxation centre for the urban community. Public Parks also attract visitors creating a huge base for interaction and socialization for all groups of people from the old to the young and also the physically challenged creating a strong social cohesion. In addition, public parks attract supportive commercial activities that increase demand for neighbouring house thus increasing the value of such property. This translates to increased commercial activities, which increases revenues for the counties and also creates employment in the area. These benefits have not been fully realized in Thika especially from Christina Wangari Garden due to poor and unsustainable management and utilization of the park.

Thika town just like any other town in the world can benefit from the above mentioned functions of public parks and gardens and particularly from the Christina Wangari Garden which is located at the central business district of the town. The Sub-county of Thika which previously the Municipal Council of Thika lacked management capacity in terms of finances, man power and

expertise in the management of the park. These resulted to unsustainable utilization of Christina Wangari garden that is characterized by congestion, poor maintenance, encroachment by commercial activities, littering and poor drainage where storm water drainage is directed in the park among others.

This study of the Christina Wangari is therefore very significant in understanding the benefits of the public park, challenges affecting public parks and garden in Kenya and particularly in Thika town to help suggest possible planning intervention that can be applied to improve the condition of the garden and other such Urban Public Parks in Kenya and in the world. It is through the implementation of the intervention and recommendation of this study that the benefits associated with urban public parks can be realized. This study will generally add knowledge about Public Parks in the world. The need for management of parks in Thika and particularly Christina Wangari Garden due to its central position in Thika town motivated its selection for this study. There is no study of this nature that has ever been conducted in Thika that focus on urban parks or even sustainable utilization of public places and therefore this study is very significant and an eye opener.

1.8 Study limitations

Lack of documented information regarding the Christina Wangari Garden in Thika, Institutional bottle-necks – bureaucracy in some institutions that may contain resource materials for the study and inadequate cooperation on the part of interviewers

CHAPTER TWO: LITERATURE REVIEW

This chapter is designed to address and review the literature that will help in understanding sustainable utilization of urban parks. In understanding this, it will address different types of public parks, uses of parks and their functions and level of utilization. It will also address factors that influence utilization of a public park and the constraints in effective utilization of public parks in Kenya and other parts of the world. Also in this chapter the literature will analyze the legislative, institutional and policy framework that guide sustainable utilization of public parks. Finally, literature on the different approaches of enhancing sustainable utilization of public parks will be examined and will include a case study of successive sustainable utilization practices.

2.1 Concept of Public Parks as a Recreational Facility

An **Urban public park**, also known as a municipal park (North America) or public open space or municipal gardens (United Kingdom), is a park in cities and other incorporated places that offers recreation and green space to residents of, and visitors to, the municipality. The design, operation and maintenance is usually done by the government, typically on the local level, but may occasionally be contracted out to a private sector company (Yuen 1995). Common features of urban public parks include playgrounds, gardens, hiking, running and fitness trails or paths, bridle paths, sports field and courts, public restrooms, boat ramps and/or picnic facilities, depending on the budget and natural features available (Jellicoe, 1975).

In the western world, the modern concept of the urban park started in the early 19th Century, during the Industrial Revolution. At this early stage, planners recognized that urban parks were important features that could improve the quality of urban life, which declined during the rapid industrialization of this time. Parks became places to escape from the stresses of chaotic industrial cities. The idea swept the United States, England, and mainland Europe. Cities in Sweden, Denmark, and Holland started to develop urban parks to improve the quality of their cities (Jellicoe, 1975). During this time, parks were often built to serve multiple motives, which usually included: “A philosophy of social reform to improve the physical and moral welfare of the working class, a utilitarian belief in the value of urban parks and recreation for labor

productivity and the dampening of social unrest, a romantic desire to bring back nature into the cities, a sense of civic pride and psychology of social hygiene, (Yuen 1995).

In addition to rapid industrialization, mass urban migration was another factor that stimulated the growth of urban parks. Crowded urban spaces, due to an influx of people massively degraded the quality of urban life. Planners began to see urban parks as places that could increase the tranquility and comfort of urban life by providing a space for citizens to escape from the squalor and stress that characterized much of their daily routine (Yuen, 1995). Thus, parks served as places of recreation and leisure. In the late 19th Century, urban parks started to be developed at public expense, when the social reform of the working population in Britain paved the way for early legislation providing open spaces in cities and towns. Since the 19th Century, urban parks have transformed American and European cities. They have not only enhanced and beautified the urban environment, but also have become “important structural components in the shaping of urban form” (Yuen, 1995).

2.1.1 Garden Cities of To-Morrow (Ebenezer Howard)

James L (2008) noted Garden City model is considered by many urban planner and landscape architect as the origin of deliberate planning for Urban Public Park. The garden city movement is a method of urban planning that was initiated in 1898 by Sir Ebenezer Howard in the United Kingdom. Garden cities were intended to be planned with self-contained communities surrounded by "greenbelts", containing proportionate areas of residences, industry and agriculture.

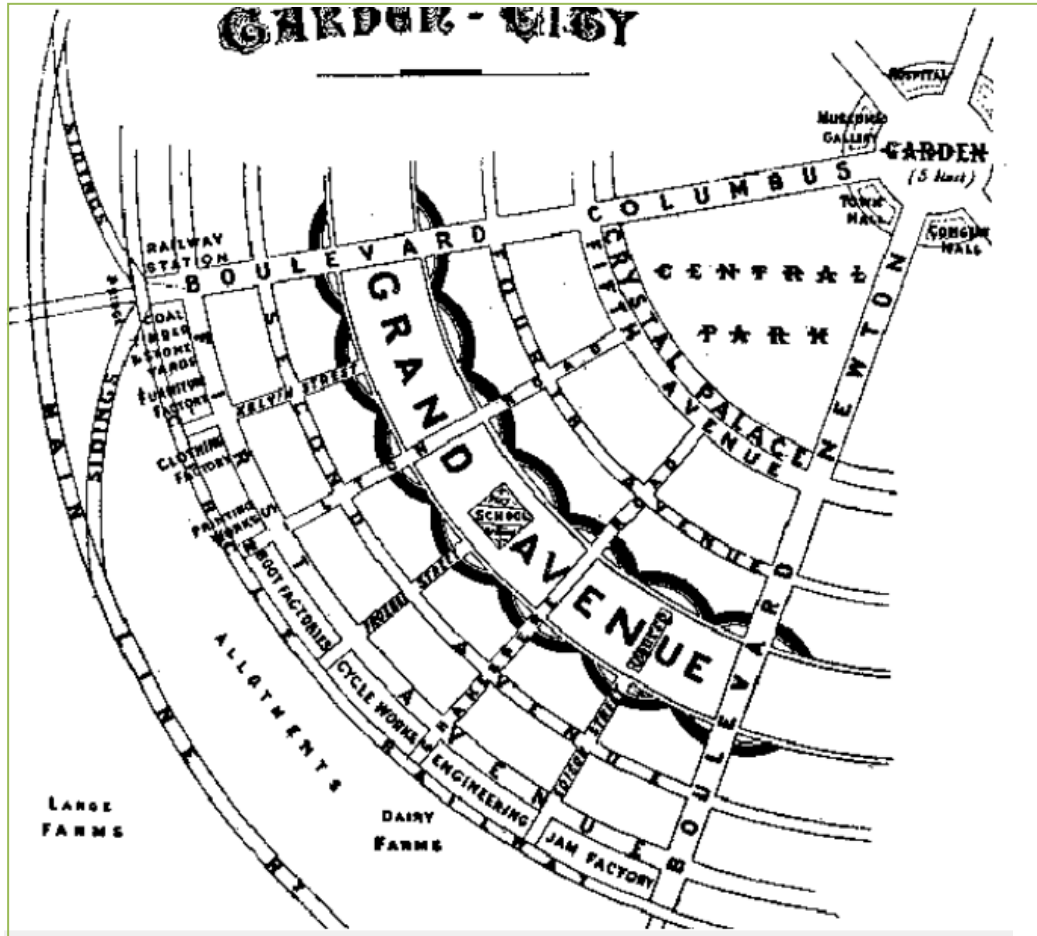
His idealized garden city would house 32,000 people on a site of 6,000 acres (2,400 ha), planned on a concentric pattern with open spaces, public parks and six radial boulevards, 120 ft (37 m) wide, extending from the centre. The garden city would be self-sufficient and when it reached full population, another garden city would be developed nearby (James L 2008)

Six magnificent boulevards--each 120 feet wide--traverse the city from centre to circumference, dividing it into six equal parts or wards. In the centre is a circular space containing about five and a half acres, laid out as a beautiful and well- watered garden; and, surrounding this garden,

each standing in its own ample grounds, are the larger public buildings--town hall, principal concert and lecture hall, theatre, library, museum, picture-gallery, and hospital.

The rest of the large space encircled by the 'Crystal Palace' is a public park, containing 145 acres, which includes ample recreation grounds within very easy access of all the people.

Figure 1: Garden city model



Source: Ebenezer Howard, 1898

Running all round the Central Park (except where it is intersected by the boulevards) is a wide glass arcade called the 'Crystal Palace', opening on to the park. This building is in wet weather one of the favourite resorts of the people, whilst the knowledge that its bright shelter is ever close at hand tempts people into Central Park, even in the most doubtful of weathers. Here

manufactured goods are exposed for sale, most of that class of shopping which requires the joy of deliberation and selection is done. The space enclosed by the Crystal Palace is, however, a good deal larger than is required for these purposes, and a considerable part of it is used as a Winter Garden --the whole forming a permanent exhibition of a most attractive character, whilst its circular form brings it near to every dweller in the town--the furthest removed inhabitant being within 600 yards, (James L 2008).

Walking still toward the outskirts of the town is the 'Grand Avenue'. This avenue is fully entitled to the name it bears, for it is 420 feet wide, and, forming a belt of green upwards of three miles long, divides that part of the town which lies outside Central Park into two belts. It really constitutes an additional park of 115 acres--a park which is within 240 yards of the furthest removed inhabitant (James L 2008).

2.1.2 History of Public Parks

2.1.2.1 Pleasure Garden, 1850-1900

Crouch, (1981), noted that by 1840, urbanization and industrialization had begun to change the life of urban residents. The spread of cities prohibited daily travel to the countryside. The pace of factory production meant that time-off, leisure, and contemplation was no longer intertwined with work (Carr et al., 1992). Transcendentalist reformers were agitating for large, open, green places in order to get people into natural settings that offered relief from the rigors of their jobs. (Carr et al., 1992). During this time in Africa very few towns existed and town planning or planning for public urban parks was not taking place (Nairobi atlas, 2008).

2.1.2.2 Reform Park, 1900-30

The most enduring legacy of the "reform park" is the playground; indeed users often referred to this model as the "playground" as opposed to the "pleasure ground". That model is connected to the larger reform movement of the Progressive Era and the motives that generated the playground, field house, and utilitarian landscape style, (Hickmann et al, 1999). The shift from

the pleasure garden to playground marked the sharpest change in urban park history up to that point.

Madanipour (2003), noted that typical Neighbourhood park was a square block or two surrounded by housing. A path in the reform park was straight and at right angles to one another, and the sitting was frank and straightforward. Park structures looked similar to adjacent factories, apartment houses, and commercial buildings. Carr et al., 1992 noted that a new building type emerged: the field house, which incorporated showers, community rooms, meeting rooms, and a gymnasium. Architecturally conventional, they had none of the picturesque details of pleasure ground buildings. Playgrounds and playing fields flanked the building in rectangular plots. Flowers were no longer forbidden; the only constraint on their use was space. Grass was squeezed out by sand, blacktop, and buildings. (Carr et al., 1992).

Madanipour (2003) noted that Professional play leaders organized and supervised activities. No longer were families expected to amuse themselves as a group. Each age and sex was assumed to have special needs. The activities were heavily, although not exclusively, child-oriented. Carr et al., (1992) found that a split between the recreation movement and the park movement originated in this era. Some cities in the world had separate commissions – one for parks and another for recreation. Madanipour (2003) added that the conflict between active and passive recreation that continues to this day began during this time. The reform park was oriented toward meeting the needs of the working class as perceived by business, philanthropic, and professional elites. Its location in the tenement districts and the emphasis on physical exercise, supervision, and organization indicate an acceptance of industrial culture and an effort to rationalize it, (Carr et al., 1992). According to Thomas (2004) during colonial time, planning for urban park was similar to that of Britain but the facilities were not provided. The population in the city was low and demand for urban park was equally low. Many towns in the Kenya during this time were developing and had no plan.

2.1.2.3 Recreational facility, 1930-65

Many studies show that in 1930s, park administrators' abandoned idealistic efforts to use parks as a mechanism of social reform. Public Parks no longer had to justify their existence as accomplishing needed social change. Recreation was accepted as a municipal function and an established institution, rather than a reform movement. The frequent use of the term "recreation" came to stand for the importance of serving all age groups, not just children in playgrounds. There was an important break between the playground park and the emerging recreational facility.

Madanipour (2003) explained that the term "facility" was appropriate because new construction was not necessarily a building. Active recreation was the password of this era. For children, supervised play continued to be important; for adults, such field sports as baseball, football, and basketball gained legitimacy. Swimming pools were more popular than any other single facility. Thomas and Coach (1998) observed that three trends; professionalism, standardization, and suburbanization, had a great impact on public park evolution. As the vast professional middle class emerged in society, many studies to class issues were abandoned in park literature; discussions of efficient management and "service to the community" were substituted.

Standardization of organizational structure, park design, and programming also proceeded rapidly in this era. In order to save money, playground plans were duplicated without regard to differences in topography or local needs. Gymnastic equipment, picnic tables, fencing, bleachers, and even recreation centers were ordered in multiple quantities (Springgate 2001). As the nation suburbanized, the operating assumption in park design became that people had greenery and small intimate open spaces in their yards and needed large-scale facilities for field sports and basketball. The urban public park served the most explicit and direct needs of the population without regard for a more subtle need to stimulate other parts of the psyche. It became a single-purpose, highly utilitarian outlet. The resulting banality of urban parks from this era has dulled ability to think of them as potentially interesting, amusing, engaging, stimulating, or exciting (Springgate 2001).

Thomas (2004) found that during the early town planning when the basic layout of the town was done, provision was made, for example in Kisumu town, six urban parks which currently are, Market Park, Jamhuri Park, Uhuru Garden, Owen Park, Taifa Park, and Maendeleo Park, which are all located in Kisumu County. In Nairobi, public parks were also created including Uhuru Park, Central park, Jeevanjee Gardens and Uhuru Gardens. In Thika Christina Wangari garden and Mugumo Gardens were as also designed. Most of these parks acquired their current names after Kenya attained independence in 1963. The parks were created to provide relaxation for the white settlers at different strategic points of interest, which included residential, administration, market and bus terminal. These parks were not only supposed to live up to the old glory of providing relaxation points for the current residents but were expected to transform with the new global trend to provide avenues for social, economic, cultural and environmental activities.

2.1.2.4 Open Space, 1965 and After

According to Madanipour (2003), the new park type perhaps is characterized best by the adventure playground. Conventional gymnastic equipment-swings, slides, teeter-totters, climbers-was abandoned in favor of free-form environments and play equipment. Railway ties and 12 by 12 timbers in different lengths formed a module for many play structures; cement culverts were another popular material. Ward-Perkins, (1989) added that the forms were extremely sturdy, had few movable parts, and were neither easily vandalized nor costly to maintain.

Springgate (2001) found that the three park types-the tot lot, adventure playground, and urban plaza-use small lots were previously thought unusable. The open-space philosophy viewed every bit of land as a potentially valuable gem in a network of open spaces. Springgate (2001) explained that the underlying ideology of the open space system is that the city is an art form worth saving. This new attitude toward the city and its open space occurred precisely when the inner city was perceived as decaying. The apparent contradiction disappears if we recall that the social and physical consequences of massive urban destruction and renewal were judged disastrous-and so a new tack was taken: selective revitalization (Coach 1998). The most important lesson in park history is that form always reflects immediate social goals, an ideology

about order, and an underlying attitude towards the city. Park history can be divided into periods, but no model has died out. Rather, each new one has emerged alongside earlier models so that at any given point in time we can find examples of several types.

2.1.3 Types and characteristics of public parks

2.1.3.1 Mini Park

Mini parks are small pieces of parkland meant to serve a residential or business area within a 2.5 kilometer radius. Due to their limited service potential and maintenance inefficiencies their acquisition and development should be limited (Springgate 2001). Springgate (2001) identified the following characteristic of a mini park:

- Size: less than 5 acres
- Population Served: 500 to 3,000
- Location and Access: One potential area of importance for the development of mini - parks is to create pockets of park development along trails and greenbelt corridors. In general, these parks serve a passive need and normally do not require vehicular parking.
- Appropriate Use: Passive recreation.

2.1.3.2 Neighbourhood Park

A Neighbourhood Park is the basic unit of the park system and should be within walking distance of the Neighbourhood homes. Serving as the recreational focus of the Neighbourhood, the park should achieve a balance between informal active and passive park uses. In general, about half of the park's area should be planned for passive activities and comprised of natural features. Neighbourhood parks have limited program activities and are not intended to attract users from outside the Neighbourhood. Surrounding uses should be mostly single or multifamily residential and all areas of the park should be readily visible from adjoining streets in order to provide a secure environment. Parkland without frontage on public streets is not acceptable. (Springgate 2001). Springgate (2001) identified the following characteristic of a mini park:

- Size: 5 to 20 acres
- Population Served: 3,000 to 10,000

- **Location and Access:** The Neighbourhood park should be centrally located if possible within its service area and should be uninterrupted by non - residential roads or other physical barriers. It should be accessible by way of interconnecting trails, sidewalks, or low - volume residential streets. Ideally, the park should adjoin a public elementary school.
- **Appropriate Uses:** Active recreation facilities include: play structures, court games, informal playfield or open space, tennis courts, volleyball courts, shuffleboard courts, horseshoe area, splash pad, activity room, etc. Passive recreation facilities include internal trails, picnic/sitting areas, general open space, people watching areas, etc.

2.1.3.3 Community Park

According to Ward-Perkins, (1989), Community parks are larger in size and serve several adjoining Neighbourhoods or several square miles of residential development, as well as preserve unique landscapes and open spaces. They should allow for group activities and offer other recreation opportunities not feasible or desirable at the Neighbourhood level. As with Neighbourhood parks, they should be developed for both active and passive recreation activities. Surrounding uses should be predominately single or multi - family residential and most areas of the park should be readily visible from adjoining streets in order to provide a secure environment. Ward-Perkins, (1989) noted the following characteristics for a community park:

- **Size:** 20 to 100 acres
- **Population Served:** 10,000 to 50,000
- **Location and Access:** The quality of the natural resource base should play a significant role in site selection for the community park. The site should be serviced by arterial and collector streets and be easily accessible from throughout its service area by way of interconnecting trails.
- **Appropriate Uses:** Active recreation facilities include: large play structures, creative play attractions, game courts, informal ball fields for youth, tennis courts, volleyball courts, shuffleboard courts, horseshoe areas, swimming pools, archery ranges, disc golf areas, etc. Passive recreation facilities include: extensive internal trails, individual and group picnic/sitting areas, nature study areas, ornamental gardens, facilities for plays or concerts, etc. Other uses may also include recreation centers.

2.1.3.4 District Park

Springgate (2001) observed that District parks serve a broader purpose than community parks and should be used to supplement community and Neighbourhood parks when the smaller parks are not adequate to serve the needs of the community. Focus is on meeting community based needs, as well as preserving unique landscapes and open spaces. Parkland with frontage on public streets is desirable. Madanipour (2003) explained the following characteristics of District Park,

- Size: 100 to 250 acres
- Population Served: 50,000 to 175,000
- Location and Access: Park may be located within walking distance of some residential areas; however, high use activity areas should be separated from adjacent residential areas. The site should be serviced by arterial and collector streets and be easily accessible from throughout its service area by way of public transit and interconnecting trails.
- Appropriate Uses: Active and passive recreation facilities include facilities similar to those listed for Neighbourhood and community parks at a larger scale. Other facilities may include regulation sport courts, regulation playfields, aquatic center (activity pools, slides, etc.), inline/skateboard facilities, rock climbing wall/extreme facilities, and group or reservation picnic facilities.

2.1.3.5 Metropolitan Park

These parks are generally natural resource based, are typically located along waterways or near bodies of water, and have the potential for a wide range of uses. However active areas should be located relatively close to one another with large surrounding areas of preserved natural or open space Ward-Perkins, (1989). Springgate (2001) noted the following characteristic of this type of park

- Size: 250 plus acres
- Population Served: Entire city, possible communities surrounding the city and visitors from other parts of the state.
- Location and Access: The location would be determined by resource availability and opportunity to utilize and/or protect the resource. The site should be serviced by arterial and

collector streets; easily accessible from throughout its service area by way of public transit and interconnecting trails; and has reasonable expressway access when possible.

- **Appropriate Uses:** Appropriate active and passive facilities include those listed for Neighbourhood and community parks but may also include facilities such as swimming beaches, radio controlled airplane fields, horseback riding, mountain biking, camping areas, boating amenities, fishing areas, hiking, bird watching and nature interpretation.

2.1.3.6 Special Use Park

Special use parks, according Springgate (2001) cover a broad range of parks and recreation facilities oriented toward single - purpose use. They can be individual sites or parts of larger parks. He also noted the following characteristic of the special use park

- **Size:** Varies
- **Population Served:** Entire city
- **Location and Access:** They should be strategically located community wide facilities rather than serving well defined Neighbourhoods or areas. The site should be easily accessible from arterial and collector streets as well from the light traffic system.
- **Appropriate Uses:** Historic , cultural, and social facilities, such as: historic downtown areas, performing arts parks, arboretums, ornamental gardens, performing arts facilities, indoor theaters, public buildings, amphitheaters, specialized / single purpose recreational facilities, community centers, senior centers, community theaters, hockey arenas, marinas, golf courses, aquatic parks, sports stadiums, skate board/in-line skate park, etc.

2.1.3.7 Useable Open Space

According Springgate (2001), Useable Open Space is an open space preserved for special use but at the same time they are used for recreation. Such open spaces include: Greenway, Nature Park, Green-space and Detention Area. He explains these open spaces as follows:

Greenways tie park components together to form a cohesive park, recreation and opens space system. Within a natural environment, they allow for uninterrupted and safe pedestrian movement between parks throughout the community, provide people with a resource based outdoor recreational opportunity and experience, and can enhance property values.

- **Location and Access:** Land availability and opportunity determine location. “Natural” greenways follow suitable natural resource areas, and “man - made” greenways are corridors built as part of development projects or during renovation of old development areas including residential subdivisions, revitalized river fronts, abandoned railroad beds, etc. Greenway locations are integral to the trail system plan.
- **Appropriate Uses:** Activities such as: hiking, walking, jogging, bicycling, in - line skating, horseback riding, canoeing, boulevards and parkways that accommodate automobiles

Nature parks are lands set aside primarily for the preservation of significant natural resources, remnant landscapes, open space, visual aesthetics and buffering, or for wildlife protection.

- **Location and Access:** Location is resource based. Development should be kept to a level that preserves the integrity of the resource.
- **Appropriate Uses:** Passive activities and facilities that minimize disturbance on the natural setting, such as: nature center, areas of nature interpretation, wildlife viewing.

Green-spaces are small parcels of preserved open space including street medians and streetscapes that increase the perception.

- **Location and Access:** The location of the green space would be opportunity based with access from interconnecting trails, sidewalks, or low - volume residential streets.
- **Appropriate Uses:** If passive recreation facilities exist, appropriate examples include: picnic/sitting areas, general open space, and people watching areas.

Detention area is a shared use park with the primary purpose of managing storm water. Depending on the circumstances and potential for shared use and development, the detention area could serve as anything from a green-space to a sports complex.

- **Location and Access:** Depends on its secondary use.
- **Appropriate Uses:** Appropriate recreation facilities depend on the compatibility with storm water detention requirements and will vary.

2.1.4 Uses and Benefits Urban Public Parks

Uses of public parks according to Ward-Perkins, (1989) can be classified in to two main categories namely: passive recreational use and the active recreational use. These two categories are explained below.

Passive recreational uses: Passive recreational activities include activities that are less vigorous activities, appropriate examples include: picnic/sitting areas, general open space, and people watching areas. Examples of such park include mini parks, historical site and natural park/setting (Maina 2011).

Active recreational use: According to Kuo (2001) active recreational use involves activities that are vigorous, these activities mostly includes sports. Activities such as: hiking, walking, jogging, bicycling, in - line skating, horseback riding, canoeing, boulevards and parkways that accommodate automobiles. Other facilities may include regulation sport courts, regulation playfields, aquatic center (activity pools, slides, etc.), inline/skateboard facilities, rock climbing wall/extreme facilities, and group or reservation picnic facilities.

Numerous studies have demonstrated the ability of natural places to positively influence individual well-being. Even brief views of nature have been found to speed recovery from surgery (Ulrich, 1984), reduce anxiety (Heerwagen, 1990), and enhance one's ability to function effectively (Kaplan, 2001). Exposure to natural environments has also been linked to the restoration of attentional resources (Kaplan, 1995) and reductions in crime and aggression (Kuo, 2001). Green space can also lead to greater social cohesiveness. According to Kuo, Sullivan, Coley, and Brunson (1998), settings with park-like elements are not only used more often, but also strengthen Neighbourhood social ties. In addition, these settings can encourage a sense of ownership and empowerment in the community, leading to better monitoring of outdoor areas and supervision of children (Coley, Kuo, & Sullivan, 1997).

2.1.4.1 Economical Benefits

Urban parks and tourism: Urban parks do not only provide recreational settings to local residents. Also visitors from out-of-town will use these green spaces. High-profile parks such as

Central Park in New York are major tourist attractions in their own right. Authors have stated that green spaces, such as an urban forest, can play an important role in attracting tourists to urban areas, e.g., by enhancing the attractiveness of cities and as a complement to other urban attractions (Majumdar et al. 2011). Probably due to their land limitations, especially many Asian island regions, including Singapore and Hong Kong, they have promoted urban ecotourism actively, and have mixed it with urban tourism.

Urban Parks and house prices: Different ways of estimating the economic value of nature have been explored over time. In an urban setting, a way of indirectly assessing the economic value of green spaces is to study the impact of these spaces on house prices. If for example parks are valued by property buyers, this would be reflected in the premium they are willing to pay for the house or apartment. In a (non-systematic) review of 30 studies that addressed the impact of parks on property prices, Crompton (2001) in 1940s researched on the property price increase due to the establishment of Central Park in New York. Among the 30 studies, the author found 95% supported the proximity principle i.e. that having a park nearby raises property prices.

2.1.4.2 Social Benefits

Urban parks and direct and indirect health effects: Nature and green spaces contribute directly to public health by reducing stress and mental disorders (Ward Thompson et al., 2012; Annerstedt et al., 2012), increase the effect of physical activity (Mitchell, 2012), reducing health inequalities (Mitchell and Popham, 2008), and increase perception of life quality and self-reported general health (Maas et al., 2006; Stigsdotter et al., 2010). Indirect health effects are conveyed by providing arenas and opportunities for physical activity (Coombes et al., 2010), increasing satisfaction of living environment and social interactions (Björk et al., 2008; Maas et al., 2009), and by different modes of recreation (Weber and Anderson, 2010).

All these indicators correspond well to the definition of health established by the World Health Organization (WHO) (1946), including physical, mental, and social components in the health concept. Considering the high level of global urbanization, urban parks are imperative for maintaining and improving public health. This section demonstrates the scientific evidence for health effects, direct or indirect, from urban parks (Winslow, 1920).

A number of studies done gathered the following results about public parks and healthy society: improved physical activity, reduced obesity, reduced stress, improved self-reported health and mental health, opportunities for recreation, psychological wellbeing, and social support, increased longevity, reduced stroke mortality and reduced cardiovascular/respiratory morbidity.

Urban parks and social cohesion: Urban parks have been viewed as an important part of urban and community development rather than just as settings for recreation and leisure. Urban parks have been suggested to facilitate social cohesion by creating space for social interactions (e.g., Coley et al., 1997; Kuo et al., 1998; Van Herzele and Wiedemann, 2003; Parr, 2007; Maas et al., 2009). Public spaces such as urban parks are potentially of importance because they cater the opportunities for high levels of interaction between persons of different social and ethnic background (Lofland, 1998; Fainstein, 2005). For the development of local communities and social ties people have to be able to meet to establish relationship (Völker et al., 2007). In addition, interacting with others helps people to participate in society and to create feelings of acceptance (Putnam, 2000).

Globalization has resulted in increasing levels of migration over the past decades. This means some of the old, formerly rather homogenous nations are becoming more and more multicultural (Kærgård, 2010). Most of the contacts between people will occur in places like local recreation facilities, schools, churches and parks (Kuo et al., 1998; Völker et al., 2007). The presence of trees (and shade) and grass in common spaces compared to barren spaces may attract residents to outdoor spaces, which enhances opportunities for the people to get connected (Coley et al., 1997).

Urban parks and biodiversity: During the past decade research on urban biodiversity has become momentous - not only because of the increasing impact of urbanization on natural ecosystems, but also because of the growing recognition of urban areas as hosts for innovative ways to conserve and promote biodiversity (Savard et al., 2000). The latter is illustrated by various global environmental conventions such as the 2002 World Summit on Sustainable Development, the 2007 Curitiba Declaration on Cities and Biodiversity, and the Global Partnership on Cities and Biodiversity launched by among others the United Nations Environment Programme (UNEP 2012).

2.1.4.3 Ecological benefit

Urban parks, air quality and carbon sequestration: Air pollution is generally considered as a major concern in urban areas, and as being among the major risk factors contributing to the global burden of disease, with for example high levels of particulate matter (PM) air pollution being associated with excess mortality and morbidity in the urban population (Cavanagh et al., 2009). Cavanagh et al. (2009) stated that various studies have identified the beneficial influence of urban vegetation on ambient air quality, although most of these studies infer the impact of tree coverage on urban air quality models rather than from experimental data (e.g., Yang et al., 2005; Nowak et al., 2006; Escobedo and Nowak, 2009), an exception being Freiman et al. (2006).

Cavanagh et al. (2009) elaborates on the specific role of urban trees in air pollution reduction, mentioning their effects in terms of intercepting atmospheric particles and absorbing various gaseous pollutants (also Yin et al., 2011). Trees can also lower air temperature through transpiration, which affects the photochemistry of ozone and reduces ozone production. (Cavanagh et al. 2009)

Parks contribute to reduction of air pollution: When excluding CO (which is dealt with), Many studies found that urban parks help remove air pollutants. Most of these studies were largely based on modeling work, applying for example biomass and air pollution uptake relations are described in the literature. The work by Beckett et al. (2000) included physiological measurements of the particles captured by trees at five UK urban sites; he found that urban parks made substantial contributions to decreasing pollution. Parks reduced the levels of other pollutants, including NO_x and SO_x (Jim and Chen, 2008; Makhelouf, 2009; Paoletti et al., 2011; Yin et al., 2011).

Paoletti et al. (2011) Studies showed that the forest growth compensated the losses due to cuttings and damages by extreme climatic events, so that the overall amount of pollutants removed from the air did not change (and remained positive) from 1985 to 2004.

Urban parks and water management: Water management is crucial to cities, particularly in times of climate change. Cities often import water from surrounding areas in addition to

converting land cover from vegetated surfaces to buildings, pavement, and other impervious surfaces. This land-cover change radically alters the pathways and magnitude of water and pollution flows into, within, and out of urban systems. Surface water flooding describes the combined flooding in urban areas during heavy rainfall. As such, it includes pluvial flooding, sewer flooding, flooding from small open-channel and culverted urban watercourses, and overland flows from groundwater springs. Surface water flooding is predominantly caused by short duration intense rainfall, occurring locally (Fryd et al., 2011; Pataki et al., 2011). Ecosystem-services-based approaches can help regulate the urban water cycle by reducing the amount of storm water runoff and to improve water quality by removing pollutants from runoff. Bioswales, rain gardens, green roofs and other green infrastructure components can help reduce runoff e.g., due increased infiltration rates for non-paved surfaces. Increased infiltration would promote groundwater recharge and evapo-transpiration from vegetated surfaces, and thus help to improve climatic conditions in the city (Pauleit and Duhme, 2000; Pataki et al. 2011). Urban landscapes with 50–90% impervious cover can lose 40–83% of rainfall to surface runoff (Pataki et al., 2011).

Urban parks and cooling: Increased air temperatures can be expected to be particularly problematic in urban areas, where temperatures already tend to be higher than in the surrounding countryside (e.g., Oke, 1987). Climate change has a range of consequences for human health, including e.g., intensity and frequency of heat waves. Oke (1987) and others have studied the impact of urban vegetation in terms of their possible cooling effect. Mechanisms at work in cooling by trees and other vegetation include evapotranspiration, which consumes energy from solar radiation and increasing latent rather than sensible heat, cooling the leaf and the temperature of the air surrounding the leaf. Shading from trees, which encompasses intercepting solar radiation and preventing the warming of the surface and air, is another mechanism, at work (Bowler et al., 2010).

2.2 Factors that influence the use of an Urban Park

Dwyer (1988) and More (1985, 1989) found that user levels vary by season, day of week, and time of day. In Baltimore, people use of playgrounds was affected by distance from their home to

the Public Park, distance between competing public parks, size and type of park, presence or absence of a variety of physical facilities, media attention on the park, effective maintenance, safety and aesthetic qualities (Dee and Leibman 1970). Different factors that influence and how they influence the use of public parks in urban areas are explained below.

2.2.1 Meeting Human Needs in Urban Public Parks

Hayward (1989) suggests that the needs of people have not been addressed in Public Park for the past two decades. These are:

2.2.1.1 Comfort

Comfort can be categorized by its physical, social, or psychological components (Carr et al., 1992). Physical comfort measures how people react physically with an environment. For example, seating that considers physiology and climate conditions, such as shade, might provide a high degree of physical comfort. Social and psychological comfort is related closely to how people experience urban spaces. It can be measured in terms of the extent to which people feel free and secure to do something (Carr et al., 1992).

2.2.1.2 Relaxation

Carr and others state that “Relaxation is a more developed state with body and mind at ease” (Carr et al., 1992, p. 98). In order for relaxation to occur, people must be comfortable. Relaxation is a combination of physical and psychological needs. Relaxation occurs when people engage not only in passive areas, but also in active and noisy ones (Carr et al., 1992). For example, while trees, greenery, and contained water, such as a lake, are associated with passive relaxation, people also consider certain sounds, such as waterfalls and the wind, elements that offer relaxation. Carr and others (1992) noted that there are two factors that could enhance relaxation. The first is “the elements of respite or contrast to the adjacent urban context”. The second factor is the presence of natural elements, such as water and trees.

2.2.1.3 Passive engagement with the environment

Carr and others (1992) note, “Passive engagement with the environment could lead to a sense of relaxation but it differs in that it involves the need for an encounter with the setting, albeit without becoming actively involved”. Observation is a passive engagement activity. Observation includes watching people’s activities, watching program activities such as sports, and observing natural environments.

2.2.1.4 Active engagement with the environment

Active engagement involves contact with people. It includes socializing, in terms of talking with others and engaging in recreational activities (Carr et al., 1992). It is noted that, while senior citizens might be comfortable talking to each other, adults might engage in recreational activities, and children play in a playground. The form of active engagement also differs across culture (Carr et al., 1992 Lyle, 1970).

2.2.1.5 Discovery

Discovery is the last need in Carr and others’ (1992) list of needs in urban public parks. It is closely associated with exploration. In their Information Processing Theory, Kaplan and Kaplan (1977) explain that people are information hungry creatures. Therefore, the need for exploration is essential for their survival. In urban parks and other public open space, discovery can be translated to the way that people move through spaces. Good spaces should offer exploration opportunities. Exploration can be enhanced by the physical design of the spaces and their visual vistas. The need for discovery, according to Carr et al., (1992) is important because it relates to human mental and physical development: “Forcing people to remain in a confined, bare setting is a form of torture or punishment”.

2.2.1.6 Affordability

According to Carr et al., (1992), public parks are considered most affordable and therefore attract users. Most urban residents especially in developing Nations are sensitive to the cost of any facility. UN (2008) noted that over 50 of urban residence in major towns in Kenya live below the poverty level, Nairobi for example leads with 60%. In such a population people are attracted to

the most affordable option. Thomas (2011) observed that most public parks in Kenya were managed by the local authority such as municipal Council or City council. Visitors are charged nothing to access though there are sometime little charges for accessing some facilities in the park such as swimming pool. Carr et al., (1992), added that there is a direct relationship between the affordability of the park and number of users visiting the park. Affordability of a public park includes all the cost for accessing a particular park; this includes transport cost from home or work place to the park, the charges for using some facilities in the park and any other charges (Carr et al., 1992, p. 106).

2.2.1.7 Accessibility

According to Carr et al., (1992), accessibility is a significant aspect in attracting urban residence in the park. Accessibility is measured by proximity from the main residence of a public park user. It is defined by centrality where urban residents from different edges of town can access the park with ease. Walkability, proximity and connectivity are among the key attributes of accessibility. At some levels, accessibility is measured by the travel time or cost of transport to the park. The more accessible the public park is, the more likely it is to attract more visitors.

2.2.1.8 Conclusion

In summary, it is very important to meet people's needs in urban public parks. Rutledge states clearly that it is important not to generalize these needs; the understanding of needs must be site specific. According to Drivers (1977), people's needs are subject to their desire to meet certain goals and objectives and get benefits from them. Therefore, it is important to understand people's preferences for activities in the park because the activities can reveal certain goals and objectives of their users.

2.3 Public Parks in Kenya

2.3.1 Utilization of Public Parks in Kenya

Maina (2011) observed that most public park in Kenya have not been utilized effectively. Today, in most parts of Africa and particularly Kenya, the existing public parks were designed during the colonial period, 1940s when most Kenyan towns had very low population, since then the

population has increased by over 500% while the condition and the size of public parks have barely improved or changed. Akivaga (2011) noted that most Kenyan municipalities and city councils perceive public parks as a waste of valuable land that can be utilized for real estate or business that can increase revenue for the council. Maina (2011) added that since public parks do not have economic benefit at short run, they are hardly funded by most municipal councils in Kenya. Their conditions are therefore poor and they are hardly maintained or managed sustainably. Due to the poor condition of public parks in most towns in Kenya, parks users and the urban community perceive public parks as a place for relaxation of the desperate people or those who have nothing else to do. That explains why in most parks one finds street families and the homeless sleeping during the day. Some parks are also encroached by business activities or are used to dispose solid waste. From a reconnaissance visit of the site it is clear that Christina Wangari Garden is inadequately utilized.

2.3.2 Constraints in effective utilization of Public Parks in Kenya

Problem and challenges associated with urban parks vary from place to place. Many studies show there is a huge different between challenges experienced in developed countries and in developing counties such as in African. In Kenya the challenges and problems are not uniform. Maina (2011) observed that public parks in Nairobi are in better condition than those in other towns, in Nairobi, public parks are well managed and maintained. Thomas (2011), the quality of public parks in most parts of the country depends on the capacity of the Municipal council in terms of expertise and finances to manage, population of the town, political goodwill, location of the park in the town and Bylaws that the municipal have to protect and manage the park.

2.3.3 Environmental Degradation

According to Maina (2011), Most of the users of the public parks walk on the green areas/grass and they do not walk on the provided walkways. This is partly due to the fact that the conditions on the walkways are not comfortable to walk on. In some cases the walkways may be muddy or dusty due to poor maintenance. Some people just pass across the park therefore using the shortest path to the other edge.

Thomas (2011) noted that some of the trees in the garden over-tower the area and kill other vegetation below them. There are also cases of littering in most public parks in the country. There is basically no proper waste management. In some towns, there is congestion where the users exceed the carrying capacity of the park.

2.3.4 Facilities within the Park

Maina (2011) observed that in most parks in the country, there are no adequate facilities to support the public parks; toilets, canteens, water points, trash containers, seats and so on. The available facilities within the garden are not well maintained and not conducive for users. He also noted that most urban garden and parks in the country also lack facilities for the physically challenged, the old or the children. This has deliberately excluded some of the town residents who would wish to use urban parks or gardens

2.3.5 Accessibility of the Park

The main access to most parks is from busy roads hence deters/discourages visitation. The hedge around some garden in Kenya is obstructive and not inviting to potential visitors thus needs to be re-designed to integrate these parks and its activities to the Neighbourhood especially the enterprises. Location of some public parks and gardens does not favour potential users due their proximity from the Central business district, (Akivaga 2011).

2.3.6 Security

According to Okech R. (2008) there is inadequate lighting and no surveillance within most public parks in the country, thus posing a danger to those visiting the park. There is case of theft reported from most of the parks in the country. For example in a research done in Nairobi frequent users confess they have ever witnessed thieves or conmen in Uhuru Park. In Central park and Uhuru Park it is dangerous to walk along roads neighbouring the park. Okech R. (2008) noted that public parks in Kenya are the temporary home for criminals and homeless at night. Some studies show that this is threats of dangerous animals in the pack such as snakes.

2.3.7 Inadequate land for Public Parks

A study that was conducted by UN on 2002 indicated that there was acute shortage of up to 72% of Public Park in Kenya's urban areas. The report also indicated that about 43% of the urban public parks have been grabbed or their use changed to other land use. Okech R. (2008) added that most towns don't have adequate land for Public Park new urban planning approaches in Kenya don't provide for Public Park or public places. The UN study also observed that most urban undeveloped land is privately owned and under freehold and their development is more guided by free market. Government institutions do not involve themselves in land banking or acquiring land for public use despite the increased need due to high rate of urbanization. This explains why most towns don't have enough land for Public Park.

2.3.8 Conflict of activities in the Parks

The UN (2008) noted that most parks in the country are used for business, drug trafficking, smoking areas, sleeping places for homeless and waiting places for most users. Most of these activities are illegal, immoral and antisocial therefore making genuine users avoid using the park. Research also shows there is very little that is done to control these activities since they are done secretly or the responsible authorities are not very committed to control these vices.

2.3.9 Poor maintenance and management

Maina (2011) observed that public parks in most urban centres suffer from poor maintenance. According to Okech R. (2008) among the main maintenance practices most parks in Kenya lack include: trimming of grasses in the park, trimming and maintenance of live fences around the park, Pruning of trees and flowers, poor repair of fences, seats, toilets and other facilities, weeding the flower garden and the trees in the park, collection of solid waste, maintaining the drainage, irrigating flowers, grasses and trees during the dry season among others. Management activities that have not been applied in many public parks in Kenya include; beautifying the park, protecting dumping activities by enforcing by-laws, fixing security lights and supervision of the activities. Okech R. (2008) added that many studies about urban public parks in Kenya show poor maintenance and management of public parks by local authorities have discouraged

people from visiting the park, it has also modified the perception of urban residents about the public parks where most people don't like visiting these public parks.

2.4 Institutional, policy and legislative provisions for sustainable utilization of Public Parks

2.4.1 Legislative Framework

This section intends to analyze the legal documents that can affect this study or the recommendations. These are basically Acts of parliament that deal with physical development. The acts are described below:

2.4.1.1 The Constitution of Kenya

From the provisions of the new Constitution as it relates to planning, development, operation and management of land, it indicates that the guiding philosophy, spirit and principle is equity in access and use of land and also public participation as a form of collecting inclusive information from all stakeholders. When it comes to planning for land for whatever reasons, it is mandatory to seek the opinions of the various stakeholders from the partners to the people at the grassroots level.

2.4.1.2 Physical planning Act CAP 286

The Act makes provision for the preparation of physical development plans. Section 29 of the act is clear on development control measures to ensure that only permissible development occur in certain areas. Section 30(1) directs that no person shall carry out development within the area of a local authority without a development permission granted by the local authority under Section 33. Thus the informal sector activities establishment, development and growth is controlled by this Act through the local authorities and in this case the Sub county of Thika.

2.4.1.3 Environmental Management and Coordination Act CAP (No. 8 of 1999)

The act provides for the establishment of an appropriate legal and institutional framework for the management of the environment and for matters connected therewith. It aims at promoting a safe, clean and healthy environment. Section 7 of the act provides for the establishment of the

national environmental management and coordination authority (NEMA). The Institution is responsible for the execution of the requirement stipulated in this Act, in relation to policies relating to the environment. Section 58 of this Act requires that every development project likely to have impacts on the environment to undergo an environmental impact assessment before commencement. According to the Act's second schedule, preparation of local physical development plans falls under the projects required to undergo environmental impacts assessment.

2.4.1.4 Urban Areas and Cities Act 2011

Section 52 of this Act requires every city council or municipal council to prepare an integrated development plan, this plan will be implemented by preparing local physical development plan that will also need action plans and subject plans to complete implementation. Such plans require the planner to have an assessment of the current social, economic and environmental situation in its area of jurisdiction, to determine community needs and aligning them to the requirements of the Constitution and to protect and promote the interests and rights of minorities and marginalized groups and communities. It also requires the plans to prioritize the identified needs in order of urgency and long-term importance, strategies to achieve the goals within specific time frames, to specific implementation programmes and projects and performance management tools to measure impact and performance and make appropriate course corrections. Christina Wangari Garden may be one of the subject plans that may be required to implement the integrated development plan for Thika Sub County.

2.4.1.5 Public Health Act Cap 242

The Act of parliament makes provision for security and maintaining health. Section 124 (a) empowers local authorities to make by-laws regarding development of building and sanitation. In most cases the informal sector activities are prohibited through this Act as they mostly violate the minimum standards of hygiene. The act generally ensures that every activity done in any place ensures human health is enhanced. This act therefore requires every land use development to be approved by the local authority and the office the public health in that jurisdiction. In that regard any development that may be done in Christina Wangari garden need to take in to consideration the health standards and Bylaws in Thika and its surroundings.

2.4.1.6 Forest Act 2005

Christina Wangari Garden contains indigenous trees. Section 4 (1) of the act sets to ensure that the forest areas under management are maintained for biodiversity, cultural or recreational use. In addition, it protects the concession area from destruction and encroachment by other persons. Section 4 1(1) outlines that all indigenous forests and woodlands' shall be managed on a sustainable basis for purposes of: Conservation of water, soil and biodiversity, cultural use and heritage, recreation and tourism, sustainable production of wood and non-wood products, carbon sequestration and other environmental services, education and research purpose and habitat for wildlife in terrestrial forests and fisheries in mangrove forests.

2.4.2 Policy Framework

2.4.2.1 The Brundtland Report

The Brundtland Report (World Commission on Economic Development, 1987) was the first global attempt to address the sustainability problem that stems primarily from the idea that there are a finite number of resources in the world but an infinite number of human wants. Therefore, in order to achieve sustainable development and utilization of resources it is necessary to meet current needs, whilst ensuring the needs of future generations are also catered for.

The current resurgence of interest in policies for compact cities dates from the late 1980s and has largely been propelled by the search for the global sustainability goals on climatic change and resource use embodied in the Brundtland Commission report (WCED, 1987) and the UNCED Agenda 21 proposal (1993). What makes the current relationship between humanity and nature (global environmental change) and society and space (globalization) different from past conditions is that they both manifest a sort of totalization of human and environmental activities. Sustainability requires that the impacts of urban development activities should not involve uncompensated geographical or spatial displacement of environmental problems or costs onto other countries drawn on the resource base and waste absorption capacity of the global commons to levels which undermine health and which disrupt the dynamic equilibrium of the global ecosystem (Jenks and Burgess, 2000).

2.4.2.2 Physical Planning Handbook

In Kenya the physical planning handbook (2008) which is the guide for urban planners requires a public park be located at the central part where the town users can access it with minimum difficulties. It also provides that for a population of 10,000 persons one or two hectare size public park be provided. A public park or garden in one hectare piece of land requires a maximum of 50 users at every given time to control over use. Facilities in public parks and should be friendly to all users including the disabled, children and the elderly. They should provide shades, seats, toilets, kiosk, trash containers, and water points and so on, depending on the interest of the users. The design and management should ensure flexibility of such a facility to fit the dynamic interest and demand of the people

2.4.2.3 The Nairobi Metro Spatial Draft Plan

This draft plan is a legal document prepared by the ministry of Nairobi metropolitan development that seeks to promote the image of Nairobi and the neighbouring towns to a metropolitan area. To achieve this, the plan sets to undertake certain projects such as infrastructural development, tourism promotion, and environmental sustainability, development of new towns/cities with the aim of promoting harmonized development of the entire Metro area, safety, conservation and tourism. Some of the projects pertaining to the CBD that the plan sets to undertake based on public open spaces include:

Public Space

- Reduction of Crime within public space such public parks through installations of CCTV and security lights
- Park design that can promote the communal use of these spaces will be through installation of public facilities such as public furniture, bins and toilets that.

Public Utilities

Provision of facilities such as public benches will be installed to promote use of the public spaces, public art installation to promote tourism such as monuments and statues and also create new public spaces such as public open spaces lights to promote security and enhance use at night

2.4.2.4 Vision 2030

This is a long-term development blueprint that aims to transform the country to a global competitive and a prosperous nation offering a high quality life for its citizens by the year 2030. The vision is based on the three pillars of social, economic and political .Since the use of public spaces is also based on these three pillars, to achieve their sustainable use, it is important to integrate these three into the environment. Through the social pillar, people will be able to interact with each other, politically, the preparation of proper policies and regulations will help in the governance of these spaces and economically, people will be able to enhance value for the spaces.

2.4.3 Institutional Framework

These are the institutions that offer management, protection or preservation of the park.

2.4.3.1 Thika Sub County

The Sub county of Thika is empowered by the Cities and Urban areas Act 2010 and the physical planning Act Cap 286 to control development and grant physical development permission. This includes prohibition and control of use and development of land and buildings in the interests of proper development of its area. It has the legal mandate to formulate by-laws and zoning and development ordinances for Thika.

It has two main arms: the technical/executive arm and the policy or political arm. The technical arm comprises the technical officers and the policy arm comprises the elected and nominated leaders.

2.4.3.2 Thika Sub County

This department is responsible for all physical planning matters in the sub county. It is divided into various sections which include; Forward planning, research, development control , landscape design, architecture, land survey , policy implementation, and, quantity survey.

The development control section is responsible for processing planning applications. Plan proposals submitted by the developers are scrutinized in this section to determine the nature of

development proposed. They also assess all technical details of plan designs. This section liaises with the forward planning department to ensure that the applications are in accordance with the set regulations.

After plans are scrutinized by various sections, issues and approvals are forwarded to the Planning committee for recommendation to the full Council for endorsement and ratification of plans. Planning decisions are prone to political influence where sometimes decisions are made with little attention to planning implications. Sub county inspectorate department is mandated with the responsibility of regulating street traders and enforcement of Sub County by laws. The environment department manages the public parks in Thika Sub-County.

2.4.3.3 NEMA

Under the EMCA of 1999, NEMA is mandated to: coordinate the various environmental activities being carried out by lead experts; promote the integration of environmental concerns into development policies, plans, programs and projects, with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of the quality of human life in Kenya; take stock of the natural resources in Kenya and their utilization, conservation; establish and review land use guidelines; examine land use patterns to determine their impacts in the quality and quantity of natural resources; implementation of relevant international treaties, conventions and agreements to which Kenya should be a party to and follow up the implementation of these treaties.

2.5 Planning approaches for sustainable utilization of Public Parks

Sustainable utilization of Public Parks can be defined as, maintenance and perpetuation of parks (present and potential) uses, modifications, and developments of its environment and living resources to cater for the present and future generations (Owens, 1991).

2.5.1 Park Maintenance practices for sustainable utilization

A study that was conducted in Nairobi Kenya, Addis Ababa Ethiopia and Cape Town South Africa about sustainable management of public parks by UN (2010) provided the following management practices that can enhance sustainability of public parks in these cities.

2.5.1.1 Grounds maintenance

Grounds maintenance of any Park should be carried out to undertake all soft landscaping work and also carry out cleansing operations. This should be done after every 3 to 5 months according to size of the park versus the number of users and the needs for such maintenance. The hard landscape infrastructure in the park should be managed regularly. All hard landscape features should be inspected regularly as part of a 4 year programme, and additional interim inspections are also carried out in response to reported issues. Such work may include refurbishing of some paths and installing new paths.

Graffiti should be removed as soon as possible by either the parks maintenance department or by Cleaning Services. Priority is given to graffiti which is obscene or offensive which should be removed within 24 hours. Enforcement of law and supervision by security personnel should be ensured to reduce cases of Graffiti.

The play areas (the equipped play area, Skate Park, tennis court) should be managed and maintained sustainably. All play areas should have a daily visual inspection carried out by the grounds maintenance contractors hired by the local authority as part of their ‘unlock and inspect’ rounds to pick up on obvious health or safety hazards. A full inspection should be carried out by experts’ inspectors approximately every year. An all-time active call center should be provided to deal with any unsafe or damaged items in the park. Weeding of flowered and trimming of fences should be done regularly to enhance the beauty and the decent appearances of the park.

2.5.1.2 Buildings

Buildings and all other structures in the park should be maintained and monitored. Cleaning and renovation of such structures should be done regularly. All buildings should maintain the green and natural spirit of the park. Otherwise the historical and cultural concept of these buildings should be preserved. Building in the parks may include toilets, library, and social halls among others. These buildings should be maintained to ensure they are used by everyone in the society the physically challenged, the old and the children. In addition, seat/benches and other structures in the park should be cleaned daily.

2.5.1.3 Litter and refuse clearance

Litter should be cleared by the grounds maintenance sub county for example two times a day depending on the rate of generation to ensure the park is clean and free from solid waste. Trash containers should be provided all over the park and Bylaws should be provided to ensure visitors should use them always. Bio-degradable solid waste should be decomposed and the manure formed can be used in flower garden and in the planted trees. Non-biodegradable solid waste can be recycled or reused where possible.

2.5.1.4 Security

The sub county should have a team of Community wardens who provide a visible uniformed presence on the streets, parks and open spaces. Their aim is to make people feel safer, deter crime, tackle anti-social behaviour and to help keep the park clean and tidy. They should work closely with partner agencies and local people to promote community groups and facilities, helping to build stronger and more confident communities. The Community wardens should also work closely with the police and other security agencies which should meet regularly to discuss current community issues and how to tackle them. The wardens are responsible for securing the park at nights. CCTV should also be provided if possible to enhance security.

2.5.1.5 Recycling and waste management

All green waste generated as a result of grounds maintenance operations should be recycled and reused. Play chip (used as a safety surface) need to be re-used as mulch on shrub beds once spent. Tree pruning should be largely used for bio fuel outside of the town. Trimmed grasses can also be sold to the daily farmers in the town. In line with the sub county management, water usage should be monitored through regular water meter readings and any high readings are investigated promptly and water leaks repaired.

Where possible pesticide use should be kept to a minimum and alternative measures are investigated, in line with the Green Planting Policy. No residual herbicides should be used in the park that could have negative effect to underground water or the natural resource. Where shrub cover is adequate, it may be possible to eliminate the use of herbicides entirely in established shrub beds. The bowling greens should be managed in line with established practice, and have

selective weed killer, fungicide, moss killer and insecticide. These chemicals should have no side effect to the users.

2.5.2 Planning provisions for Public Parks in Kenya

Maina (2010) in his survey on suitable location of urban parks in Nairobi recommended the following location considerations: 1) Proximity to Training centers, 2) Distance from existing urban parks, 3) proximity to the center of the area, 4) Proximity to residential centers, 5) Proximity to cultural and sport centers 6) Distance from troublesome user 7) Distance from the main network 8) Access to sub Network 9) Located in the Good Land use and physical characteristic.

2.5.2.1 Public Parks as an urban land use

Public parks in urban areas are classified in the broad category of urban land use namely recreation land use (Physical planning handbook 2008). Recreation according to Kenya PPH (2008) is the sum total of human, social-cultural and economic activities that enhances the therapeutic status of the mind. It brings a relaxation of the body and mind. The average land recommended for Recreation land use in Kenya is approximately 5.1% of the total land in that urban area. A study that was conducted by Ministry of land department of urban planning (2004) shows that towns such as Nyeri has 18.8% of the total land use used for recreation while Thika town has only 0.7% of the total municipal land use is set aside for recreation. The total land use set aside for recreation land use in town such as Eldoret, Thika, Nanyiki, Isiolo, Nyahururu is below average (5.1%) requirement while towns such as Nyeri, Nakuru, Naivasha have recreation land use above average (Physical Planning Handbook 2008, pg 56).

According to Ministry of land the Recreation land use in Kenya includes

- Areas of scenic beauty
- Areas of historical/ cultural importance
- Unique physiographic features
- Parks, forest and water masses

- Playing field, stadia, green spaces, zoos, snake parks, museum, amusement parks among others
- Discotheques and cinema halls
- Conservation areas
- Road reserves

Urban Public Park requires 20% of the total recreation land use in urban areas which is 1.02% of the total land in an urban area.

2.5.2.1.1 Demand for recreation facilities

There are several socio economic factors among the urban and rural population that suggest a really need for generous provision of green spaces within the urban environment. These include:

Urban population: The majorities of adult population in urban areas are migrants from rural areas and show a strong attachment to land. The rural environment has been a formative influence in their life.

Low earnings: The majority of the population lack money for all their basic needs. They are therefore essentially pedestrian and their recreation must be found within walking distance to their home. There can't afford much living space and tend to live in cramped overcrowded conditions. Some relief is necessary from the pressure generated by overcrowding

Population structure: Majority of the population in major urban areas are under 25 years. Open spaces are therefore necessary for their health, physical and psychological development. Overcrowded living condition lack variety in the environment and lack of opportunities for independent play and exploration during the earlier years of children tend to inhibit their intellectual development. It is therefore essential to provide opportunities for children to play in safe attractive and stimulating surrounding within the residential areas.

Limitations on public expenditure: Public funds are limited; a sensible landscaping policy could be one of the cheapest and most effective way of counteracting eyesores in the manmade

environment; producing an urban environment which is attractive to live and work and providing areas of inexpensive recreational opportunity.

2.5.2.1.2 Requirements for a major Public Parks in urban areas

Although each park will have its own special character as determined by its topography, historical associations and immediate surroundings, it should however be able to provide a wide range of recreational opportunities from among the following:

- Areas of visual relief screened from surrounding
- Area for setting with quality with scented gardens, colourful garden, flower and shrub displays, small enclosure among others
- Areas for walking through such as shade avenues:
- Areas of botanical correction and exhibition;
- Areas of open air exhibitions of scriptures, paintings, photography among others
- Areas of flat expanse which encourage ball game, running about and exercising in addition to providing space for displays, fairs shows among others
- Areas of organized sports such as crickets, tennis courts among others
- Arena for open air display of traditional dancing, plays, concerts, shows mass meetings among others
- Developed artificial lakes and pools ornaments, boating, fishing, collection of water plants
- Children play grounds

Physical planning handbook (2008) which offers guideline for planners in Kenya suggests the following location, distribution and facilities required in the public park.

Location: For this area to be used most effectively it should be closely related to the following facilities within the urban area: - community centers and social halls, health center, local shops, primary and secondary schools. It may also be used as a landscaping buffer between major roads and the housing areas and between industrial areas and housing.

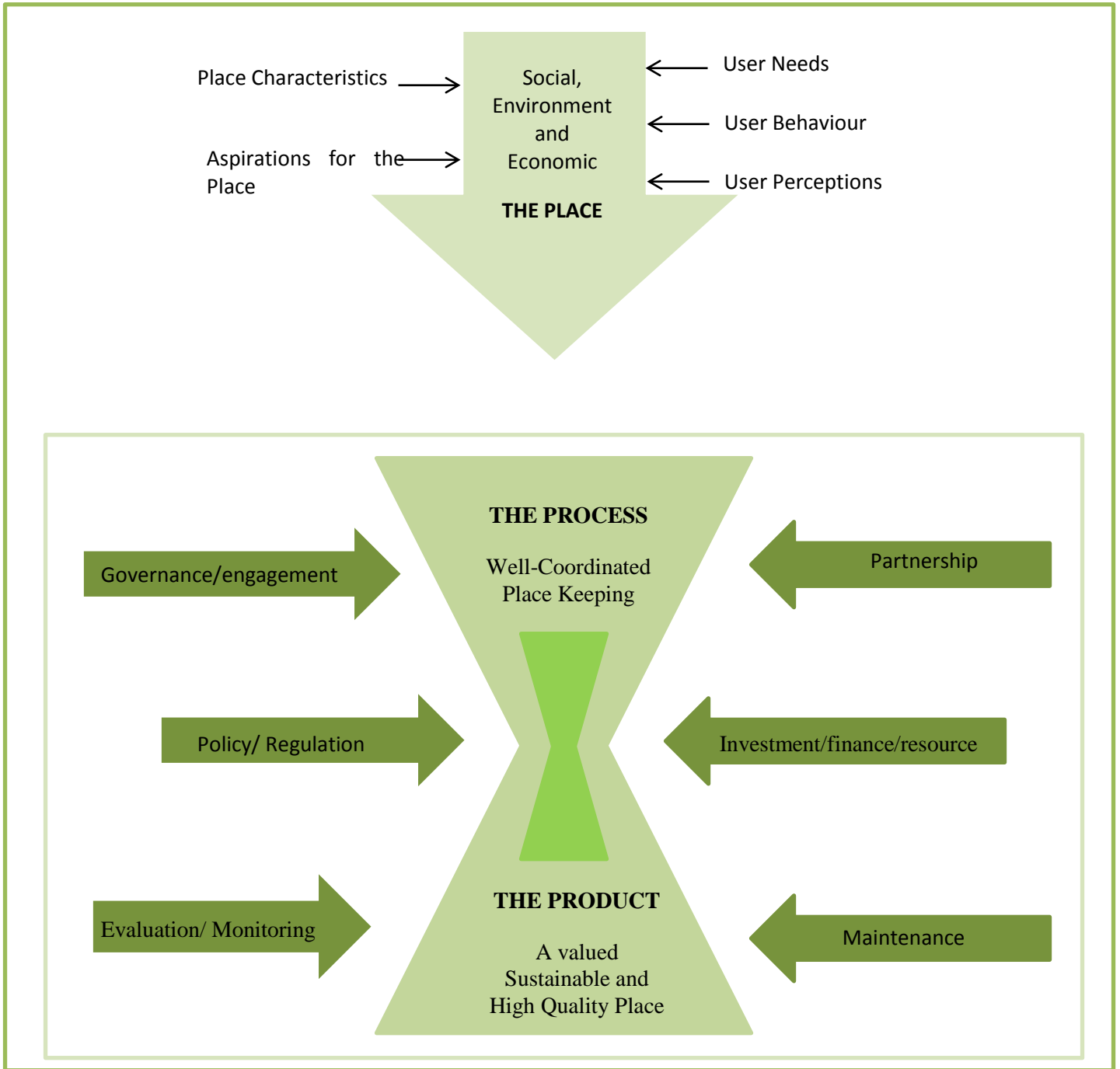
Distribution: There should be a small area of recreational space within walking distance of all areas with a residential density above 50 persons per hectare. It would probably be 1-2 hectares per 10,000 populations in areas above 50 persons per hectare.

Facilities: Besides ornamental landscaping features the park should include 1-2 playing fields and children's equipped playgrounds. In some parks there may be hard courts, in; others there may be adventure playgrounds or other special features.

2.5.3 Place-Making for sustainable utilization of Public Parks

Wild et al., (2008) defines Place-making as the creation of high quality places that people want to visit experience and enjoy. These spaces engender a sense of belonging and attachment for the local residents and who have access to use them. It is motivated by concepts such as effective utilization, 'sustainability', 'sustainable communities' that help in physical regeneration and revitalization of the town. When the concept of place making focuses on an urban park it is referred to as place-keeping.

Figure 2: Conceptual framework for place making



Source: Welch, 1991

2.5.3.1 Place-keeping

The concept of ‘**place-keeping**’ is the long-term management of places to ensure that the social, environmental and economic quality and benefits can be enjoyed by future generations. Place-keeping by its very nature is a multidimensional and multi-scalar concept. The dimensions are inter-related and it can be useful to consider it within a conceptual framework which can be applied to a number of different scales (e.g. site, neighbourhood, city, and region)

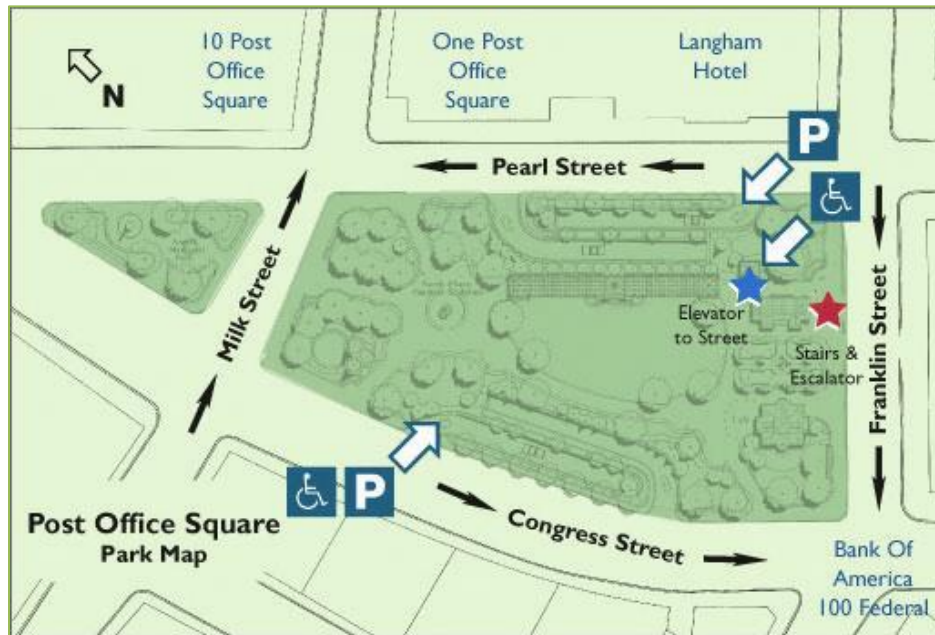
Maintenance encompasses a range of land management techniques and the day-to-day operations required to ensure the ‘fitness for purpose’ of a place (Barber, 2005, Welch, 1991). It relates to a place’s condition and cleanliness and to its robustness - how well it stands up to everyday use. One of the interesting aspects of place-making and place-keeping projects in practice is how they often have very broad social, economic and environmental aims and objectives.

2.5.4 Case study 1: Post Office Square, Boston

2.5.4.1 Introduction

Norman B. Leventhal Park at Post Office Square, constructed in 1991, is among the best-loved public open space in Boston. During a spring lunch-break, it is difficult to find a place to sit or even stroll through the park because of its popularity. The park occupies 1.7 acres. It provides open-space contrast to the dense concentration of Class-A office buildings that surround it. The park is open to the public, but is privately owned and controlled by the Friends of Post Office Square Trust. The park sits atop a 1,500-car parking garage, which provides part of the revenue to maintain and operate it. The trust also collects assessments from the owners of adjacent buildings. Post Office Square is maintained to high standards, with a maintenance budget of \$3 per square foot (approximately KSH 250).

Figure 3: A map of Post Office Park in Boston



Source: City Council of Boston 2002

2.5.4.2 Concept

Post Office Square was a reclaimed land from a dilapidated above-ground parking garage that was blight on the district. The garage was relocated below ground, under the park. Post Office Square is a park for all seasons, containing more than 125 species of plants and an extensive lawn. Bushes, plants and flowers edge sidewalks. A dense canopy of large trees protects the park, providing shade in the summer and filtering the light in the winter. The ground cover, shrubs and trees define and reinforce sidewalks, fountains, art, and a restaurant featuring a gamut of building materials brick, stone, wood, metal and glass.

2.5.4.3 Park design

The designer used many design features to make the park inviting and attractive. Green was brought all the way to each corner and walkways offset a little so that the park looks as big as possible. For safety, plantings are arranged so that all areas of the park are visible from the street. Planting beds and lawns are tilted up ways from the walks so that green areas appear more

extensive. A wide variety of plant material is used so that the park constantly change and plants show colour during as much time of the year as possible.

Detailing in the park is handled with great care and sensitivity. An attempt is made to echo material and themes from the surrounding building and the neighbouring park. For example, similar granite was used. The wrought iron fence, which incorporates image of foliage, was whimsical, yet historically appropriate. Lighting and benches are traditional. The low walls containing planting beds are of right height and depth for seating. Stone bollards and corners blocks incorporate an incised decorative pattern picked up from neighboring buildings. Care was paid to how brick walkways paving meet the granite wall, with a band of granite softening the transition. Even the drain grates and supports for the vines which will climb the trellises are carefully detailed. Architecture elements in the park consist of the garage entrance of glass pavilion housing café, and a 140 foot long trellis that helps define the main pedestrian walkways. The architect's intention was to dematerialize the buildings, keeping them light and unobtrusive. Artworks are also incorporated in the park though a competition, for example a computer controlling lighting scheme which edges the trellis and programmed with changing patterns which can respond to the passing pedestrian.

2.5.4.4 Features

Building the park on top of the underground parking was made possible by a 54-inch-deep layer of soil and drainage material, allowing the location of the plants and trees on the surface. The park encourages activities such as eating, reading, and people watching. Additionally, the park is designed to hold performances and accommodate supervised day care visits by children. The café boosts activity and helps extend the active hours of the park. On-site services include an information kiosk, seasonal displays, and a flower stall. The park's centerpiece is an all-season restaurant that includes 100 outside moveable chairs.

Figure 4: Images of people relaxing in Post Office Square in Boston city



Source: City council of Boston

Shrubs, trees, and ground cover define a series of garden rooms offering the visitor a variety of experiences, including a Red Oak tree and two giant Water Arborvitaes. Ramp access to the underground garage brackets the park on Congress and Pearl streets, successfully masked by flowers, shrubs and trees.

Figure 5: Visitors relaxing in Post Office Square in Boston city



Source: City council of Boston

A kiosk structure, fountains, and art provide points of interest in the park.

Figure 6: Decorations in Post Office Square in Boston city



Source: City council of Boston

CCTV, security lights and security personals offer security in the park and give the visitors' confidence to spend their time even at night

2.5.4.5 Management and Maintenance of the park

FOPOS is a company hired by all the stakeholders to oversee all the maintenance and management activities in the park and the garage which run it professional by keeping it clean and attractive. Mike Street Café was chosen to provide food service because of their ability to deliver quality food from a Kitchen nearby and willingness to work with the management company (FOPOS) on menu price and hours.

2.5.5 Case study 2: Central Park in New York City, USA

Central Park is a public park at the center of Manhattan City. In 1858, Frederick Law Olmsted and Calvert Vaux won a design competition to improve and expand the park with a plan they entitled the Greensward Plan. Construction began the same year, continued during the American Civil War, and was completed in 1873. Central Park is the most visited urban park in the United States. Designated a National Historic Landmark in 1962, the park is currently managed by the Central Park Conservancy under contract with the city government. The Conservancy is a non-profit organization that contributes 83.5% of Central Park's \$37.5 million annual budget, and employs 80.7% of the park's maintenance staff.

Figure 7: An image of Central Park



Source: City Council of New York

Central Park is one of the most famous sightseeing spots in New York. It is bordered on the north by Central Park North, on the south by Central Park South, on the west by Central Park West, and on the east by Fifth Avenue. Only Fifth Avenue along the park's eastern border retains its name; the other streets bordering the park (110th Street, 59th Street, and Eighth Avenue, respectively) changed names.

2.5.5.1 Visitors

The park, which receives approximately thirty-five million visitors annually, is the most visited urban park in the United States. It was opened on 770 acres (3.1 km²) of city-owned land and

was expanded to 843 acres (3.41 km²; 1.317 sq mi). It is 2.5 miles (4 km) long between 59th Street (Central Park South) and 110th Street (Central Park North), and is 0.5 miles (0.8 km) wide between Fifth Avenue and Central Park West. Its size and cultural position, similar to Munich's Englischer Garten and London's Hyde Park, has served as a model for many urban parks, including San Francisco's Golden Gate Park, Tokyo's Ueno Park, and Vancouver's Stanley Park .

Landscaping and facilities: While planting and land form in much of the park appear natural, it is in fact almost entirely landscaped. The park contains several natural-looking lakes and ponds that have been created artificially, extensive walking tracks, bridle paths, two ice-skating rinks (one of which is a swimming pool in July and August), the Central Park Zoo, the Central Park Conservatory Garden, a wildlife sanctuary, a large area of natural woods, a 106-acre (43 ha) billion-gallon reservoir with an encircling running track, and an outdoor amphitheater, the Delacorte Theater, which hosts the "Shakespeare in the Park" summer festivals.

Indoor attractions include Belvedere Castle with its nature center, the Swedish Cottage Marionette Theatre, and the historic Carousel. In addition there are seven major lawns, the "meadows", and many minor grassy areas; some of them are used for informal or team sports and some set aside as quiet areas; there are a number of enclosed playgrounds for children. The six miles (10 km) of drives within the park are used by joggers, bicyclists, skateboarders, and inline skaters, especially when automobile traffic is prohibited, on weekends and in the evenings after 7:00 pm.

2.5.5. 2 Crime

As crime has declined in the park and in the rest of New York City, many former negative perceptions have waned. The park has its own New York City Police Department precinct (the Central Park Precinct), which employs both regular police and auxiliary officers. In 2005, safety measures held the number of crimes in the park to fewer than one hundred per year (down from approximately 1,000 in the early 1980s). The New York City Parks Enforcement Patrol also patrols Central Park.

2.5.5.3 Maintenance

The park is maintained by the Central Park Conservancy, a private, non-profit organization that manages the park under a contract with the New York City Department of Parks and Recreation, in which the president of the Conservancy is ex officio Administrator of Central Park. Today, the conservancy employs four out of five maintenance and operations staff in the park. It effectively oversees the work of both the private and public employees under the authority of the Central Park administrator (publicly appointed), who reports to the parks commissioner, conservancy's president. As of 2007, the conservancy had invested approximately \$450 million in the restoration and management of the park; the organization presently contributes approximately 85% of Central Park's annual operating budget of over \$37 million. The system was functioning so well that in 2006 that the conservancy created the Historic Harlem Parks initiative, providing horticultural and maintenance support and mentoring in Morningside Park, St. Nicholas Park, Jackie Robinson Park, and Marcus Garvey Park.

2.5.6 Lessons from the case studies and applicability of the case studies in Kenya

- There is need to involve experts in designing the park and suggesting ways of improving them. Companies with experts, who have sufficient knowledge about designing Public Park should be hired to develop long and short-term plans, manage and maintain the parks. In Kenya and specifically Thika sub-county, planning and maintenance of the parks is done purely by the Municipal while in Boston City and in New York City a private company was hired to design the park and manage it. In Thika sub-county, a special department that should consist of experts in park planning, managing and utilization should be formed to oversee development and utilization needs of the parks. This approach would enhance accountability, synergy and professionalism.
- The park should generate revenues to pay for maintenance activities. This should not include charging visitors. In Boston the underground car park spaces and the food and drinks business activities generate enough revenues to maintain the park. In Thika sub-county the revenue generated from the park is less than 5% of its maintenance cost. In Kenya, therefore, a similar approach should be used where food and snacks business, photographing, parking

and such like activities should be introduced to generate revenue for the management of the park.

- The beauty of the park should be enhanced and improved all the time. The good looking park improves the sense of belongingness of the neighbouring residence and creates an aspect of place-keeping. It should be done by changing the flower bed regularly to make it look unique. In Thika, there is very little emphasis on the aesthetic values of the park. The sub-county of Thika should improve the beauty of the parks to attract more visitors and change the negative impression of the local community about the parks.
- Management and utilization of the park to improve the condition and the appearance of the park over time is vital. This improvement should fit changing needs and interest of the park users. In Thika, there are elements of the parks like Christina Wangari negatively evidenced by congestion, encroachment by business activities that discourages potential users from visiting the park. It is therefore necessary to ensure that utilization of the park in Thika is sustainable and flexible to the dynamic needs of the park.
- The management and improvement of a public park can be funded by the neighbouring business/property owners for the benefit of the workers and the public. By improving the park and place-keeping it, the rental and property values would increase due to the high number of visitors who would likely seek services from those buildings. In Thika Sub County, the local residents may be very reluctant to fund any county project due to the low capacity of sense of belongingness and weak social cohesion. The society basically thinks paying taxes should be enough. Therefore, funding projects in Thika should involve property owners and institutions like high learning institutions that will automatically have significant impacts to their properties and institutions. In such approach there should be maximum involvement and partnership of such parties in planning and management of the park.
- Partnership and involvement of all stakeholders is very important in coming up with a very successive park. Involvement of all stakeholders ensures a very inclusive design that guarantee comfort to all users i.e. the poor, the rich, physically challenged, the elderly and the children. In such an approach, the interests of all the users are ensured. Unlike the situation in Boston City and in New York City there is minimal involvement of the stakeholders in Thika in any kind of development. It should therefore be set as a significant

requirement as it is stressed by the Cities and urban areas act of 2010. The involvement of stakeholders may be significant in boosting the social cohesion and sense of belongingness among the local community and all the other actors in the project.

- The fence of the park should be kept short and attractive to give those using the adjacent streets a good view of the park. Accessibility should also be designed to link the park with other neighbouring areas. Christina Wangari garden like other parks in Kenya is surrounded by a tall fence that does not allow people walking along the roads to have a view of the park. The design of short fence such as in Post Office Park in Boston needs to be adopted in Kenya due to its ability to give the neighbouring people a chance to view the park.
- To achieve a well-designed and maintained public park the counties and other sponsors of the project should be willing to invest and allocate enough fund to come up with world Class Park. For example in Post Office park, maintenance cost the City Council around US\$3 per square foot (approximately KSH 250). Thika Sub County spends only 80,000 annually to maintain three parks in the sub county. Due to the limited financial capacity, the maintenance cost should not be so high like in Boston but at least KSH 40, 000 monthly should be budgeted to maintain Christina Wangari garden.

2.6 Conclusion

From a comprehensive analysis of the literature on Public Parks from historical perspective to date a few conclusions can be drawn:

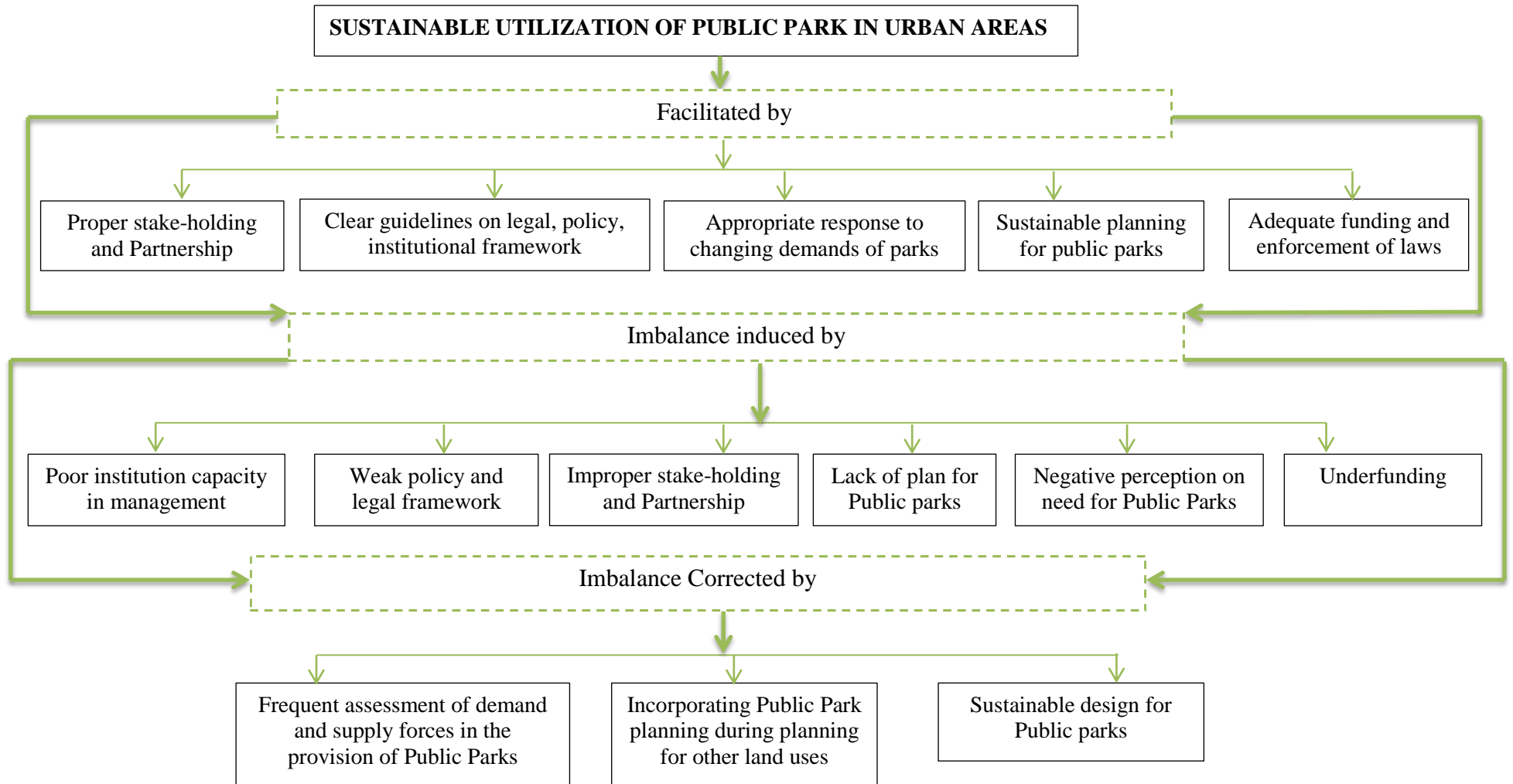
- The dynamic nature of society's lifestyle changes their needs for design requirement for Public Park since the uses change with the lifestyle. It was observed that during the classical period, all the way to industrial revolution and to modern era, the uses and manner of utilizing a Public Park keeps on changing. It can therefore be projected that in the future; the society and urban community might not be using or utilizing Public Parks like they are being used today. Therefore, when planning for Public Parks the design should be flexible enough to accommodate possible changes that might be required in future.
- An effective and sustainable functioning of an Urban Public Park is a product of the professional management, adequate funding, and level of commitment by the local authority.

Many parks fail to yield the benefits of a well-managed and utilized park due to poor planning and management. The local community on the other hand should be on the front line to push the government institutions to properly manage urban parks.

- When planning for public parks it is so unprofessional to generalize the planning and design needs for a public park; the understanding of needs must be site specific that should be dictated by the desires of the local community who are the most potential users. As stated by **Drivers (1977)**, people's needs are subject to their desire to meet certain goals and objectives and get benefits from them. That means during planning for public parks a study should be conducted specifically to identify the desires of the local community such as people with special needs (for example the physically challenged), religious background, different age groups, gender among other factors.

2.7 Conceptual Framework

Figure 8: Conceptual framework

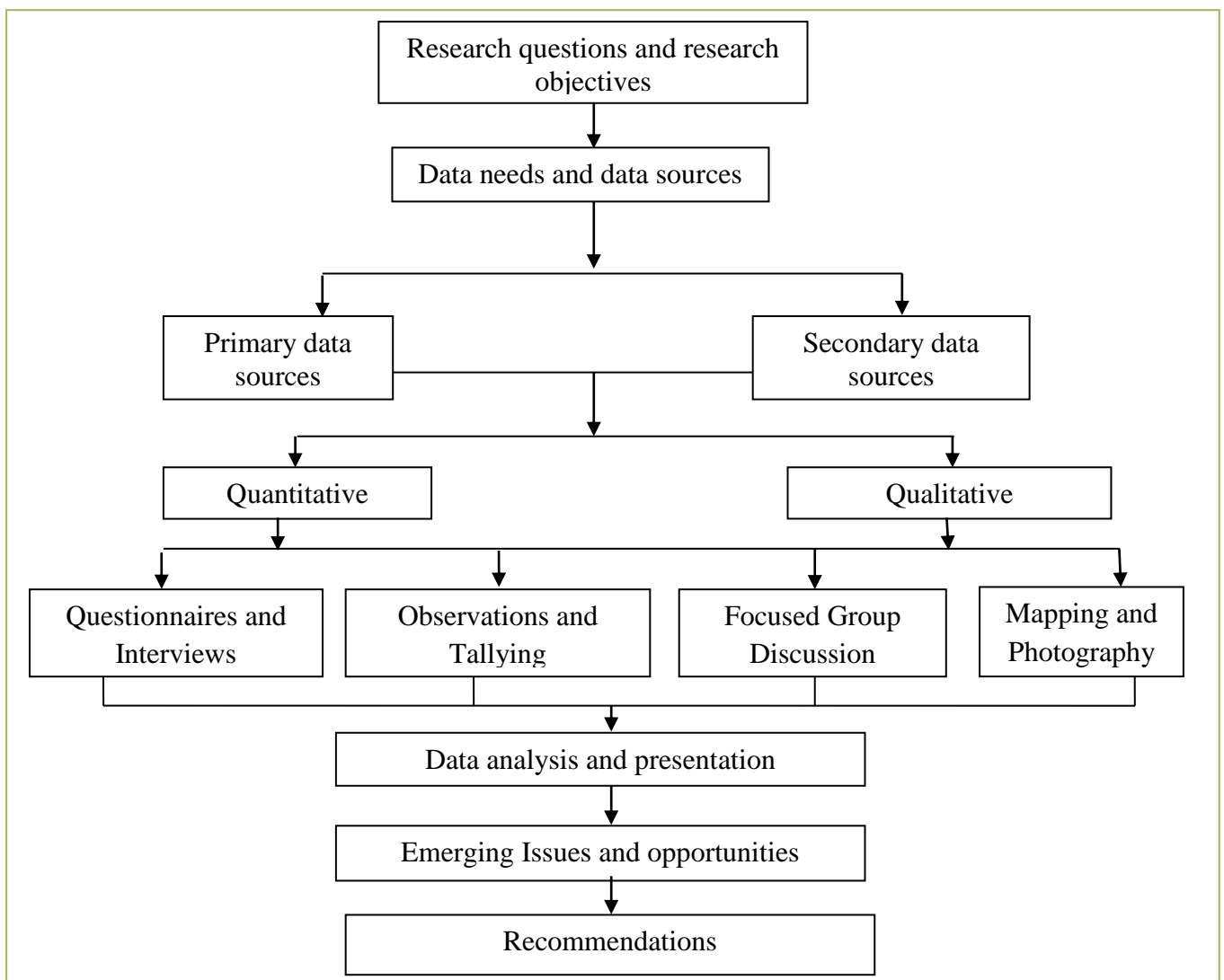


CHAPTER THREE: METHODOLOGY

3.0 Overview

The research methodology is geared towards realizing the objectives of this study. This chapter therefore expounds on the methods used in data collection such as interview, observation, questionnaire, mapping and photography. In addition it also explains sources of data and types of data collected, sampling methods and methods of data analysis and presentation.

Figure 9: Research Methodology Flow chart



Source: Author 2014

3.1 Research design

Research design is the conceptual structure within which research is conducted. The research employed Non experimental research method. The research study followed the process below;

Literature review of past studies on Urban Public Parks: The literature was obtained from books, journals, government documents, Conference papers, research thesis, internet and relevant documents relating to the study topic. The purpose of this was to familiarize and synthesize arguments and ideas on Urban Public Parks. The literature review focused inter alia on;

- The various policies and legislations on utilization of public parks and relationship with other urban land uses.
- Conceptualization of various variables in the interaction of Urban Public Parks and the commercial land use. This aided in the formulation of a conceptual framework that; guided the inquiry of the research, and provided a tentative theory (explanation) of their interactions.

The second step involved making a **familiarization tour** of Christina Wangari Garden and the surrounding land uses in order to have apt background knowledge and understanding of the entire study area. This reconnaissance tour involved making observations and taking photographs and it influenced the sample design of the study. Different institutions were also visited during this tour to give an overview of the study and to help in identification of the key active stakeholders and the potential stakeholders. It also influenced identification of the key informants, data needs, data sources, designing of data collection instruments and methods of data collection.

The third step was the **Field Survey** and involved administration of pre-survey questionnaires with the aim of testing their suitability in the field. This was to enable amendments to be made to the questionnaires in order to make them workable. Later the administration of data collection instrument was conducted with the aim of collecting the desired data. The data collection instrument used included questionnaires, interview schedule for the key informants and focused group discussions.

The fourth step involved **data analysis** using appropriate techniques. It included the analysis of the collected data from both secondary and primary sources. The fifth and the last step involved **Compilation of research findings**, conclusion and recommendations. The research findings from both the primary and secondary sources were compiled and conclusions drawn, formulation of recommendations was also done to address the situation on the ground.

3.2 Data sources

Data required for this study was gathered from various sources such as government publications, reports, journals, maps, internet, and minutes from the Sub-county of Thika among others. Data was also collected from the primary sources which included; interviews with key informants, park users and the Sub-county of Thika.

3.3 Data Collection Methods and Techniques

3.3.1 Analysis of documents

This entailed content analysis of the relevant literature and case studies with an aim of gaining a deep insight on the problem and on the enhancement of conceptualization.

3.3.2 Observation

This technique was used to collect information on facilities provided and their numbers. The quality of these facilities in the garden was examined. The condition/state of the garden was also observed as well as the uses and activities carried out. Tallying was done to count the number of people using the garden per unit time and the frequency of movement in and out of the park. Interaction of the park with the neighboring environment through movement of park users from different gates/sides of the park was also observed that also helped in mapping areas.

3.3.3 Questionnaires administration

Questionnaires were prepared and administered to various sampled respondents depending on the information being sought for. They were both open ended and closed. In this study, questionnaires targeted the users of Christina Wangari Garden at the time of the study. 50

questionnaires were administered during the field study to five identified strata according to the main purpose of visiting the park. The strata included; Smokers, Business operators, Washroom visitors, those users passing through the park and those relaxing in the park. All the 50 questionnaires were fully answered by the selected respondents.

3.3.4 Interviews

This entailed interviewing key informants and stakeholders of the park. Interview schedules were prepared and used to guide in interviewing the respondent. The main respondents were Sub-county of Thika officials, Kiambu County (Department of Lands, Planning and Housing), CBOs and NGOs such as Thika CBD Business Association, Thika Hawkers Association, JKUAT, Jodan College, Goodlife Sacco and Mt. Kenya University among others. Local Member of County Assembly, Local registered Physical Planner and Representatives of Thika Physically Challenged Organization.

3.3.5 Photography

Photograph taking was done to help in collection of data on the physical conditions of the garden and in recording visual land use implications of the Christina Wangari Garden. Photography assisted on analysis of information and data presentation.

3.3.6 Mapping

Maps and satellite images (from Google Earth) were used to gather information on the spatial organization of the Central business district of Thika town and the surrounding areas. It also helped in analyzing street organization and the neighbouring land use morphology surrounding the park.

3.3.7 Focused group discussion

Key informants and current stakeholders were invited in a morning breakfast focused group discussion that was held in Blue Post hotel. The Bluepost Hotel was selected due to existence of a well-managed private garden. The following stakeholders were selected to participate in the focused group discussion:

- i. Thika Sub-County Physical Planner
- ii. Thika Sub-County Public Park Supervisor
- iii. NEMA officer
- iv. Chair Person, Thika CBD Business Association
- v. Assistance Chair person, Thika Hawkers Association
- vi. Principal, Jodan College of Technology
- vii. Student Leader, Mt Kenya University (MKU)
- viii. Lecturer, Jomo Kenyatta University of Agriculture and Technology (JKUAT)
- ix. Representative of KCB Bank
- x. Representative of Thika Posta
- xi. Senior Planner, PEMA Consultancy limited (private physical planning firm- Thika)
- xii. Member of County Assembly, Thika Township Ward
- xiii. Secretary, Thika Physically Challenged Association

3.4 Population and Sampling

Sampling was used in this study due to its ability to reduce cost of the research, to reduce time of the study, improving better management, supervision and record keeping of the data and to enhance accuracy of the study.

3.4.1 Sampling Frame

The target population of the study consisted of the park users during the time of the study. This population includes children and adult population. Reconnaissance survey statistics estimates the total number of visitors in a particular time as 204 persons. 184 of this number were adults while 20 were children. The target population of this study excludes the children and thus dealt with 184 adult only as the study target population.

Out of the 184 adult visitors 5 categories were identified according to the main purpose of visiting the park. It was assumed that visitors with similar purposes of visit had homogenous needs and issues about the Christina Wangari Garden. These categories include: Smokers, those visiting Public Toilets, those relaxing in the park, those just passing through the park and those

involved in commercial activities in the park. The last target population consists of Key informants and the community gate keepers. These five groups formed the 5 strata that were used in this study. During the reconnaissance survey, the total number of persons per stratum was identified to help in sampling.

3.4.2 Sampling

The park users- the study targeted all adults using the garden during the study period. The field survey took place on week days (Monday, Wednesday and Friday) and on a weekend (Saturday and Sunday).

The study employed Stratified sampling and Systematic Random Sampling. Stratified Sampling was used to categorize the park users in 5 strata according to the main purpose of visiting the park. These strata are listed below with the average number of visitors per particular time.

- i. Those relaxing in the lawn or elsewhere: Average number is 95 per particular time
- ii. Smokers: 8
- iii. Those visiting Washrooms: 14
- iv. Those just passing through the park: 40
- v. Those operating commercial activities: 27

A sample of 50 park users was considered adequate due to the homogeneity of visitors in each stratum and since the scientific threshold of 10% representation was achieved. The sample size represents the 50 questionnaires that were administered in this study. In order to determine the sample size in each stratum the proportion of number of users in that stratum to the total number of users was used. The formula below was used:

$$\frac{\text{Average No. of users in each stratum per any particular time}}{\text{Average No. of Park users per any particular time}} \times 50$$

Where 50 is the intended sample size for the study

For example, in calculating the sample size of those visitors relaxing in the park where the average number of visitors relaxing is 95 and the average number of park users per particular time is 184, the sample size is 26 respondents.

$$\frac{95}{184} \times 50 = 26 \text{ respondents}$$

A similar approach was applied to identify number of respondent (sample size) in each strata and thus 4 respondents were pick to represent those visitors using washrooms, 3 smokers, 7 of those operating commercial activity and 10 of those passing through the park.

Systematic Random sampling was used to identify the specific person to answer the questionnaire. In each stratum each respondent represented 4 park users. Hence, in each stratum the 4th user was picked to answer the questionnaire, if the 4th user was not willing to answer the 5th person was picked instead. This procedure was repeated till all the questionnaires were administered in every stratum.

The key informants – Judgmental sampling was used to identify key informants who were interviewed during the study. The key informants involved stakeholders who were identified during the reconnaissance visit due to their level of activeness in Park management or their potential in partnership in sustainable utilization of Christina Wangari Garden. The Key informants included:

Government institutions

- i. Ministry of Lands, Planning and Housing ,Kiambu County
- ii. Thika Sub-County Physical Planner
- iii. Thika Sub-County Public Park Supervisor
- iv. NEMA officer, Kiambu County

CBOs and NGOs

- i. Chair Person, Thika CBD Business Association
- ii. Assistance Chair person, Thika Hawkers Association

Private institutions

Representatives from:

- i. Jodan College of Technology
- ii. Mt Kenya University (MKU)
- iii. Gretsia University
- iv. Jomo Kenyatta University of Agriculture and Technology (JKUAT)
- v. Delmonte
- vi. Standard Chartered Bank
- vii. KCB Bank
- viii. Thika Posta
- ix. Good life Sacco

Planning Experts

- i. Senior Planner, PEMAN Consultancy limited (a private physical planning firm- Thika)

Politician

- i. Member of County Assembly, Thika Township Ward

Vulnerable groups

- i. Secretary, Thika Physically Challenged Association
- ii. Chair Lady, Majengo Women Association

Table 1: Sample frame table

Interviewer		Number of respondents
Questionnaires Strata	Number	Grand Total
Relaxing on the Lawn	26	50
Passing through the park	10	
Commercial Activities	7	
Visiting Public Toilet	4	
Smokers	3	
Persons Interviewed		
Thika Sub-County Physical Planner	1	20
Thika Sub-County Public Park Supervisor	1	
Minister of Lands, Planning and Housing Kiambu County	1	
NEMA officer	1	
Chair Person, Thika CBD Business Association	1	
Assistant Chair person, Thika Hawkers Association	1	
Jodan College of Technology	1	
Mt Kenya University (MKU)	1	
Good life Sacco	1	
Thika Posta	1	
KCB Bank	1	
Family Bank	1	
Standard Chartered Bank	1	
Delmonte	1	
Jomo Kenyatta University of Agriculture and Technology (JKUAT)	1	
Gretsa University	1	
Senior Planner, PEMAN Consultancy	1	
Member of County Assembly, Thika Township Ward	1	
Secretary, Thika Physically Challenged Association	1	
Chair Lady, Majengo Women Association	1	
		Total: 70

Source: Author 2014

3.5 Data Analysis Methods and Techniques

In order to gain insight from the data collected, data was organized and analyzed using the most appropriate methods. These methods and procedures of data analysis included:

Quantitative Data Analysis: - Various parameters in this study were measured quantitatively. These are: current physical, economic and social status of the park such as number of different facilities, the challenges and constrains, and the possible solutions. This data was coded and inputted into the computer for analysis using (SPSS) and Microsoft excel. Frequency distribution, grouped frequencies, measures of central tendency, measures of variability and measures of relationship are among the statistical methods used. The output included; frequency, distribution tables and charts.

Qualitative Data Analysis: - This was applied to information that could not be analyzed statistically. Research aspects such as, physical conditions of various variables in Thika CBD, economic and social factors based on the researcher's observation and from people's opinions such as the park users and key informants information was analyzed qualitatively through content analysis and comparison of different opinions.

Geographical Information System (G.I.S):- Analysis of the spatial aspects such as the spatial organization of the area, the distribution of the neighbouring business and institutional premises and the street morphology that directed people to the park.

3.6 Data Management

These helped in checking data in terms of methods of data collection, the findings and other variables.

Data validity: Findings from the study, self-research and the respondents' information was analyzed to test the validity of the data. This involved finding out if the data collected and the method used were consistent with expectations and gave the desired results. It necessitated affirmation of the respondents' report.

Data reliability: Checking the consistency of the questions administered to different interviewees and the consistency of responses. This means that the same data would be obtained if the study was carried out in a situation that did not change.

3.7 Data presentation methods

A final written report was prepared and presented for all the compiled data. For effective communication of the findings and conclusions, pie charts, line graphs, tables, photographs, maps and written reports were used. The report was organized in to seven chapters as explained below:

3.7.1 Organization of Chapters

Chapter one: Introduction: The introduction chapter outlines the background information, problem statement, research questions and objectives, research assumptions, the scope of the study, justification and limitations of the study.

Chapter two: Literature review

Literature review was designed to address theoretical explanation of different attributes associated with urban public parks in order to afford answers for the research questions in this study. It addressed the following topics: overview of the theories of urban public parks, Changing roles of Urban public parks over time, attributes associated with park use and physical activities, types of urban public parks , benefits of urban public parks, challenges facing urban parks in Kenya and Garden Cities of To-Morrow (by Ebenezer Howard). Literature review addressed the concept of meeting human needs in Urban Public Park, factors that influence the use of urban public parks, sustainable utilization of Public Parks, modern approach for improving urban parks, Case studies: Post Office Square, Boston and Central Park in New York City USA , and institutional, legal and policy framework.

Chapter three: Research Methodology

The research methodology was designed to ensure that all the data required was accurately collected, analyzed and presented. The chapter included; research design, data sources, data collection methods and techniques, population and sampling, data analysis methods, techniques and data management.

Chapter four: Background to the study area

It addressed historical background of study area, the location of the study area from regional context, physical and environmental characteristic, population and demography characteristics and economic characteristics that reflect the objectives of the study.

Chapter five: Study findings

This chapter presented the data collected from the field articulating the real issues of the problem with respect to the field findings. The data was presented in form of charts and graphs among other methods of data presentation. This was answered research questions.

Chapter six: Planning implications

This chapter contained the emerging issues that were identified in every chapter in details, their causes, effects and their relationships, hence their implications for future improvement.

Chapter seven: Summary of recommendations and conclusions

This chapter summarized recommendations and conclusions for the project. These recommendations were informed by the knowledge that was acquired from the entire study mainly from the literature review and the research findings from the field work.

Table 2: Data Need Matrix

Research Objective	Type Of Data Required	Methods Of Data Collection	Sources Of Data	Method Of Analysis	Data Presentation	Expected Out
To investigate the type, current use and level of utilization of Christina Wangari Garden	<ul style="list-style-type: none"> - History of the garden -Physical characteristic of the garden / size/shape/ location in relation to other land use/facilities in the garden -Type and categories of user of the garden - Entire maintenance and management activities practiced in the garden -All activities practiced in the garden by the users 	<ul style="list-style-type: none"> Questionnaires administration -Interviews -Literature review - Mapping -Photographing -Observation 	<ul style="list-style-type: none"> -Publications -Key informants -Informal sector activities Proprietors -Residents/ park users -Neighbouring Property owners - Sub County of Thika 	<ul style="list-style-type: none"> -Spatial analysis tools (GIS) -Content analysis -Qualitative & quantitative analysis 	<ul style="list-style-type: none"> -Reports -Charts -Tables -Frequencies 	<ul style="list-style-type: none"> Explanation on the physical characteristic of the garden An explanation about the nature of the garden and the activities practiced in the garden Analysis of the maintenance activities in the garden and the entire activities practiced by the users
To find out the factors that influence utilization of Christina Wangari Garden	<ul style="list-style-type: none"> -Relation between garden and the neighbouring land use and activities -Factors influencing people to use the garden -Attractive features of the garden 	<ul style="list-style-type: none"> -Questionnaires administration -Interviews -Observation -Literature review - Mapping 	<ul style="list-style-type: none"> -Publications -Key informants -Informal sector activities Proprietors -Residents/park users -neighbouring Property owners -Sub County of Thika 	<ul style="list-style-type: none"> -Content analysis -Qualitative & quantitative analysis 	<ul style="list-style-type: none"> -Reports -Charts -Tables -Frequencies 	<ul style="list-style-type: none"> -Well established analysis of the factors that influence the use garden -Analysis of the existing attractive features in the garden and the missing features that the users may need
To establish the constraints in effective utilization of Christina Wangari Garden	<ul style="list-style-type: none"> -Characteristics of the garden that discourage residence from using the garden -Problems and challenges affecting the utilization of the garden Roles of stakeholder in managing the garden -Weakness and difficulties of different actors in improving the garden 	<ul style="list-style-type: none"> - Observations -Photography -Mapping and sketching -Questionnaires - Satellite images 	<ul style="list-style-type: none"> - Sub County of Thika -Field survey 	<ul style="list-style-type: none"> -Spatial analysis tools (GIS) - SPSS 	<ul style="list-style-type: none"> -Maps -Reports -Photographs 	<ul style="list-style-type: none"> Explanation about the planning challenges and constrains that affect the garden Roles of stakeholders to improving the park and their effort to improve the condition of the garden

<p>To examine the existing institutional, policy and legislative provisions that guide sustainable utilization of public parks in Sub County of Thika</p>	<p>Examining the legislative provision that influence management and utilization of the garden Reviewing the policy provision of policy document that guides sustainable utilization of the garden Examining the institution that influence and guide sustainable utilization of the garden</p>	<p>-Interviews -Questionnaires administration</p>	<p>- Sub County of Thika -Literature review/ Publications - Residents</p>	<p>-Qualitative analysis</p>	<p>-Reports -Photographs -Tabulations -Charts</p>	<p>Analysis and explanation of the provision of the legislation, institution and organization and policies that may affect the sustainable utilization of Christina Wangari Garden</p>
<p>To propose planning and operational suggestions for sustainable utilization of Christina Wangari Garden</p>	<p>-Planning efforts of the local community Sub County of Thika and other actors to improve the garden and difficulties -Possible and most applicable solutions that can improve the Garden and make it attractive to the residence and enhance sustainable utilization of the Garden</p>	<p>-analysis of the data collected -literature review (case studies)</p>	<p>- Sub County of Thika -Literature review - Residents</p>	<p>-Content analysis -qualitative & quantitative analysis</p>	<p>-Reports -Charts -plan</p>	<p>Planning intervention for improving the garden and make it more sustainable and attractive</p>

Source: Author 2014

CHAPTER FOUR: BACKGROUND OF THE STUDY AREA

4.1 Historical background of Thika town

There are two explanations for the name Thika. One has its origin in the Kikuyu word Guthika, meaning to bury. During a great drought, the Maasai ventured outside their normal territories looking for water for their huge herds of cattle. Two rivers pass through Kikuyu land, River Thika and Chania, both providing sustenance for the agricultural Kikuyu. With this water in contention, and both tribes desperate for survival, they fought a bloody battle that left few survivors. A mound near Blue Posts Hotel supposedly is where the dead warriors were buried. The other explanation comes from the Maasai word Sika meaning rubbing something off an edge. In addition, the area was originally inhabited by the Akamba tribe. Towards the end of the 19th century, outsiders began to settle in this outpost, a convenient resting spot between Nairobi and upcountry for British settlers. Europeans and Asians stopped and settled at Thika, the former setting up farms, and the latter setting up shops. A monument in the shape of a pillar was erected by the British in the early 1900s in the central business district of Thika; it commemorates the founding of Thika as a town. The town was given its status through the government gazette in 1924. It was elevated to a second class municipality when Kenya gained independence in 1963, and the first Mayor was enthroned in 1968.

The town has historical sites like the Mugumo Gardens, which is the name for the giant fig tree where the ancient legendary seer "Mugo wa Kibiro" prophesied. Believers claim that all of his prophesies have come to pass. According to the legend, the fall of the tree would symbolize the fall of British rule in Kenya. The British Government reinforced the tree to prevent it from falling, but it split into two parts and fell in two stages in 1963.

4.1.1 Historical Background of Christina Wangari Garden

Christina Wangari garden was initially known as Coronation garden. It is a historical site, which is in the heart of Thika Town. The garden is named after a famous woman freedom fighter, Wangari who was involved in the struggle for the country's independence. It is a public site and no fee is charged to visit the garden. The garden was designated as a public open space in 1942

by the colonial government when the population of the town was only 10,000 persons. It changed the name to Christina Wangari garden in 1963 after independence owing to the lapse of colonization. Its uses and management have evolved over time; originally it was a disused undeveloped open space that was chiefly used by the street families. Over time, under the management of previously the municipal councils, currently the sub-county, immense improvement on the garden has been witnessed. In the year 2003, the park designed was improved as well as its maintenance resulting to overuse and congestion leading to dilapidation.

4.1.2 Development Trends of Thika Town

Thika town has been developing rapidly especially from the year 2000. Indicators of development in Thika include population increase, increased built environment (both horizontal and vertical density), increased population density and improved functions of the town. The population, for example, has increase rapidly for the last 4 decades. In 1979 the total population of Thika was 18,209 persons but in 2001 the total population of Thika Sub-County increased to 107,174 persons with a population density of 487 persons per kilometer square. In 2009 population census indicated that the total population of the Sub-County shifted to 134,917 and the population density increased to 760 persons per KM². In 2012, the total population was 148,960 persons and the density increased to 827 persons per KM². The total population is projected to 171,430 by the year 2017.

The built environment has increased rapidly over the years as evidenced by reduction of undeveloped land in the Sub-County. The density of building in the Sub-County has increased rapidly as well. This density can be described in terms of vertical density and the horizontal density. This is observed in the residential areas as well as in the CBD of the town. In 2001, residential areas only had single dwelling unit per a ¼ acre of land, those dwelling units have been demolished and replaced with apartments. A similar scenario have been witnessed in the CBD of Thika with one floor business premises being replaced with 6 to 10 floors commercial premises.

4.2 The Physical Setting

4.2.1 Location

Thika is a market town in Central Province, Kenya lying on the A2 Road and located about 40 kilometer north of Nairobi city (the capital city of Kenya) on the Thika River at 13 degrees South and 37.55 degrees East. The elevation of Thika is 1420 meters to 1550 meters above sea level. Thika is one major town located on the Northern part of Kiambu County. Christina Wangari garden is located in the Central Business District between Kwame Nkrumah road, Kenyatta Highway, Uhuru Street and Commercial Street, opposite the Thika Sub-county main offices. The map below shows the location of the study area from a regional perspective.

Plate 1: Location of Christina Wangari Garden from a regional perspective

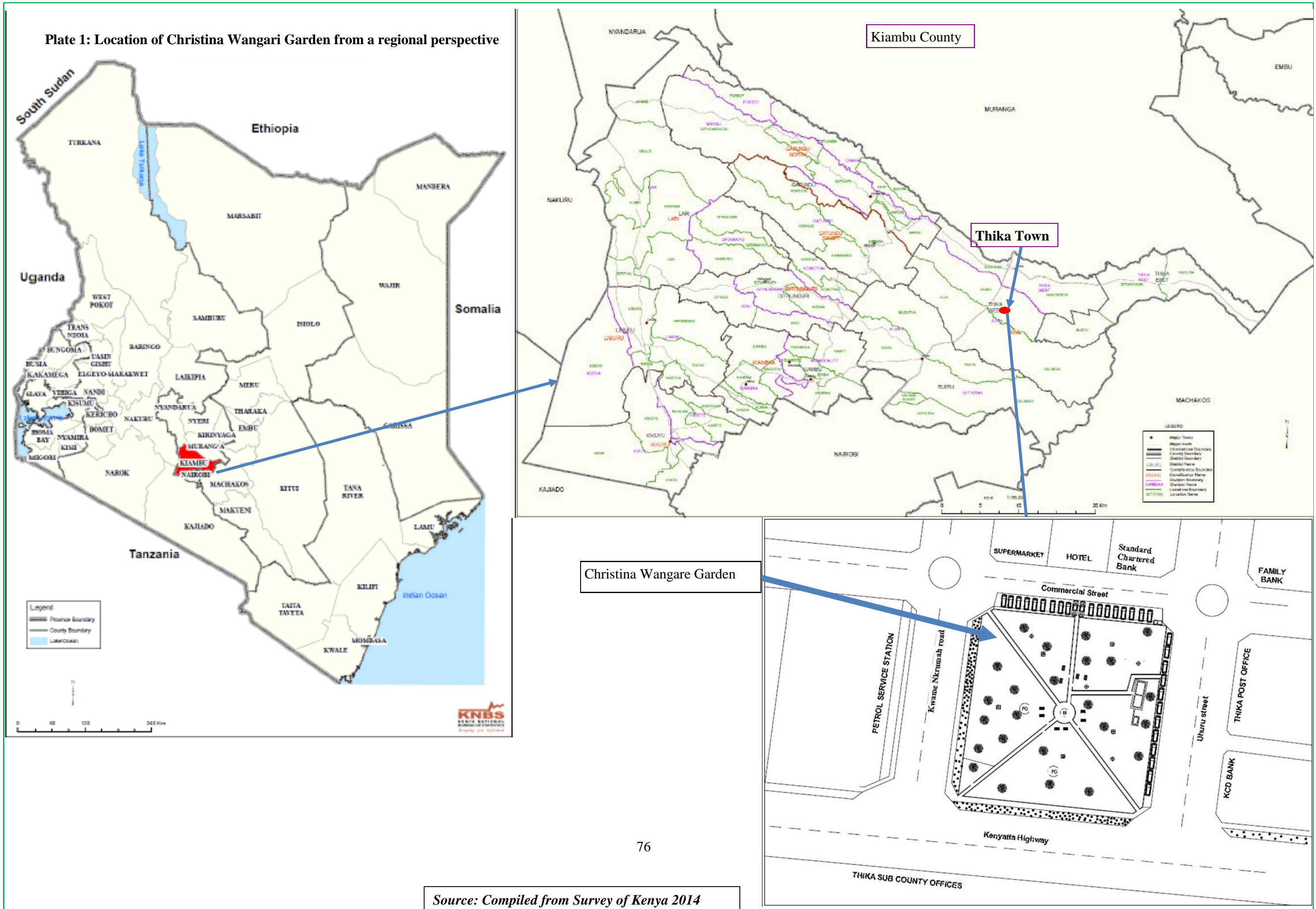
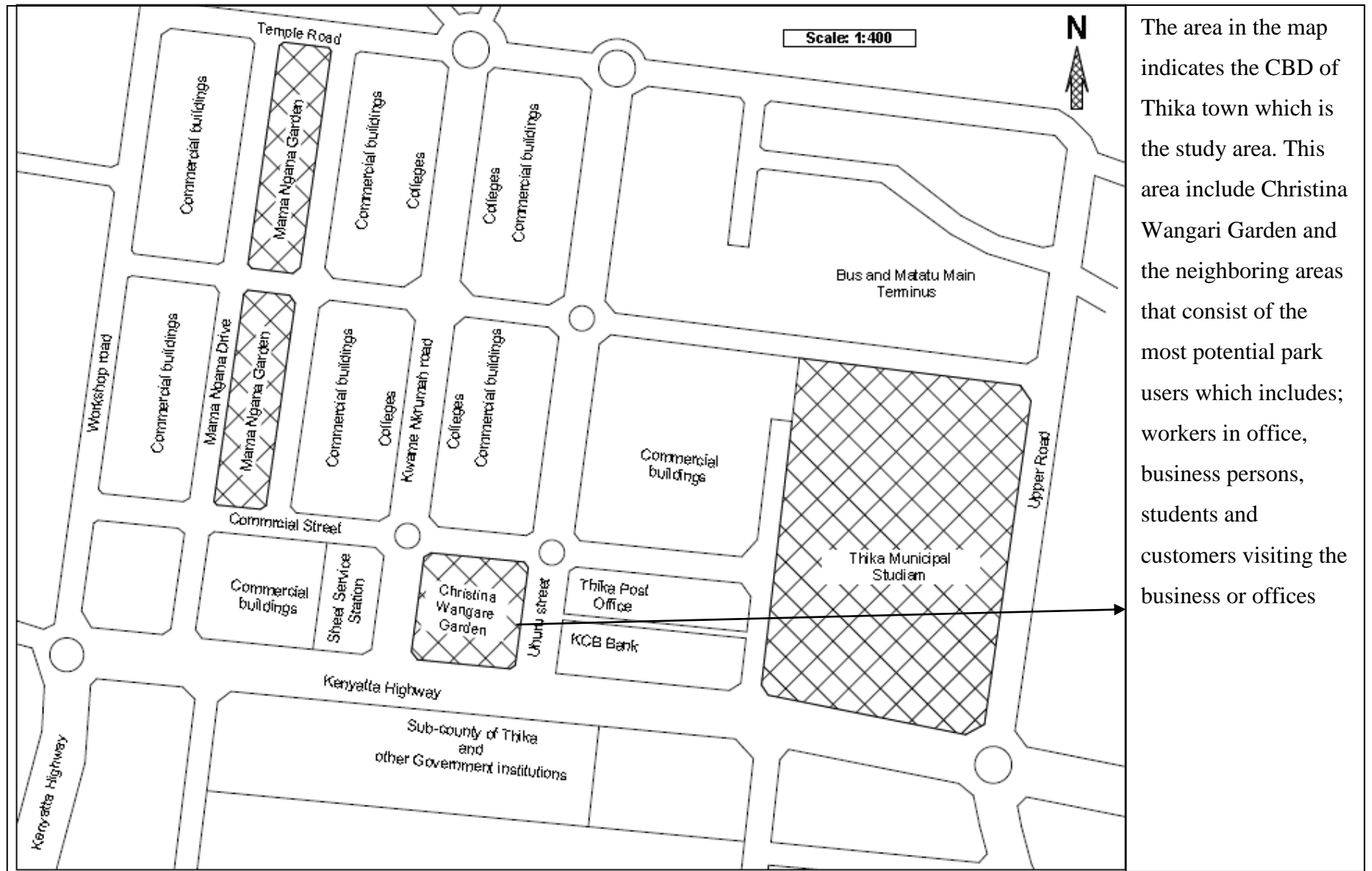


Plate 2: A map of Thika Town CBD



The area in the map indicates the CBD of Thika town which is the study area. This area include Christina Wangari Garden and the neighboring areas that consist of the most potential park users which includes; workers in office, business persons, students and customers visiting the business or offices

Plate 3: Land Uses in the Study area, Thika CBD



Source: Author 2014

4.2.2 Topography

Topographic features have not only affected climatic conditions of Thika town and the entire Thika Sub County but also economic development of the area. The town has a diverse topography ranging from 1060 m to 3550 m above the sea level.

The highlands to the west form water catchments areas' and watersheds of most of the rivers, which flow towards the lowlands of the Southeast parts of the district. All these rivers flow from Aberdare Ranges to the West and towards South East joining River Tana thus forming part of Tana and Athi River Drainage System. The higher areas to the west are characterized by deeply dissected topography with numerous slopes, which are prone to landslides.

4.2.3 Climatic characteristics

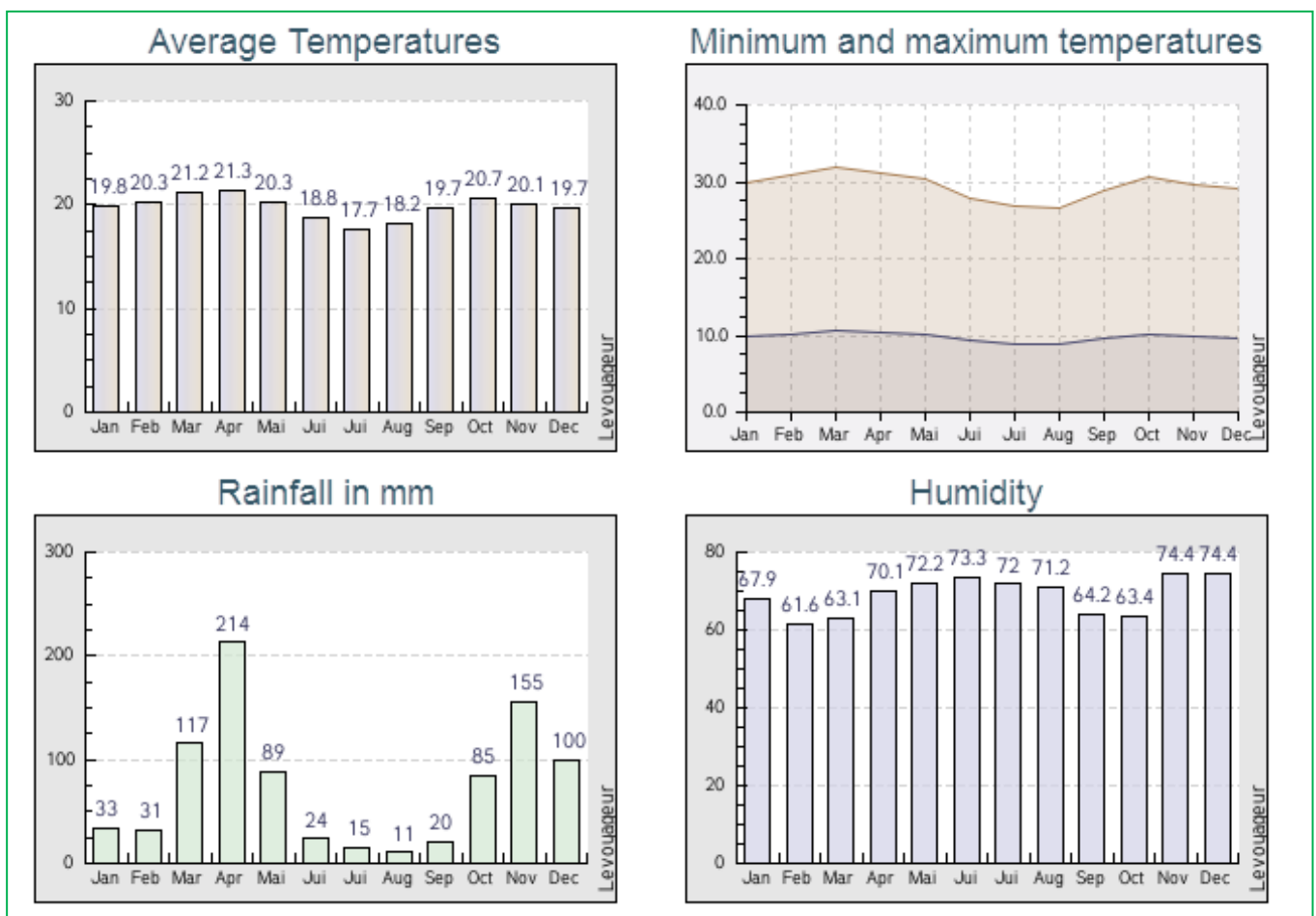
The sub county has a bi-modal rain pattern with long rains occurring in the months of June and May and short-rains in the months of October and November. Rainfall in the district ranges from 965mm to 2,130mm. The flat topography characterized by low rainfall and well drained soils makes it suitable for irrigated plantation farming, mainly coffee and pineapples, and beef farming. Cut flower is, also an upcoming economic activity. It is significant to note that while the numerous streams and rivers are an important source of piped water projects, they pose a major obstacle in road transport as they necessitate construction of many bridges and high maintenance costs.

Thika Sub County has a high potential for underground water. There are many boreholes scattered in most places of the town. The importance of underground water as a source of water supplies, for example, cannot be underrated, as it is hardly impossible to have gravity water systems. With an exception of irrigated farming, agricultural activities and the types of crops being grown have heavily been determined by rainfall patterns. The Northern and Western parts of the town, which receives 1,500mm minimum annual rainfall, tea, coffee and dairy farming are the dominant economic activities in the catchment areas. In the semi-arid areas to the East with low and unreliable rainfall, cattle rearing and production of drought resistant crops are the main pre-occupation of the farmers. Cotton, a drought resistant crop, can do well in this area but currently the potential is not being exploited.

Thika town has a mean temperature of 25°C with coldest months being June, July and August. The hottest months are February, June and April. Temperatures also vary during the year with a mean minimum of 20°C and a mean maximum of 30°C. With the exception of

Ndaka-ini Dam, which is the source of water supply for Nairobi City, the town does not have significant water mass.

Figure 10: Bargraphs showing climatic conditions in Thika

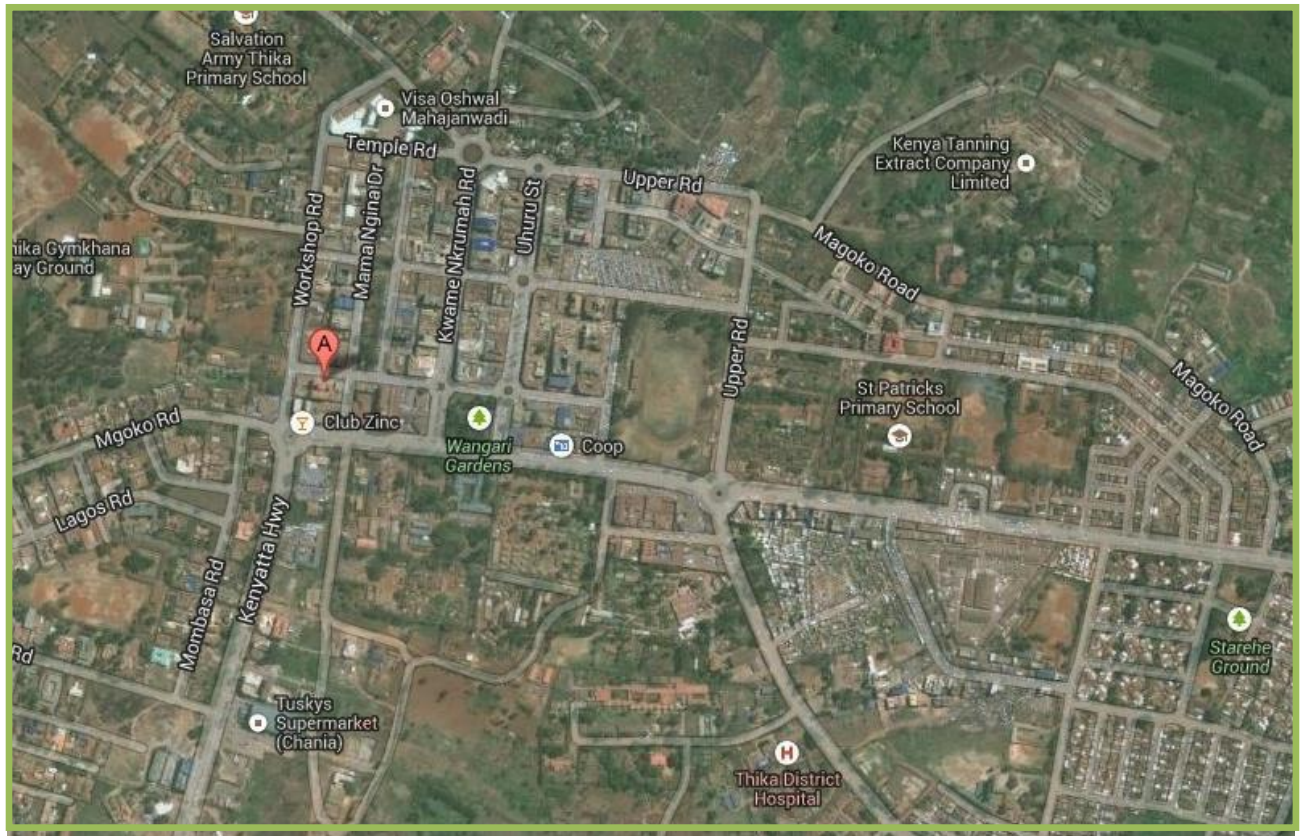


Source: Metrological Kenya 2013

4.2.4 Vegetation

In Thika town most of the existing vegetation consists of trees and flowers planted by residents. This covers about 2.3% of the total in the town. Christina Wangari garden, Thika stadium and Mama Ngina Garden are the main open public places in the central part of the town.

Plate 4: Vegetation cover of Thika Town



Source: Google satellite 2013

4.3 Population and demographic characteristics

Thika town is the 6th largest town in Kenya in terms of population with day time population estimated as 310,000 persons (KNBS 2009). The Sub-county of Thika has a population of 200,840 and a rapid growing of 4.7% per year (Thika Sub-County, 2013). The day time population is about 50% higher than the night population due to the high number of people who resides in the nearby rural areas or small towns but work in the Town. There is also additional group of people who visit the town during the day time to shop or visit various offices or some are just tourists. With the upgraded Thika Super Highway that has reduced travel time from Nairobi City to Thika from approximately 2 hours to only 30 minutes, most commercial and industrial activities has trickled down from Nairobi resulting to increased population. The day population density of the entire Sub-County is 912 Persons per Kilometer square but the day time population density is 1407 persons per Kilometer square.

This study focuses on the Central Business district of Thika sub county and more specifically the part of the CBD that neighbouring Christina Wangari Garden. The population neighboring the park in this study includes the persons within a distance of 100 meters from the perimeter of the Garden. This population is defined by this study as the most potential park users and consists of: persons working in different institutional offices, business persons operating in the area, students studying in the learning institution and frequent shoppers and customers visiting this business and institution offices. The population of those persons working in various offices includes people employed in institutions such as Banks, Hotels, Company offices, Government institution, Supermarkets and learning institutions among other such institutions. The sub-county of Thika identified 321 licensed work places and 1064 employee in the study area (100 meters from Christina Wangari garden).

Businesses persons operating in the study area comprise of; hawkers, small scale businesses operators, persons providing small scale services such as M-Pesa services, barber shops, shoe polish and fruit vendors among others. Thika Sub-County identified 3,456 licensed such business persons in the study area. The department of Education and Technology Thika Sub-County identified 634 students studying in different high learning institutions within the study area. Thika Central Business District Association (TCBDA) suggested that the approximately number of frequent customers shopping or visiting various business or offices within the study area is 30,000 persons per day. This number is high in week days than in weekends.

The total number of potential visitors of the Christina Wangari Garden is therefore estimated as 35,154 persons per day. Out of 35,154 potential users, only 650 persons in a week day and 1000 person in either Saturday or Sunday that visits the park. This population of the potential park user depends of the time of day and the day in a week. For example this population reduces by 90% at night and by 30% in weekend. It's clear to note that Christina Wangari Garden needs to be utilized effectively and sustainably to provide relation and leisure site for this high number of potential uses.

4.4 Economic Activities

Thika is externally serviced by an eight-lane superhighway, a highway to Garissa and the rest of North-East Kenya, a highway to the central highlands and a railway line (with plans to add

a passenger light rail to Nairobi). Internally, the town has a well-maintained road network. Thika is externally serviced by a dual carriageway to Nairobi, a highway to Garissa and a railway line. Internally, the town has a well-maintained road network. The economic activities of the town include agriculture, particularly in the horticulture (exports mainly to Europe) and coffee industry (exports mainly to the USA and Europe). Other industries include textile (cotton), mining (building stones), floriculture (mainly exports to Europe) food processing (pineapples, macadamia nuts, and wheat), real estate, tannery, motor vehicle assemblies, and cigarette manufacturing. Thousands of micro-enterprises, about one hundred small-scale industries and about twenty major factories exist in and around the town.

About 100 small-scale industries and about 20 major factories exist in and around the town. The service sector is well represented with the establishment and growth of a number of educational and financial institutions. Thika is home or close to three universities, tens of middle level colleges, hundreds of secondary and primary schools and dozens of financial institutions. Thika has a bustling nightlife, modern recreation centres and significant retail trading operations. The growth of the greater Nairobi region and improved infrastructure and services has led to new residential estates. The area surrounding Christina Wangari Garden is characterized by massive small scale business, educational institutions and government institutions.

4.5 Land use

Thika town like other towns in Kenya has various land uses. These land uses includes residential characterized by flats, apartments, houses, bungalows, and informal settlements among others. There is also evidence of mix use of houses where the ground floor consists of commercial activities and the other floors are residential. This land use occupies 54% of the total land in Thika town. Thika town operate as a dormitory town since it accommodate people working in Nairobi town but resides in the town. Educational land use is defined by availability of three universities, tens middle level colleges, over hundreds secondary and primary schools. Examples of this institutions includes; Amboseli Institute, Chania Boys High School, Excel Institute of Professionals, Grets University, International Centre of Technology, Jomo Kenyatta University of Agriculture and Technology, Kenya Institute of Management, Mount Kenya University, Reward Institute of Professional Studies, St John Kilimambogo Teachers Training College, Success Professionals Institute, Thika College of

Banking, Thika Institute of Science and Technology, Thika Technical Institute just to mention a few. This land use is estimated to occupy 8.6% of the total land use.

Industrial land use is evidenced by availability of production and processing companies that deal with products such as textile (cotton), macadamia nuts, wheat, tannery, motor vehicle assemblies, cigarette manufacturing, bakeries, packaging and industrial chemicals among others. Industries in Thika occupy 11.2% of the total land use. Agricultural land use is characterized majorly by the potential catchment areas of the town. The agriculture activities include; cultivation of horticulture and pineapple (exported mainly to Europe) and coffee (exports mainly to the United States and Europe), cooking oils (to the rest of Kenya and eastern Africa) and animal feed processing. This land use occupies 9% of the total land use.

Public purpose land use is characterized by various hospitals, cemetery, fire-station, government institutions and offices, police stations, social halls among others. This land use occupies 3% of the entire municipal land. Recreational land use in Thika town is majorly defined by the presence of various open spaces such as Thika Stadium, Mama Ngina garden and Christina Wangari garden among other open spaces like the railway line and power line riparian reserves. This land use constitutes only 1.8% of the total land. Transport land use in Thika is defined by the availability of roads and railway. It is clear that the railway line is not adequately utilized. Road transport has dominated the transport model in the area. Reports from sub county of Thika show 34% of the total roads are tarmacked while 66% are not. Transport lines in Thika constitute 26.2% of the total land use.

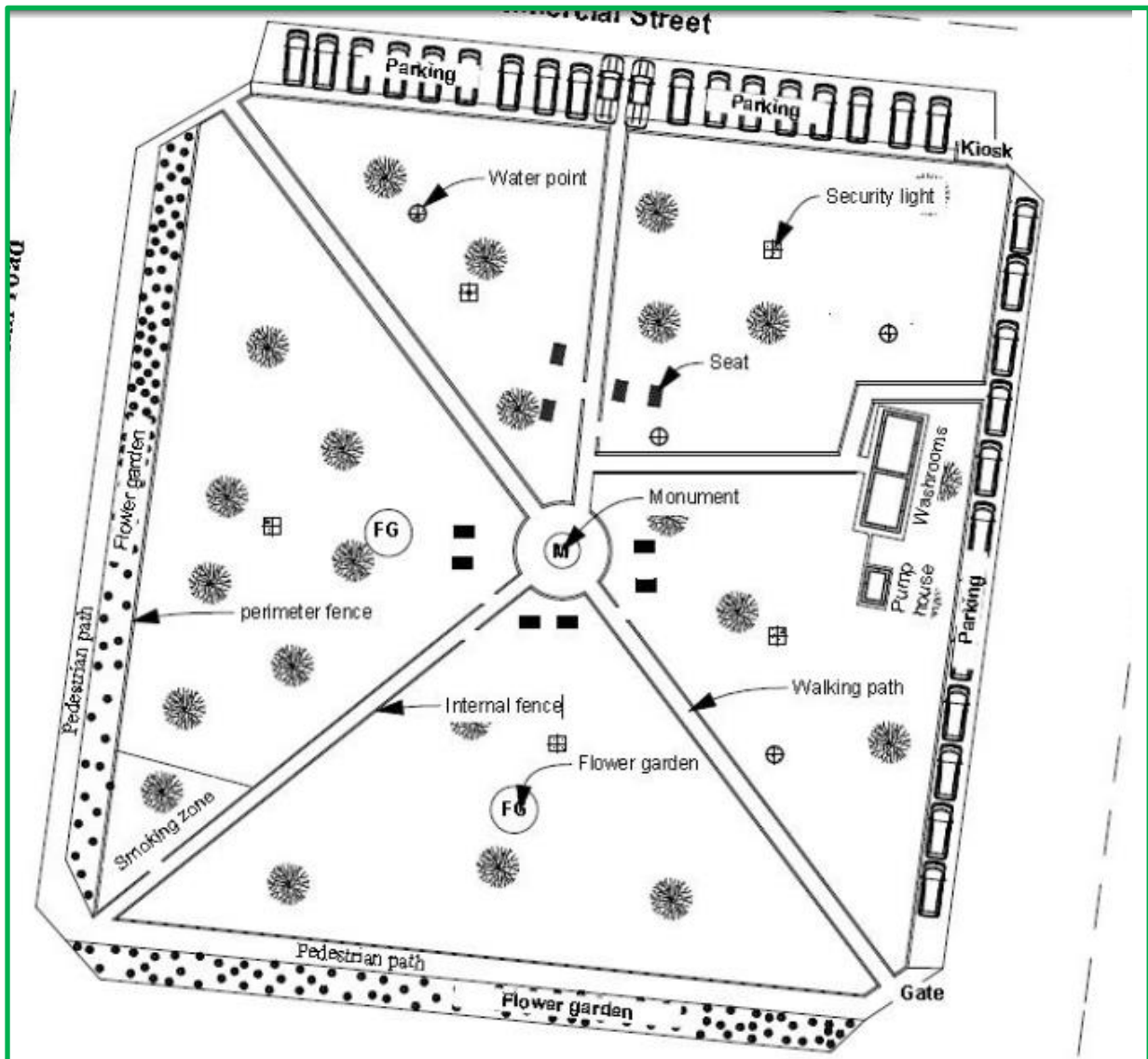
4.6 The study area

Christina Wangari Garden is located in the central part of Thika town and it is surrounded by Commercial Street on the North side, Uhuru Street on the West, Kenyatta high way on the South and Kwame Nkrumah road. The garden is surrounded by government institution (such as ministry of lands), learning institutions, commercial activities such as hotels, small scale business, financial institutions, offices among others. The presence of all these neighbouring land use activities increases the demand of park in the town. The park has a land size of approximately 0.6 hectare. The study also included the potential users that involve the neighbouring workers in different offices, business persons, students and customers shopping

or visiting different offices. The average numbers of park's visitors per day are 654 persons with Sunday recording the highest number of visitors.

Due to its location at the CBD of a busy town, Christina Wangari Garden is potential site for providing relaxation for the neighbouring persons working, studying, shopping, or visiting the various offices surrounding the park. The park suffers various challenges such as high number of users than the carrying capacity of park, poor capacity of the sub county in terms of funds and expertise, poor political good will, inadequate attention in maintaining and preservation of the park, space use conflict, threat of being encroached by business activities, in-optimal utilization ,grabbing by private developers, poor management, inadequate involvement of stakeholders, insecurity, negative perception from the users and the authority, inadequate facilities, lack of facilities for some groups of people such as the physically challenged, the old and the children.

Plate 5: Christina Wangari Garden (1.5 acres)



Source: Author 2014

Table 3: SWOT Analysis of the Study Area

Strength	Weakness	Opportunities	Threat
<p>The average annual rainfall in Thika town can support growing of grass in parks without necessarily watering it</p> <p>The availability of committed and knowledgeable park workers and supervisor to improve the conditions of the park.</p> <p>The centrality and affordability of Christina Wangari garden that make it favorable for users</p> <p>Availability of indigenous tree canopies that provide shade for the users as well as improving the beauty and environmental diversity of the park</p> <p>The proximity to the Thika Sub County office and the police station that help in supervision and security of the park</p> <p>Availability of banks surrounding the park increase the security due to the availability police officers</p>	<p>Negative perception about the need for a public park by the high income population and the actors in Thika Sub county</p> <p>Underfunding of public parks by Thika Sub county since the park does not earn the Sub County revenues like other land uses</p> <p>Lack of land banking by the government and even the fact that the entire CBD of Thika is developed hence hard for compulsory acquire land</p> <p>The fact that most partners get in to a deal of partnering with the local authority if they will benefit rather than a voluntary</p> <p>Poor capacity of enforcement by the relevant authorities makes it hard for the improvement of the garden. For example hawkers are prohibited but there have been more than ten hawkers in the park per particular time.</p>	<p>Availability of potential partners and donors who are willing to support any public project if requested to</p> <p>Devolution is likely to enhance improvement of public park by allowing park manager to work independently. Otherwise the decision and the funding development and improvement of public park and places is more decentralized</p> <p>Development of Kiambu spatial plan. This plan may note inadequate provision of public parks in Thika sub county and therefore give intervention that may see an improved approach to the shortage</p> <p>Availability of successive case studies that can be emulated such as Central park in Nairobi and Bluepost garden in Thika and Post Office Garden in Boston. Improvement of</p>	<p>Rapid population growth of Thika town increasing demand of parks in the town as well as urbanization. The increased demand pose threat of overuse of the existing pubic park</p> <p>The likelihood of the park being converted to other uses like development of private properties at Moi garden</p> <p>Encroachment by business activities. Business activities such as saloons are usually cheaper in the park than any other place in town and therefore tend to attract more customers. This means if no immediate solution is done, the park may gradually change from a relaxation site to a business center</p> <p>Unwillingness of Thika Sub County to invest or priorities the need for public park citing reasons like it is not a major</p>

<p>who man the bank at day time and security officers at night</p> <p>Availability of facilities though currently not functioning but can be repaired at a cheaper cost and functions again. Such facilities include water pump for the monument and water points spread in the Christina Wangari garden.</p> <p>Availability of photographers in the park who help in enforcement of the Park Bylaws and also supervise the garden reducing the cost of supervision that could have been catered for by Sub County of Thika</p> <p>Availability of well-drained soil and the gently gradient of Christina Wangari garden and in Thika town that make the park user friendly even during the rainy season</p>	<p>Lack of studies done by the Sub county of Thika to establish the demand of parks and the needs of park users. Such studies may help in addressing the inadequacy of public places in Thika. This also address the issue of inadequate application of professionalism in the management of public parks in Thika</p> <p>Kwame Nkrumah road drain storm water in the park causing flooding during the rainy season. These discourages the uses from visiting</p> <p>Lack of facilities and the inadequacy of facilities such as seat, kiosks, facilities for the children need funds that may not always be available and discourage potential users from visiting the park</p>	<p>Christina Wangari garden can borrow a lot from the completed plan of Jeevanjee Garden and already implemented plan of central park and Post Office Garden.</p> <p>Implementation of cities and urban areas act is crucial to proper management of towns and the governing of Sub County of Thika since it will empower professional and representatives of the people to make direct contributions towards the development of Thika town</p> <p>Potential users through rapid urbanization, population growth as well as improved infrastructure such as Thika Super High Way</p>	<p>necessity</p> <p>Lack of a master plan for Thika Sub County that would help the County government establish a land budget for the town and therefore address the inadequate public spaces. This pose a future problem where private developers will develop all the available land in the town without the provision of public recreation open spaces which cannot be provided by private investor.</p> <p>Poor state of public parks in Thika may result to a very negative perception of public places that may restrict them from visiting the park even in future when public park will be well improved</p>
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Source; field survey 2014

Table 4: Problem Tree Diagram

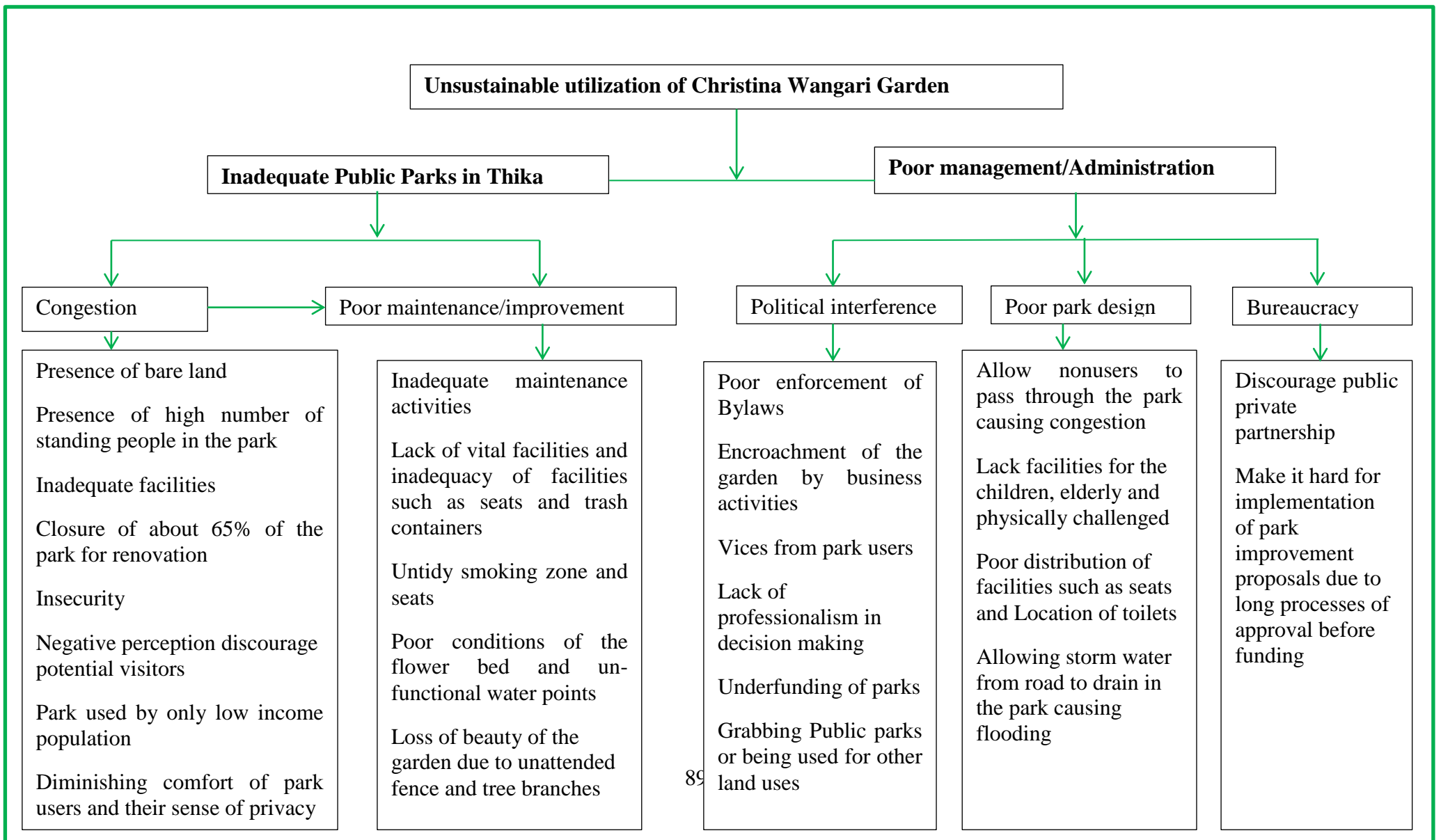
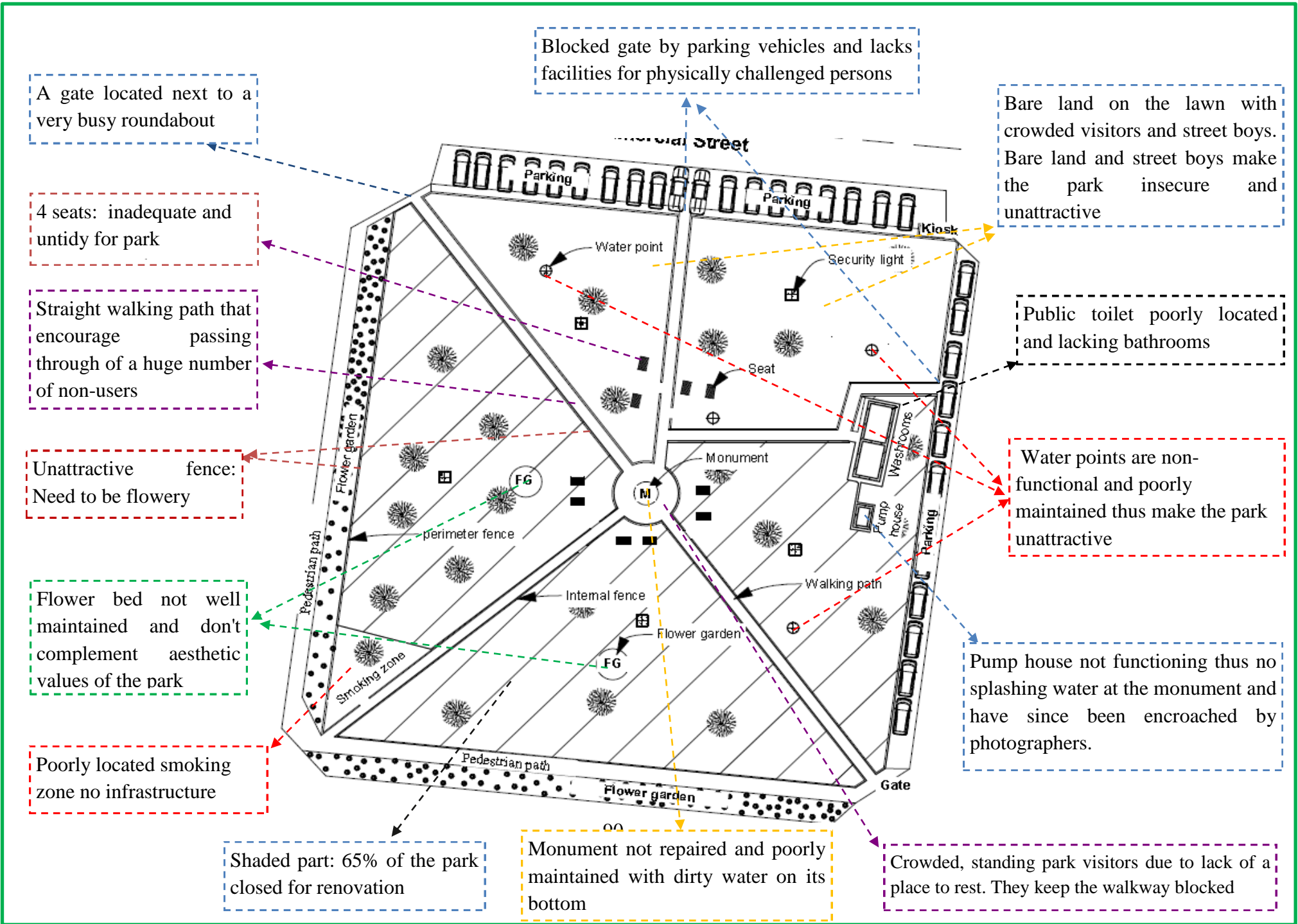


Plate 6: Problem Map



CHAPTER 5: DATA FINDINGS AND ANALYSIS

5.1 Introduction

A problem shared is a problem half solved, it is therefore crucial to involve stakeholders in the process of planning as a way of solving social, environmental and economic issues in any site. People's attitude, views and opinions are parameters through which issues and ideas are born, reared and implemented.

This part of the study focuses on the people's opinion on the research questions. This chapter evaluates the research findings against the study objectives. The relationship between the research findings and the study objectives is critically examined and analyzed. The data collected during the field study through questionnaires to the park users, photography, mapping, observation, tallying and interviews with the Key informant and the representatives from Thika Sub-county. Descriptive statistics has been presented using table, bar chart and pie charts as Mugenda (1999) states; they are good for descriptive variable.

5.2 Current use and level of utilization of Christina Wangari Garden

The study intended to establish the current use and level of utilization of Christina Wangari Garden as well as other characteristics associated with the use of the garden.

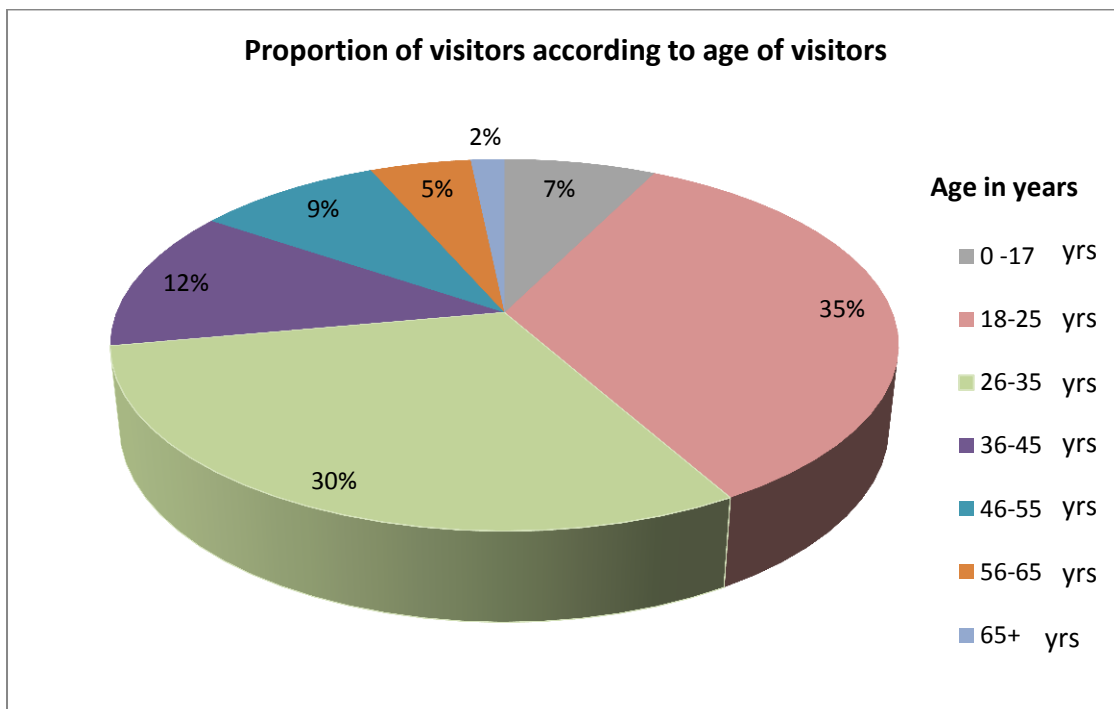
5.2.1 Proportion of Park visitors by gender

The study intended to know the proportion of the park users according to **gender**. This was achieved mainly through noting. The number of female in the park was slightly higher than that of the male at any given time. This is probably possible because men have alternative places for spending their free time such as bars and clubs unlike most women. A tallying that was done lunch hour in a week day shows that 52% of the Christina Wangari garden visitors were female while 48% were male. This observation was similar in a tallying that was done in a Sunday afternoon.

5.2.2 Proportion of visitors according to age

The study established that majority of the park visitor were middle age. Two thirds of the visitors are youths between the ages of 18 years to 35 years. The study also established that 82% of this population (between 18-35 years) was students in various surrounding high learning institutions. Most of them visit the park during intervals between their classes. Generally, young people can endure harsh conditions in the park such as standing for long hours, seating on stones and so on as a result of inadequate facilities and congestion in the park. Only 1 old person in a sample size of 40 questionnaires was above 65years. The park lack facilities for old and that may explain the minimal number of elderly persons visiting the garden.

Figure 11: Proportion of visitors according to age of visitors



Source; field survey 2014

Figure 12: Photo of the park users

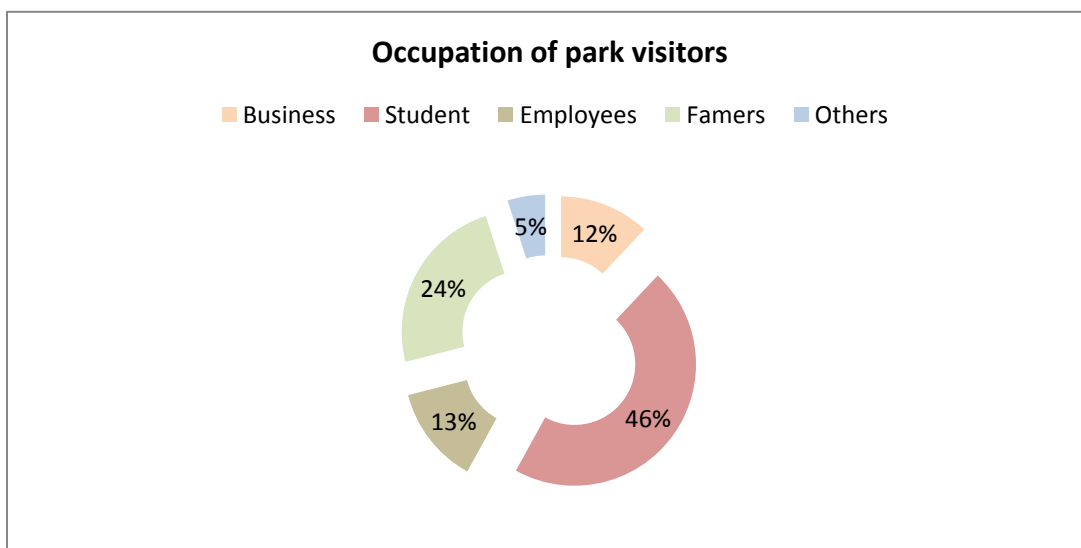


Source; field survey 2014

5.2.3 Occupation of the park users

The study also established the occupation of the users of Christina Wangari Garden. Five categories of occupation were noted and included; students, farmers, small scale business persons, employees in office and others. Others included Matatu/Bus turn boys, jobless (searching for a job), homeless families among others.

Figure 13: Occupation of the park users



Source; field survey 2014

Most of visitors were students who constituted almost half (46%) of the visitors. Farmers who the research noted came from neighboring agricultural areas such as Murang'a or Thika

neighbourhoods constituted 24% and they mainly come in Thika town to visit Banks, offices or for shopping purposes. Students could be attracted to the park due its affordable and proximity to learning institutions.

5.2.4 Distance from the park to the visitors work place and home

More than half of the visitors of Christina Wangari garden work within the CBD of the town or less than 5km away. Majority (67%) of them also had their home within Thika Sub County or 15 kilometers from the park. Only few people (less than 15%) living or working more than 10 km away from the park visited the park. Thus the study noted an inverse relationship between the distances travelled by the park user and likelihood to visit the park. The longer the distance from either the work place or the residential place the less likely one is to visits the park. Cost of transport is a critical measure of affordability of the park. The study noted that those visitors who travelled more than 5 km to visit the park were mainly there to meet someone or were waiting for certain services from the various offices in Thika Town. None of them was there for relaxation, discovery or socialization.

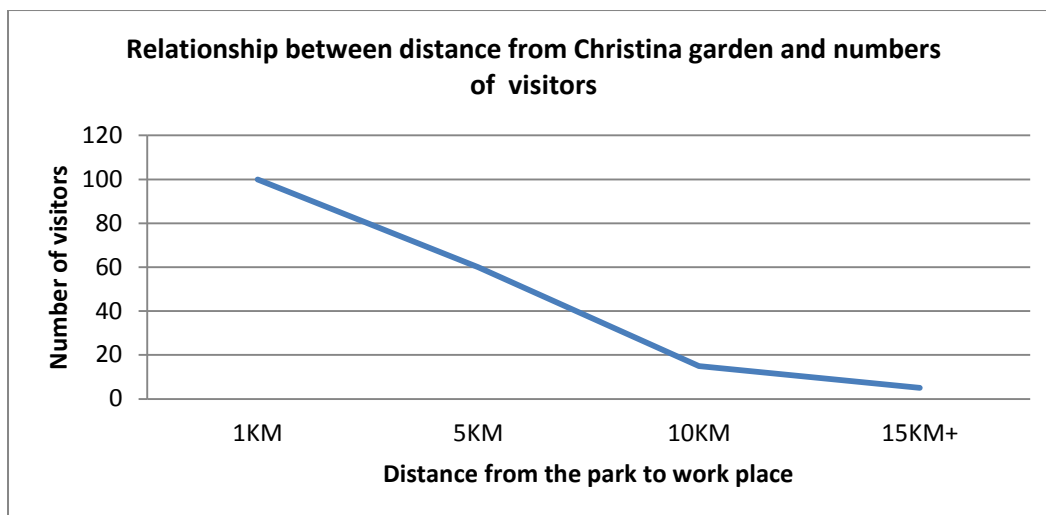
Table 5: Distance from the park to the visitors work place and home

Distance km	Location of the respondent home/work to the Garden	Percentage of respondents
0 – 5km	From home	67%
	From work place	59%
5.1 – 10 km	From home	22%
	From work place	26%
10 km and above	From home	11%
	From work place	15%

Source; field survey 2014

59% of the park visitors have their main occupation (work place of college) within the Central Business District of Thika town.

Figure 14: Relationship between distance from Christina garden and number of visitors

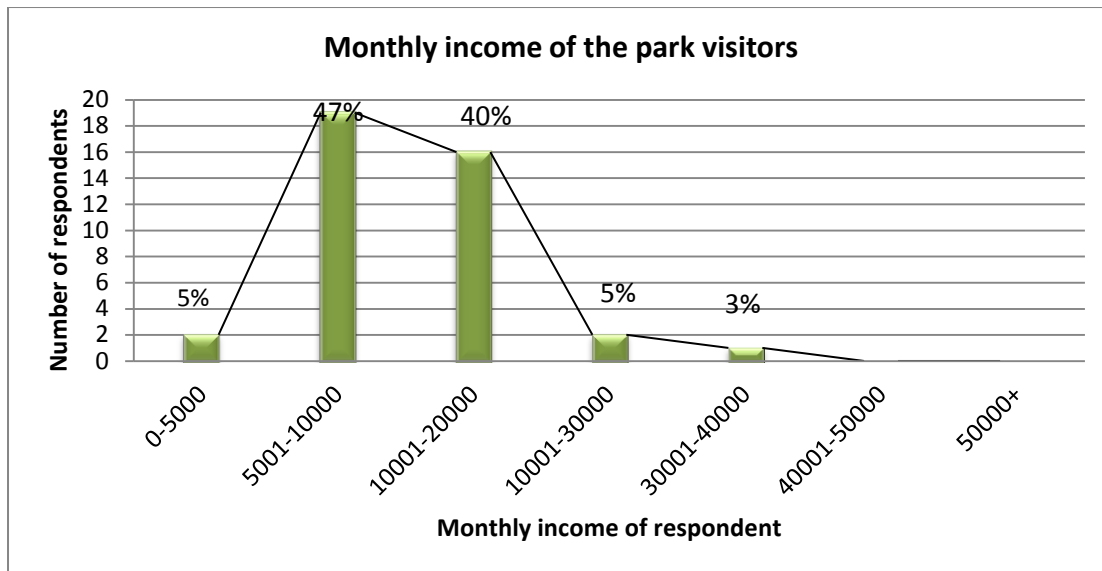


Source; field survey 2014

5.2.5 Income of the visitors

The study shows that about 95% of park users are in low income category whose earning is Ksh 30,000 or less per month. About half of the visitors' monthly income is from ksh 5,000 to 20,000. This is generally the population who can't afford to pay regularly to visit recreational facility or spend their leisure time in a private garden or in restaurants. This category of income uses the park to meet friends or relax as they wait for a class or services in offices. Visitors who carry packed lunch from their home take it during the lunch hour in the park. Affordability is a factor critical to the use and high income population could be using private parks and restaurants due to conduciveness.

Figure 15:Income of Park visitors



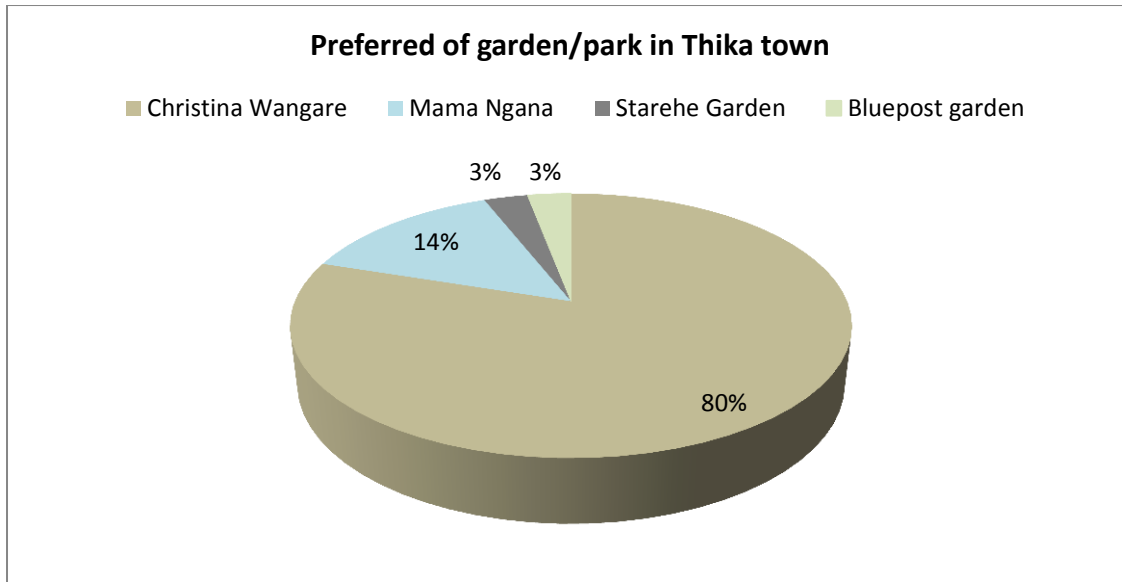
Source; field survey 2014

5.3 Factors that influence utilization of Christina Wangari Garden

5.3.1 Most preferred Public Parks in Thika town

The research wanted to establish the most preferred park in Thika town. It also wanted to investigate the characteristics of such a park. 81% of the respondents said that they prefer visiting Christina Wangari garden than any other park in Thika. The other preferred park was Mama Ngina garden which is 80meters from Christina Wangari garden. Other parks included Bluepost which is a private park and Starehe Park which is 3km from Thika CBD and is currently used as a football field. Christina Wangare garden is central, accessible, has unique facilities, is a land mark; factors that are considered vital in influencing use. Blue Post might be a preferred Park due to its conducive conditions and facilities but due to lack of centrality and affordability issues makes it less attractive.

Figure 16: Preferred Parks in Thika Town

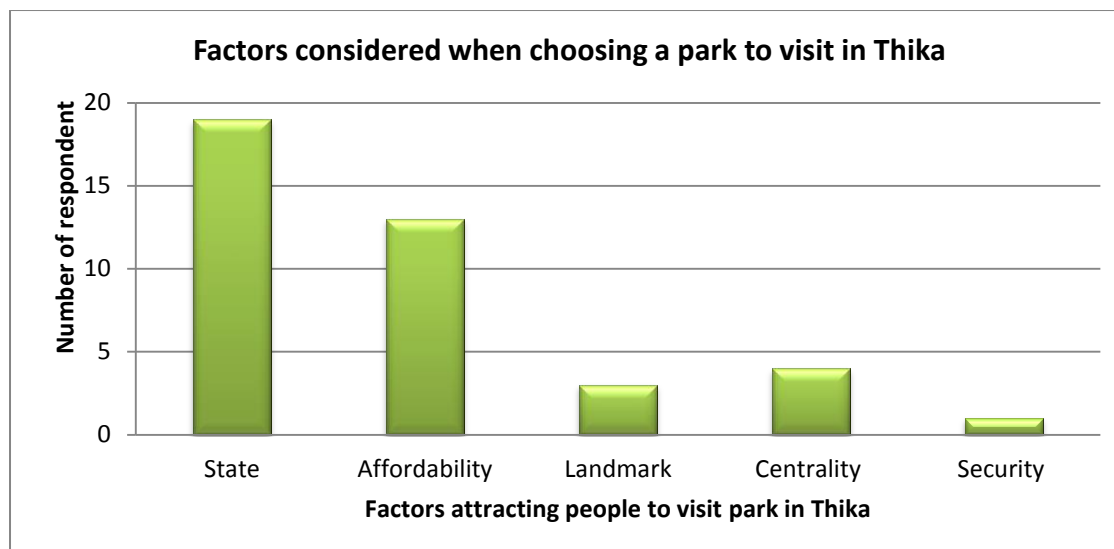


Source; field survey 2014

5.3.2 Characteristic of most preferred parks

According to the interviewed respondents on preference of the particular park, 47% said they preferred that park due to its state. The state of a park in this case, means the general condition of the park manifested by the available facilities (washrooms, photography, smoking area, and saloons), level maintenance and its level of conduciveness for relaxation. 29% of users were attracted by the affordability of the park. 9% of the users are attracted to a park because it is a main landmark in the town or is adjacent to many landmarks such as sub county offices, post office, government offices, banks, petrol stations and supermarkets. 10% prefer visiting the park due to its central position in town. Only 3% was attracted by security of the park. The chart below expounds on the factors that people consider when choosing the park to visit in Thika. Centrality and affordability should be the main critical factors in Park Planning and provision

Figure 17: Factors considered when choosing a park to visit in Thika



Source; field survey 2014

5.3.3 Activities/uses of the park

There are a number of uses or activities practiced by persons who visit Christina Wangari Garden. These activities range from commercial, social, relaxation among others. From a tallying that was done in 3 weekdays and on a Sunday, within 1 hour the average number of persons who get in the park are 2,820. 84% of these people just walk through the park to access different places on the opposite side of the park, 10% get themselves a place in the park to relax, meet someone, wait for someone or socialize and spend an average of 60 minutes (1 hour) during their visit. 2% visit the washroom and leave after an average of 4 minute while 3% visit the smoking zone and after an average of 10 minute leave. 1% gets in the park and involves themselves with business activities such as hawking, photography or saloon as well as sleep in case of the homeless. The table below summarizes these against the population.

Table 6: Main activities/uses in a park

MAIN ACTIVITIES/USES		Average time stayed in the park during the visit	Number of user involving in that activity in an hour		Number of user involving in that activity per a particular time	
Walking through the park		1minutes	2369	87%	42	16%
Resting: relaxing, waiting/meeting someone or socializing		1 hour	176	7%	178	66%
Smoking		10 minutes	84	3%	8	3%
Commercial activities	Hawkers	3hours	12	0.5%	12	4%
	Saloon	8 hours	8	0.25%	8	3%
	photography	8 hours	7	0.25%	7	3%
Visiting washroom		4 minutes	58	2%	14	5%
			Total= 2716		Total: 268	

Source; field survey 2014

A conclusion can be drawn from the table that majority, 84% have no interest in the park but just use it for transit or access. At every minute about 47 persons gets in the park from the 5 gates in the park, out of the 47 only 1 or 2 persons have interest in the park. These people cause a huge congestion along the walking path (which are only one meter wide) and the gates which have an equal width. People passing through the garden or a park are generally not genuine uses. There are emerging unique uses of parks that should be incorporated in Parks Planning such as smoking, nail painting and washrooms.

Figure 18: Park users passing through the garden



Source; field survey 2014

The genuine activities/uses of the park therefore include; resting (when waiting for someone or services from an office nearby, meeting someone in the park, engaging with natural environment, socializing or just relaxing), smoking, business and visiting washrooms.

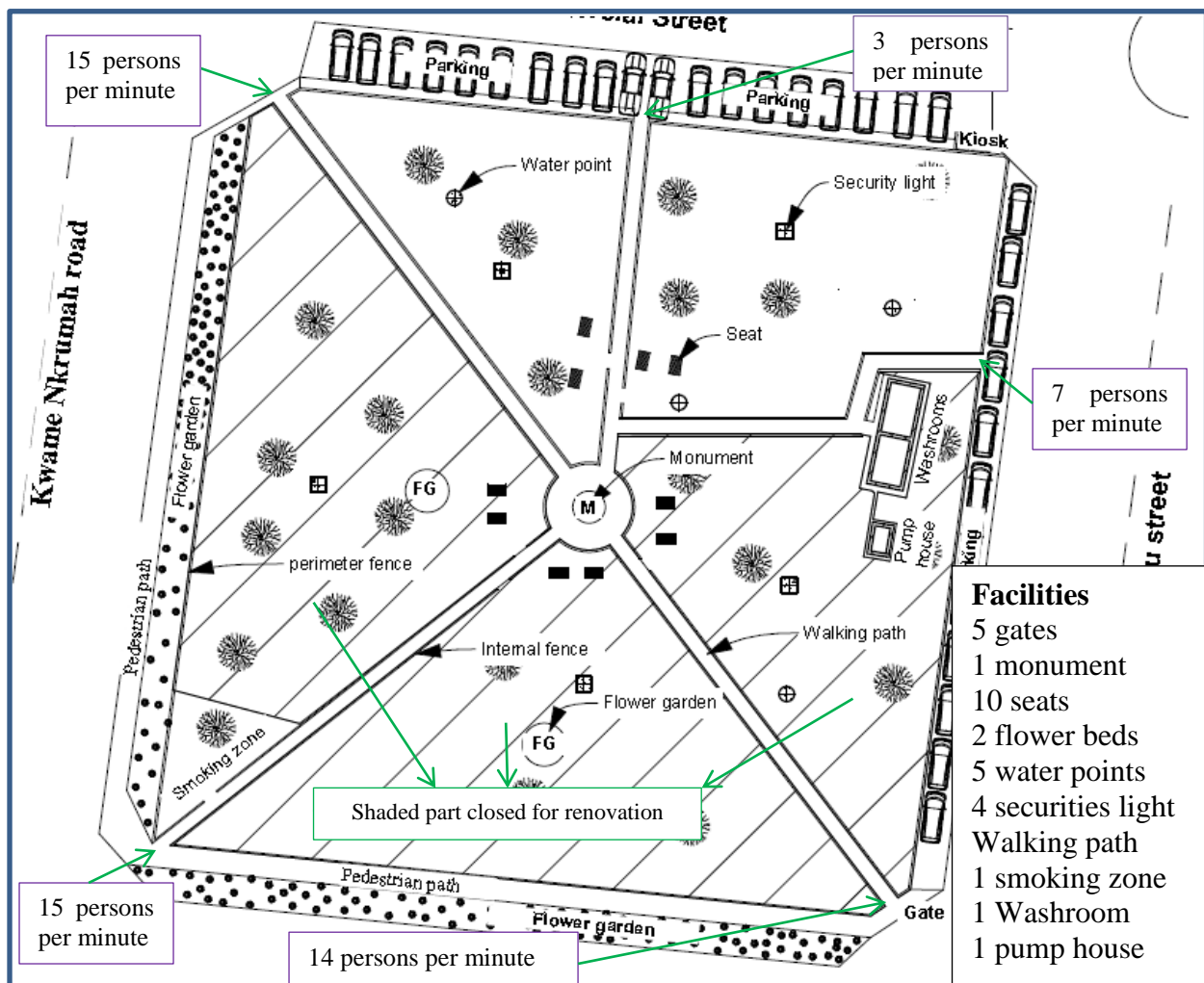
5.3.4 Facilities in the park and rate of visitation from different entrance

From the map, the shaded part is under renovation where the planted grass is allowed to grow without disturbance by park users. The useable part (un-shaded) is only 35% of the total area of the park thus the remaining 65% is under renovation. The plan for the park provides for a Monument at the middle of the park, 2 flowerbeds, 10 seats but only 4 are currently usable, 4 security lights distributed in every quarter of the garden, 5 water points but only one is functional, a washroom with male side and female side, a pump house that is not functional and one smoking zone at one Corner of the park. Other facilities include walking path and a perimeter and internal fence. The park is surrounded by parking spaces on two sides and a two meter wide pedestrian walk way on the other 2 sides.

As indicated above, the park attracts 47 persons every minute. Out of 47, only 7 persons usually have interest in the park, the 40 just pass through. The map below shows the gates used most. 15 persons pass through each of the two gates in the park. 14 persons pass in one of the gate per minute while 3 get in through the gate that is blocked by parking vehicles along Commercial Street and 7 persons through the other blocked gate along Uhuru Street.

The two block gates, blocked by parking vehicles have the least number of visitors getting in the park through them, that shows the effect of such blocking to accessibility of parks.

Plate 7: Number of facilities and rate of visitation from different gates in the garden



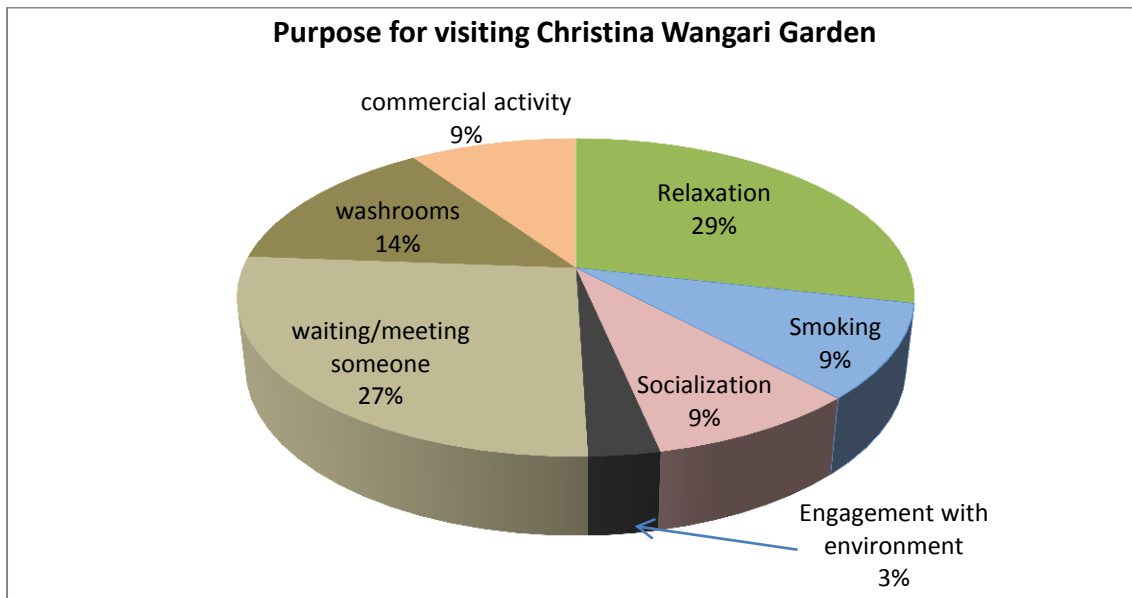
Source; Author 2014

5.3.5 Main Purpose for visiting Christina Wangari Garden

The study wanted to capture the main purpose why people visit Christina Wangari garden. 29% of the park users visit the park to relax after a busy time in work place or in class. Majority (73%) of this population visit the park during lunch hour and in the evening. 27% of the park users visit the park either when waiting for someone or are meeting someone. During their visit they may get a chance to socialize, visit the washrooms or smoke. Only one respondent out of 40 said he visited the park to engage with natural environment. The study also noted that 97% of those people who visit the park to meet or waiting for someone have a

monthly income of less than Ksh 20,000. These are the persons who may find it hard to host a friend or a relative in a decent hotel. The park (according to Thika Sub-County representative) is also used as a site for Public blood donation in Thika and assembly point for fire census. The pie chart below expounds on that observation.

Figure 19: Purpose for visiting Christina Wangari Garden



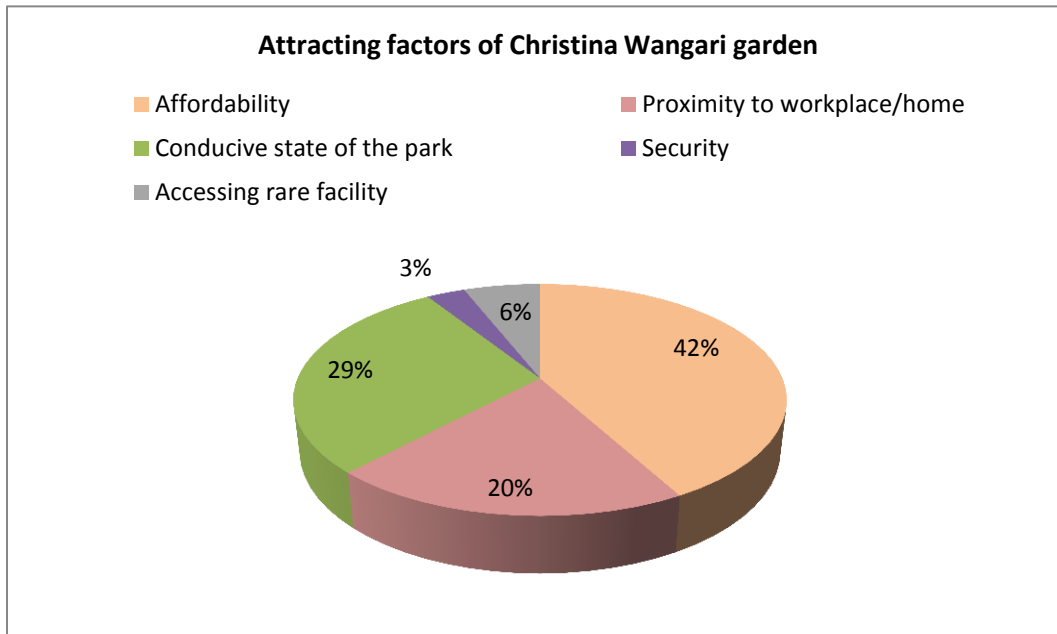
Source; field survey 2014

The Study noted that those people who visit the park to smoke come because there is no other smoking zone in Thika CBD, those coming for saloon and the photographers find that service cheaper in the park than any other place. It also noted that public toilets in Thika were cleaner than other toilets around and was also at the central place.

5.3.6 Factors that attract visitors most in Christina Wangari Garden

The study identified a number of feature associated with Christina Wangari garden that makes it unique. Out of the 40 respondents interviewed during the field survey 17 (42%) of them said the main factor that enthused them to visit the park is that there are no charges when visiting the park and therefore very affordable to them. Some people felt the park is located at the central CBD thus near to either their work place or home, some were attracted by the good state of the park. 3% said it's the only place they can access facilities such as smoking zone or washrooms. One respondent said he is attracted to the security of the park as opposed to Mama Ngina garden.

Figure 20: Factors attracting visitors in Christina Wangari Garden

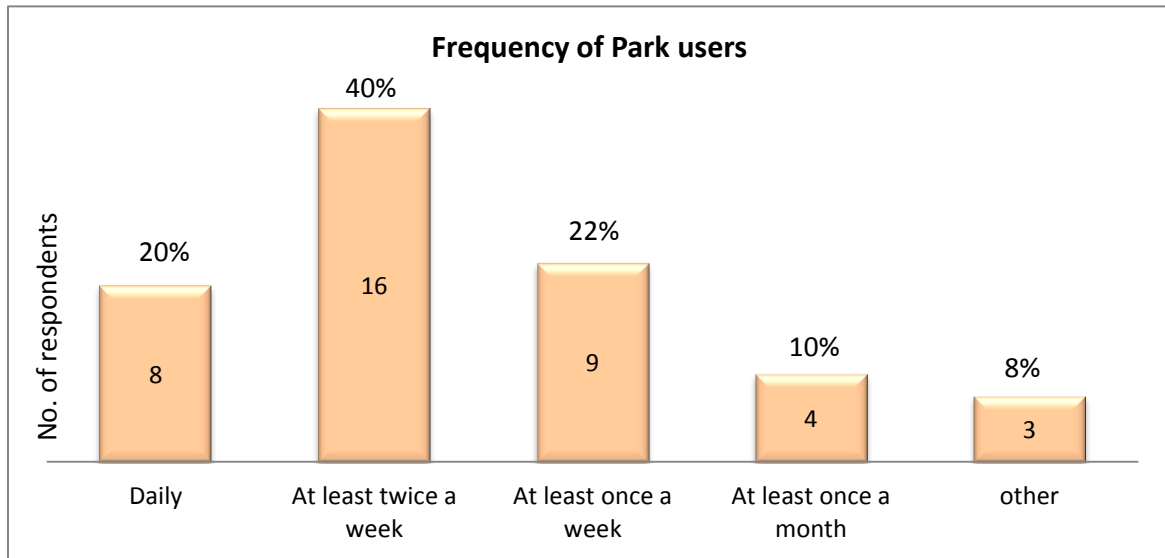


Source; field survey 2014

5.3.7 Frequency of visiting the park by the users

Most of people (40%) who visit Christina Wangari garden visit it at least twice a week. 20 % visit it daily, out of these 8 respondents, 7 of them were student studying in the nearby colleges or business persons working in the park. 22% of the park users visit the park at least once a week (mostly on Sunday or Saturday). 10% visit the park at least once a month, 75% of them live and work more than 10 km from Thika town. 8% of the park users were visiting the park for the first time or have no regular pattern of visiting the park. The bar graph below illustrates the above scenario.

Figure 21: Frequency of visiting the park by the user

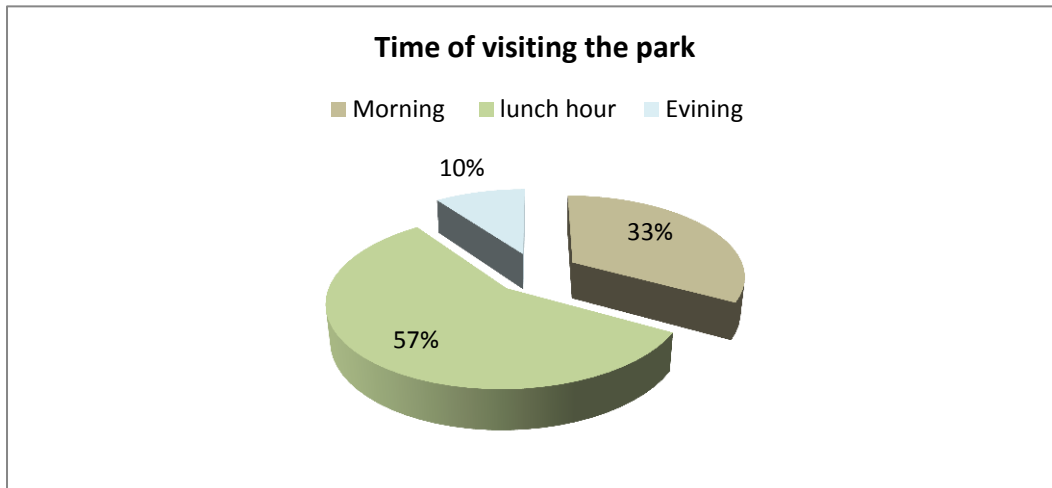


Source; field survey 2014

5.3.8 Visiting time by park users

More than half of the park users visit the park over lunch hour (between 1200hrs to 1400hrs). Most of these people are students and low income persons who work in the neighboring offices. Some people visit the park to take their parked food and relax before they get back to work. During this time, most students are free from classes and they get a chance to relax in the park before the next class. 33% of users of Christina Wangari garden visit the garden in the morning hours (from 0800hrs to 1200hrs). The study noted that most users use the park while waiting for certain services in the neighbouring offices and banks, meeting or waiting for someone in the park. 10% visit the part in the evening, the study noted several groups having meetings. Many students over lunch time are free as well as those who work in neighbouring offices.

Figure 22: Time of visiting the park by users



Source; field survey 2014

Figure 23: Young people having meetings in the park

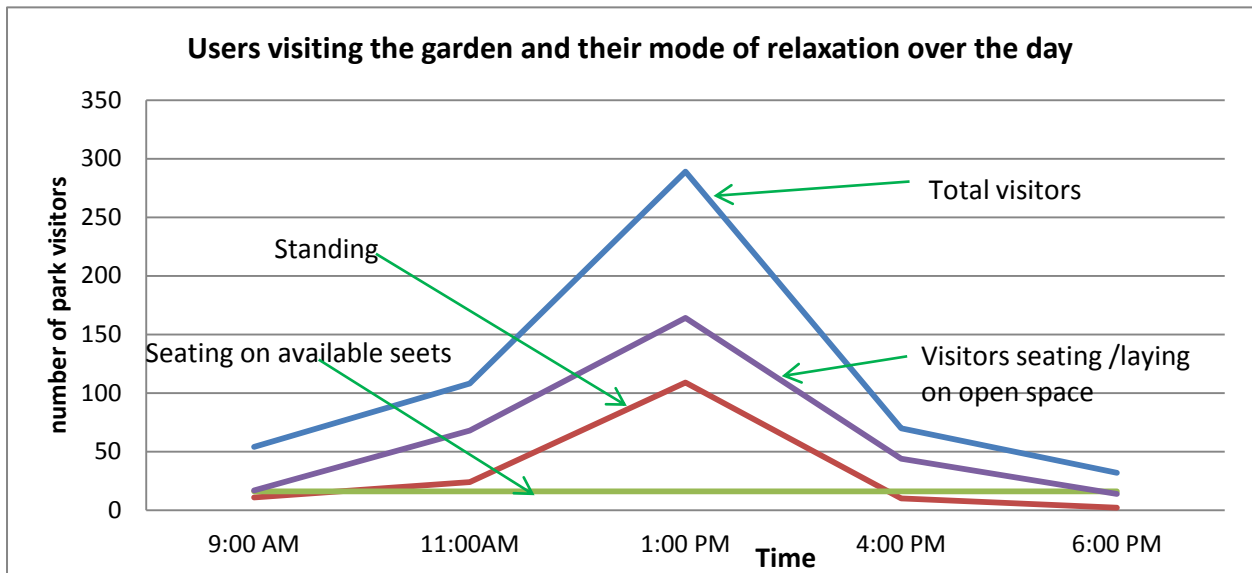


Source; field survey 2014

5.3.9 Mode of relaxation in different time of the day

From a tallying that was done in the park in a week day in 0900hrs, 1100hrs, 1300hrs, 1600hrs and 1600hrs to capture the distribution of visitors during different hours of the day, it was noted that most people visit the park during lunch hour. There are no visitors at night because the park is opened at 0800hrs and closed at 1830hrs though some street boys sited they use the park at night. During their visit in the park, the visitors find themselves a place to relax and rest. Most of them seat or lay on the open spaces under the trees' shade, some stand around the monument at the central part of the park or along the walking path while other just seat on the four functional seats. The line graph below explains this observation further.

Figure 24: Users visiting the garden and their mode of relaxation over the day



Source; field survey 2014

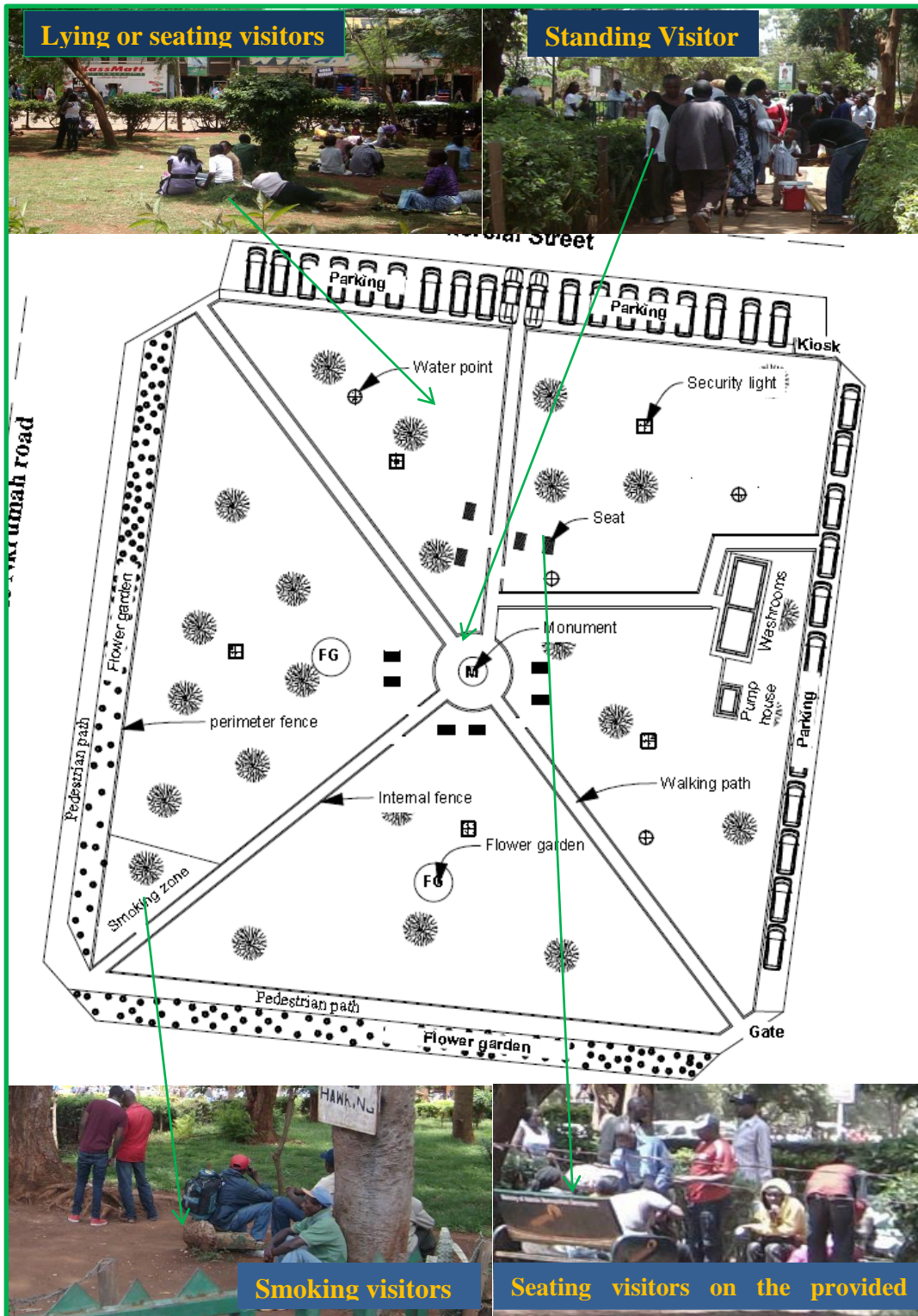
The total number of people visiting Christina Wangari garden increases from the 8.00 am which is the opening hours and get to the highest at the lunch hour (1.00 pm). From lunch hour, the number reduces until the closing hour. The trend of those standing in the park and also those seated or lying on the open space change but the number of those seated in the park remain constant. The study noted that those standing are desperate of spaces to seat but the park is so congested for them to get a space to seat or lay down during their visit.

Figure 25: Mode of relaxation in the different parts of Christina Wangari Garden



Source; field survey 2014

Figure 26: Condition of Christina Wangari Garden

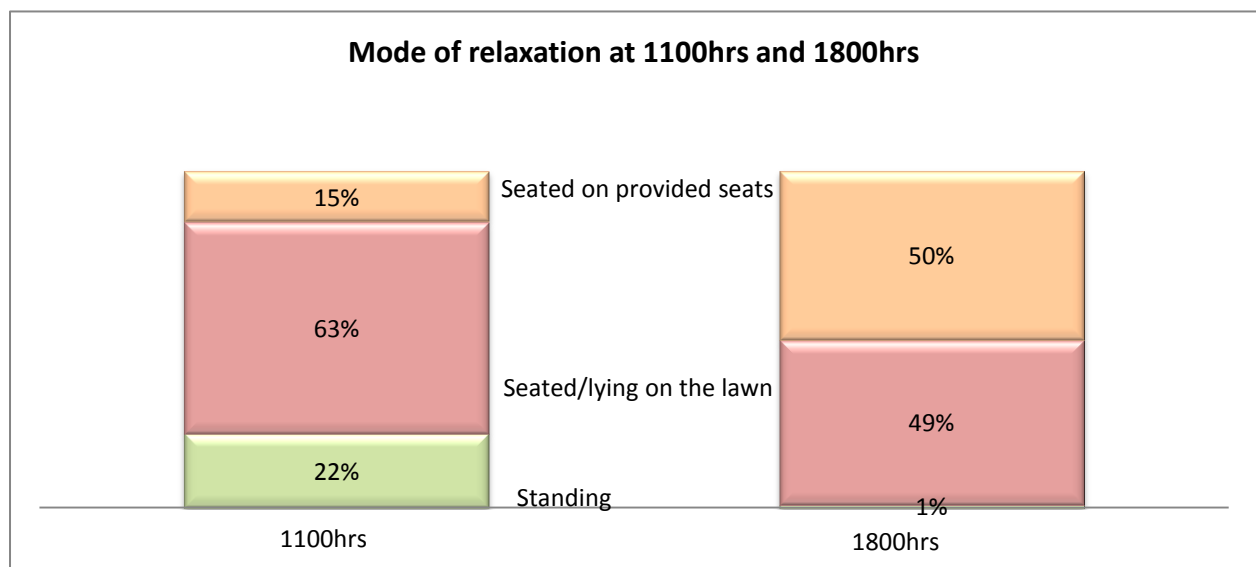


Source; field survey 2014

5.3.10 Comparison on mode of relaxation in 1100hrs and 1800hrs

In the morning hours (1100hrs) the total population of visitors was 108 persons. 22% of these people were standing but in the evening (1800hrs) when the total population of visitors was 32, only 1% were standing. One conclusion that can be drawn is that in the evening most people are usually tired after a busy day and therefore only a few proportion of the total can stand. The second conclusion is that park visitors don't stand by choice but because of the crowding or lack of seating facilities. The number of visitors who were seated in the 4 available functional seats remains constant (16 persons). Despite the number being Constant, the proportion was different with 15% in the morning and 50% in the evening. These means at any given time people prefer relaxing on the seats than any other place in the park.

Figure 27: Mode of relaxation at 1100hrs and 1800hrs

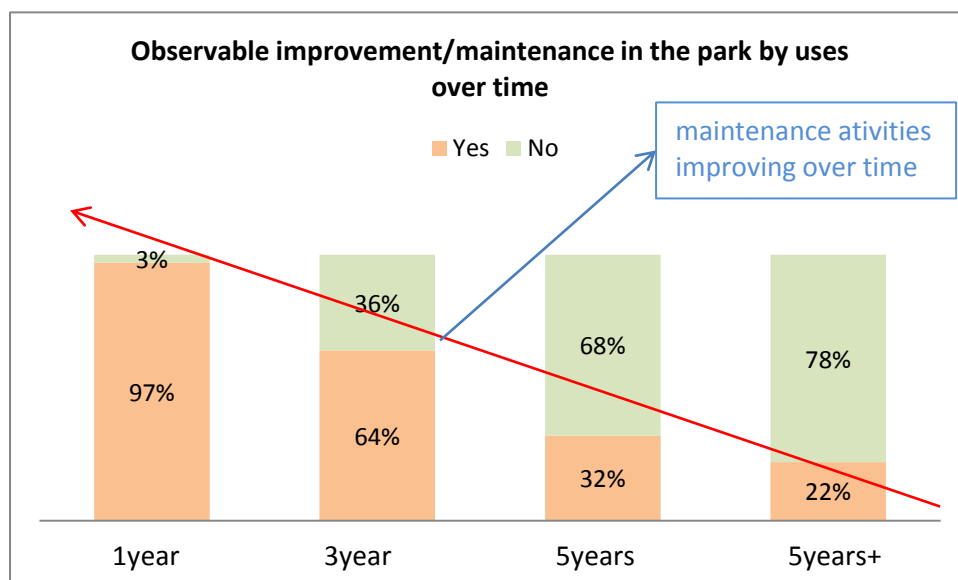


Source; field survey 2014

5.3.11 Observable improvements/maintenance in the park

The study noted, over time the maintenance and improvement activities have been intensified. Over the last one year, 97% of the respondents said they have noted a number of improvements or maintenance activities. For the last three years, 64% of users have observed improvement activities but only 32% noted any improvement change 5 years ago. Devolution has brought positive attributes to the Park.

Figure 28: Observable improvements/maintenance in the park



Source; field survey 2014

Asked to mention these improvements/maintenance activities the park users listed the following:

Table 7: Observable improvement/maintenance in the park

Duration	Maintenance activity	Improvement activity
0 – 1 years	<ul style="list-style-type: none"> Collecting of litters Cleaning of washroom Watering of grasses and flower garden Trimming of fences and flower garden Sweeping of the smoking zone and the walking path Repairing fences Weeding of fences and flower garden 	<ul style="list-style-type: none"> Planting of flower gardens Rehabilitation of toilets Reducing number of commercial activities such as hawkers and saloon Planting of more conducive grass Improvement of security Relocation of smoking zone Removal of the dumping site
1.1 – 3 years	General cleaning such as weeding, sweeping, collection of litters and	<ul style="list-style-type: none"> Provision of security light Planting of fence along the

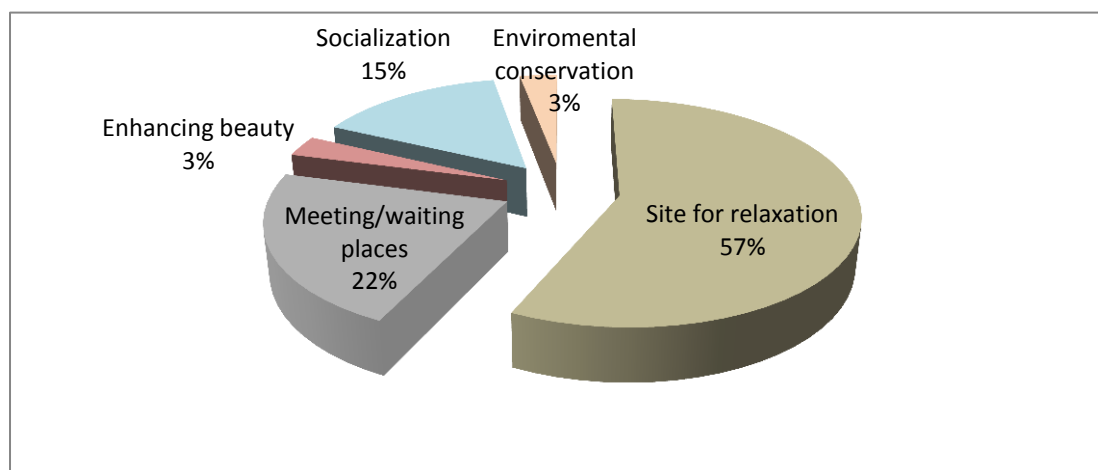
	cleaning the toilets	walking path and trees in the park <ul style="list-style-type: none"> • Introduction of public washroom • Removal of street children and street families who were major security threat • Closing of the park at night
3.1 – 5 years	General cleaning such as weeding, sweeping, collection of litters cleaning toilets	<ul style="list-style-type: none"> • Introduction of more suitable gate • Introduction of a smoking zone in the park • Provision of 8 seats
5years and above	General cleaning such as weeding, sweeping, collection of litters cleaning toilets	<ul style="list-style-type: none"> • Demarcating/marketing the walking path and paving them • Elevating the perimeter fence • constructing the monument and the pump house which is non-functional now

Source; field survey 2014

5.3.12 Significance of the park according to park users

The study intended to capture the perception of the users on the importance of parks in Thika town. Majority of them said parks form a favorable place for relaxation. Others said the parks are important places for hosting, meeting or waiting for friends or relatives. Other felt that parks are important for promoting the beauty of a Town, for environmental conservation as well as places for the homeless to sleep. Interviews with Key stakeholders also complemented this significance and added Public Parks can also attract tourism and investors. The chart below represents their views.

Figure 29: Significance of parks according to the users



Source; field survey 2014

5.4 Constraints in effective utilization of Christina Wangari Garden

5.4.1 Important facilities lacking in Christina Wangari Garden

The study wanted to find out the perception of users to important facilities that were lacking in the park. Most people (67%) said the park was lacking a kiosk, other said there was no roof on the smoking zone, other noted that the park lacked functional water points while a small number said the park lacked trash containers. Users' needs are site specific and are a function of their goals and objectives.

Table 8: Missing facilities according to the park users

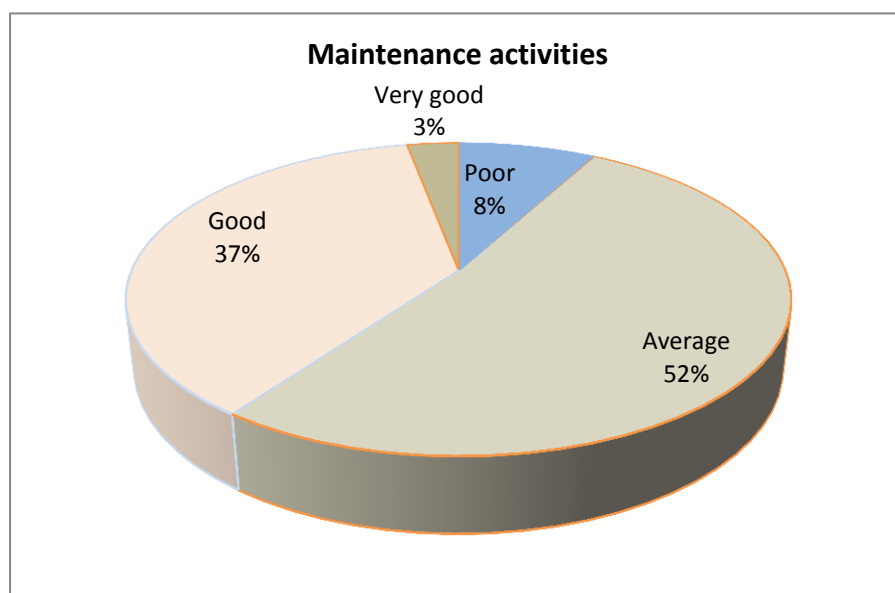
Missing facilities	Number of respondents	Percentage
Kiosk	28	67%
Trash container	22	54%
Roof at the smoking zone	5	13%
Facilities for the children	11	27%
Facilities for the physically challenged	6	15%
Bathroom	2	5%

Source; field survey 2014

5.4.2 Rating of maintenance of the park by users

The study wanted to capture the views of the park users on their satisfaction level in regard to maintenance activities in the park. Most of them felt it was average or slightly above average. Only 3 out of 40 respondents said the maintenance was poor and they were dissatisfied with the way some parts of the park are ever closed and the untidy condition of the smoking zone.

Figure 30: Maintenance activities





Source; field survey 2014



5.4.3 Challenges facing facilities in Christina Wangari Garden



The table below summarizes the challenges related to different facilities and places as they were observed by park users and from observation checklist. Challenges constraint users from optimal use, the more the challenges, the less the use and vice versa. Other challenges could be evident but users don't recognize them since they don't are unaware of the best practices.

Table 9: Challenges affecting Christina Wangari Garden

Facility/place in the park	Notable challenges by park users
Open green space	<ul style="list-style-type: none"> Littering due to lack of trash containers Congestion due to the high demand and due to the fact that 60% of the park is

	<p>under renovation</p> <ul style="list-style-type: none"> • Presence on bare land, over 50% of the open green space is bare due to over use  <p>Bare land causing environmental degradation</p>
<p>Seats</p>	<ul style="list-style-type: none"> • Inadequate seats. Only 4 seats were functional while the whole park have only 10 seats and each seat can serve a maximum of 4 people • Distribution of seat is not even. Seat are concentrated on the central part of the park • Untidy seats/ not properly cleaned • The 4 Functional seats are mostly used by Nail painter/saloonists
<p>Washroom</p>	<ul style="list-style-type: none"> • Lacking bathrooms which is equally important • Not very affordable to most visitors/users (charge 10/=) • Awful smell spreading on the other parts of the park • Toilet is located where the prevailing wind blows the smell in the park
<p>Smoking zone</p>	<ul style="list-style-type: none"> • Lack essential facilities such as seats, trash container and roof • Affecting nonsmokers especially pedestrians passing by due to its location at the edge of the park • Lacks a sense of privacy. Smokers feel they are so exposed to people in the park and pedestrian outside the park  <p>A child in the smoking zone</p>

<p>Monument</p>	<ul style="list-style-type: none"> • Poor maintenance • Lack of repair. The monument had an operational fish pond and splashing water but after the breakdown of the pump ,it has never been repaired while the pump house have been occupied by the photographers • Untidy  <div data-bbox="1029 539 1318 651" style="border: 1px solid red; padding: 5px; display: inline-block;"> Unrepaired and untidy monument </div>
<p>Walking path</p>	<ul style="list-style-type: none"> • Availability of potholes • Availability of business persons operating along the paths thus blocking access. • Congestion especially near the monument due to high number of standing persons who block the way  <div data-bbox="1106 1133 1362 1274" style="border: 1px solid red; padding: 5px; display: inline-block;"> Businesses blocking movement </div>
<p>Flower garden</p>	<ul style="list-style-type: none"> • Poorly maintained, not properly weeded • The flowers planted are not attractive • Their location is not appropriate, it's not evenly distributed • The flow garden don't manifest the beauty of the park

	 <div data-bbox="1023 203 1318 360" style="border: 1px solid red; padding: 5px; display: inline-block;"> Unattractive and poorly maintained flowers </div>
Trash container	<ul style="list-style-type: none"> • Completely lacking
Water points	<ul style="list-style-type: none"> • Poor maintenance and repair. • Untidy • Only one water point if functional out of the 6 available water points in the park. The functional water point if not used by public but for watering the growing grass in the park <div data-bbox="435 976 903 1272">  </div> <div data-bbox="1134 1066 1369 1200" style="border: 1px solid red; padding: 5px; display: inline-block;"> Poorly Maintained water point </div>
Fence	<ul style="list-style-type: none"> • Destruction of fence by park users • The perimeter fence lacks aesthetic characteristics. Should be flowery and attractive
Trees	<ul style="list-style-type: none"> • Long branches of trees are dangerous to the users during the windy season • Untrimmed branches grows toward electricity cables
Gates: Entrance/exist	<ul style="list-style-type: none"> • Two gates in the park are blocked by the vehicles parked along the road • Location of the gate allow nonusers to cross through the park causing congestion • Four gate cannot be accessed by a person in a wheelchair therefore not conducive

for the physically challenged

- There are no pedestrian crossing marks on the road adjacent to the gates




Aesthetic

- The park lacks features that contribute to the beauty of the park or the existing one are not properly maintained. For example the fence should be flowery and the flower garden should be well maintained
- Poor maintenance of facilities such as the monument and the water point make the park lose its beauty
- Presences of bare land on the open spaces make the park unattractive
- Presence of street boys who are very dirty diminishes the beauty of the garden

Security/ safety

- The security have been highly improve over the recent years but there are few case of theft
- The park is closed at night due to insecurity posed by street children and other homeless who sleep in the park and even rob people walking along the surrounding streets.
- The trees pose threat to the uses due to the branches that fall from the trees to the open spaces especially during the windy season.
- The worn out pavement along the walking path are a safety threat to users for they may cause one to fall down when walking

	
Maintenance/ Improvement of the park	<ul style="list-style-type: none"> • High number of users than the carrying capacity of the park, hence overwhelming the maintenance activities e.g. in planting grasses • Missing facilities like trash containers thus making it hard to maintain the garden • Vices by park users such as passing through the fenced place, smoking in non-designated areas, alcohol consumption

Source; field survey 2014

5.4.4 Overuse/congestion

About 65% of the park was closed during the field survey and has been closed for over 2 months. The remaining 45% of the park is very congested with about an average of 187 persons per any particular time. The highest number of visitors recorded was 308 users. The park is 1.5acres. Congestion has caused other cumulative problems/challenges in the park such as bare land on the open areas and the closure of some parts of the park.

Congestion in the park diminishes the sense of privacy in the park. For example, on a Sunday afternoon the study observed that over 50% of the visitors were couples. Couples in a park require a sense of privacy when talking but the distance between one couple and another user of the park was less than a meter, making the couple uncomfortable or limited to talk exhaustively. It is not only couples who needed a sense of privacy but also other park user especially those who were meeting. It was observed when two or more friends visited the park together they deliberately chose a place away from other people. Congestion also contributes to insecurity in the park. When people are so much close to each other it is hard for a user to keep checking the safety of his her belongings.

5.4.5 Lack of Inclusivity of facilities

The park lack facilities for the children, the old and the physically challenged. Most gates are impassable by the physically challenged and the park doesn't have enough seats for the old people and the physically challenged. On tallying there was only one physically challenged person visiting the park.

5.4.6 Misuse of park by visitors

The study identified some activities that were being practiced by users that were prohibited. The enforcement of some of the park Bylaws is poor. The field study noted some people taking cigarette out of the segregated smoking zone, there was also drinking of alcohol inside the park by street boys and other users. The study also noted that hawkers were not allowed in the park but for example on a Sunday the study identified 12 of them operating in the park. Other noted vices were the saloon activities such as nail painting. Two week ago before the commencement of the field study the authority had stopped saloon activities that were encroaching the park but on the same Sunday the study identified 5 persons practicing activities such as nail painting. There were also cases of visitors passing through the fence to access some part of the park while others were accessing the closed places that are under renovation. Enforcement of the existing legislations and Bylaws should be ensured.

Figure 31: Smoking at the prohibited place



Source: field survey 2014

Figure 32: Hawkers operating in the park despite the ban



Source; field survey 2014

Figure 33: Nail painting taking place in the park despite the ban



Source; field survey 2014

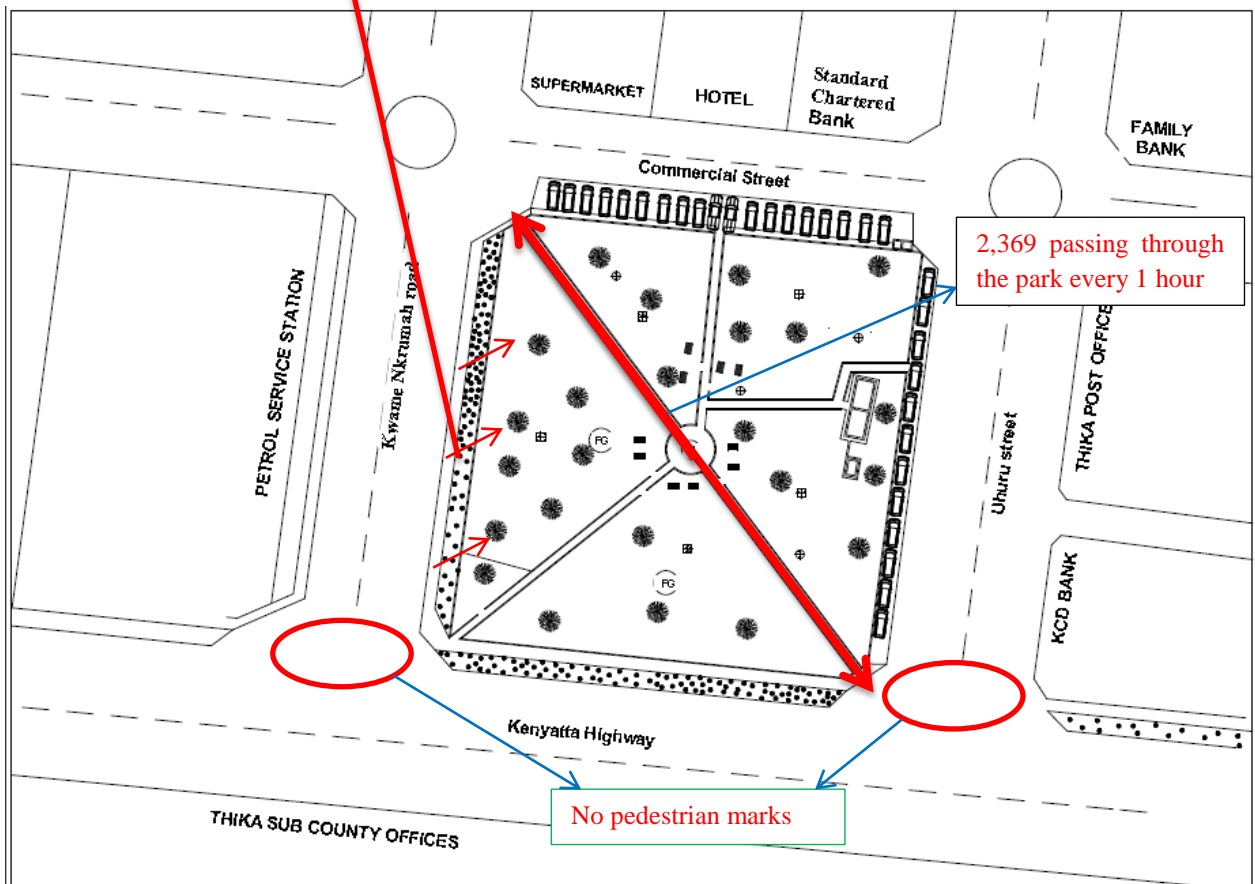
5.4.7 Problematic park design

The design of the park allows for storm water from the road to drain in the park causing flooding during the rainy season in some parts of the park making it inaccessible. The Study shows pedestrians are very economical with distance and they therefore prefer the shortest distance. The location of the gates in the park allows for town residence to cross through the park causing a lot of congestion. The study identified an average of 2,369 persons passing through the park in an hour. That means every minute 40 persons pass through the park. This number is very high bearing in mind the park is only 1.5 acres. The location of the toilet is wrongly placed depending on the direction of the prevailing wind while facilities such as seat are not well distributed. One gate is located next to a very busy roundabout causing pedestrian-motorist conflict .Synergy of various professionals and Park managers should be advocated for.

Figure 34: Design issues of Christina Wangari Garden



Storm Water drainage channel directed to drain surface runoff to the park



2,369 passing through the park every 1 hour

No pedestrian marks

Source; Author 2014

5.4.8 Community interference

From a comprehensive discussion in the focused group discussion and also from most key informants, the study noted that political interference was a major problem in the management and enforcement of local authority Bylaws. This vice have slightly changed under the devolved government and now most government workers and especially those entitled with management of parks in Thika work independently and apply their professional knowledge freely in decision making and implementation rather than being forced by politicians. In Christina Wangari garden the saloons, the hawkers and the photographers were bought by politicians without consultation with those government workers who are entitled in the management of the garden. Politicians did that as a way of reciprocation sense to the people who voted them. These politicians disregard the side effects of having those business persons in the park, their interest reign over the public interest. The park supervisors could not even give direction to those business people. An example is the encroachment of the pump house area by the photographers leaving the park without functional water points.

5.4.9 Weak stake-holding and partnership in decision making

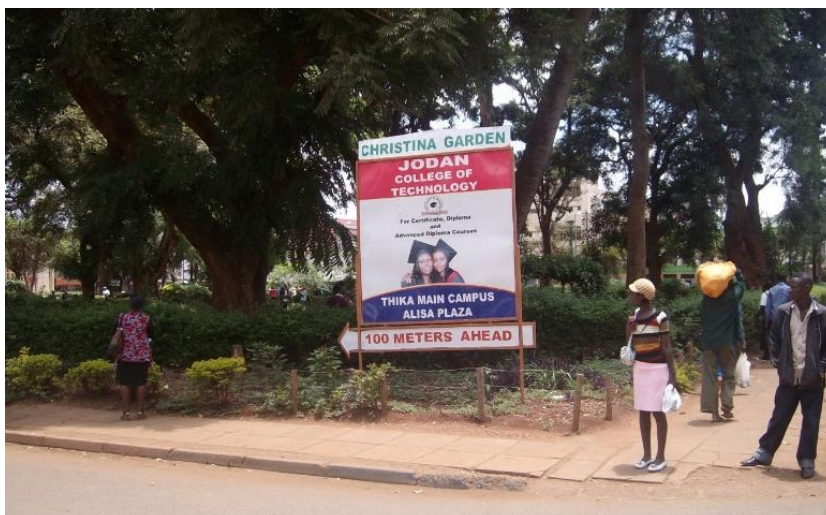
In the management of the Christina Wangari Garden and other Public park in Thika, the Sub County of Thika lacks mechanisms to enhance partnership and involvement of all stakeholders in decision making. It was noted for example different professionals in Thika Sub County don't come together to discuss issues relating to public parks. For example the Sub county physical planner has never advised the park supervisors or no synergy/liason has ever occurred or there is no research that has ever been done to establish the main issues affecting public parks in Thika. Lack of partnership has resulted to lack of a permanent and sustainable solution about public parks. Christina Wangari garden is for example lacking facilities for the physically challenged, facilities for children because the decision making is not inclusive. Successive planning and management of public open spaces should involve a process of public consultative meeting and involvement of different expertise to have a solid decision on the way forward. The same approach of planning should also be applied in Thika.

On the other hand the stake holding and partnership have suffered yet another setback. The study noted that there has been no formal public private partnership on Christina Wangari garden. The willing stakeholders come with a mutual interest on any deal. The identified

main stakeholders included Mt Kenya University, Jodan College, Ministry of Nairobi Metropolitan, Goodlife Sacco and eco-toilet initiative. The partnership is usually not formal and in most cases faced setbacks therefore not succeeding due to the selfishness of some partners. For example MKU wanted to put a Sign Post in the garden for free and in return maintain the garden but the deal did not materialize as they were required to pay some money for the post. Nairobi Metropolitan donated 10 seats in for the garden and then Goodlife Sacco through an informal agreement branded and promised to keep them tidy but they have not been doing that. They only wanted to advertise their Sacco through branding. Jodan College has been in an informal partnership with the sub county of Thika trough maintenance of flower bed after they were allowed to put a Sign Post in the garden. They also participate in cleanup activities. The Eco-toilet has been charging for the uses of the toilet and in return they pay a fee to the county and also maintain the public toilets.

The stakeholders have experienced bureaucracy in trying to partner with the Sub County of Thika. Sometimes the private institution must look for a mediator who knows how to aid that kind of partnership. Potential stakeholders said they have never been approached by anyone to offer their services but they are always willing to support.

Figure 35: Jodan College Signpost



Source; field survey 2014

Out of the four main partners only Nairobi Metropolitan which is a government institution partnered for free, donating the seats. All the other private institutions have been relying on mutual benefit to make any deal with the Sub County of Thika. That shows most institutions

in Thika lack the spirit of Company/Institution social responsibility. It is important that most high learning institution in Thika town should voluntary offer their support to the improvement of the Public garden in town because their students are the key users of these parks.

Figure 36: Goodlife Sacco partnership



Source; field survey 2014

Figure 37: Public toilet as PPP initiative



Source; field survey 2014

In a focussed group discussion potetial stakeholders were noted to be the 3 banks surroundin the park; the KCB bank, Family Bank and the Standard Charterd Bank. Other potetial stakeholders include higher learning institutions along Kwame Nkruma road and Uhuru street. Expertise and doners such as the UN and Universities should be approached to either donate funds or help in researches that may yield planning solution and even capture the

dynamic needs of park users. Exploration of potential stakeholders as well as facilitation by the managers of the parks should be encouraged.

5.5 Institutional, policy and legislative scrutiny on utilization of Public Parks in Thika

This section identifies and analyses Institutions, Policies and legislations that guide utilization of Public Park in Thika Sub-County as witnessed during the field study. It expounds on the setbacks faced by different institutions in implementing different Planning policies on Public Parks and also in the enforcement of Planning laws and Bylaws. In addition, opportunities and strengths of various institutions, legislations and policies in Thika Sub-County will be examined.

5.5.1 Institutions Managing Utilization of Public Parks in Thika

Thika Sub-County and Kiambu County are the main institutions responsible for the management of Public Parks in Thika Sub-County. Other institutions that are indirectly involved include NEMA, Service providers such as Thika Water Company, and Central Government agencies operating in the area such as Nairobi Metropolis department among others.

5.5.1.1 Institutional Strengths

Through devolution, Thika Sub-County and Kiambu County have been given more financial and professional strength to enhance development in their area of jurisdiction. It was noted during the field survey that establishment of County government has accelerated service delivery in Thika. **Improved professionalism in decision making:** Kiambu County on formation employed professionals in different fields of development. These professionals who form the executives of Kiambu County are currently having their offices in Thika town. Much improvement has been noted in Christina Wangari Garden due to the devolution. Public involvement has been witnessed in development issues and the development of Kiambu County Strategic Plan (2013 to 2017) is such a milestone. The ongoing development of Kiambu County Spatial Plan will also be significant in including people's priorities in development.

Reduced community interference: Political interference was also another setback that was experienced in Thika Sub-County before devolution. Municipal Council of Thika was initially run by a group of politicians who had no skill and expertise. They were so powerful that they controlled every activity in the town thus making the few professionals employed in the Municipal powerless. These for example resulted to encroachment of Christina Wangari garden by Business persons who were “untouchable” since they were brought by local councilors or Member of Parliament.

Improved Financing of development: Devolution has seen increased funding of project in Kiambu County. Thika Sub-County has benefited from the share that Kiambu County government received from the National Government. On the other hand Thika Sub-County will be able to benefit directly from the tax/revenue collected from different commercial and industrial activities in the county. This will play a major role in accelerating implementation of development in the county. It was noted during the study that Management of the garden used to get all its funding from LASDAP and LATF which was insufficient to facilitate management of the garden.

Figure 38: Funding of Christina Wangari Garden



Source: Field Survey 2014

Reduced Bureaucracy in service delivery: Before devolution, planning process and decision making process in the improvement and planning for Public Parks needed the involvement of National government (initially known as Central Government). Compulsory acquisition of land could take a very long process. On the other hand the Thika Sub-County could not develop a local physical development plan on their own since such undertaking was

supposed to be done by Ministry of Lands. During the study, it was established that most potential stakeholders in the management of Christina Wangari Garden were discouraged to partner due to bureaucracy.

5.5.1.2 Institutional Weaknesses

Inadequate resource allocation: Due to insufficient funding, the available resources are directed to projects that are considered critical. It was noted that the available funds allocated to the sub-county is meant to develop projects related to public health, water supply, transport, housing, sanitation, education and security which are considered as a first priority by the Kiambu Governor Manifesto. Recreational facilities are in the third priority category.

Poor professional capacity: The study identified that Thika Sub-County has inadequate professional capacity in management of park. The office entitled with the management of Park for example does not have any current data about the number of users visiting the garden, the size or knowledge about requirements of a Public Park. The office doesn't have any future plans for the Public Parks in Thika. The physical Planner in the sub-county does not advice the park supervisors on how to improve the park. The parks do not even comply with policy and standard requirements. The design of Christina Wangari also suffers a number of unprofessional faults expressed by location of gates and lack of inclusivity in its design. It is also expressed by inadequacy of public parks.

Poor Political good will: The process of decision making and implementation of projects in Thika depends on the Political good will. Politics is a main pillar of development in any country or county. In County government, the Governor and Members of county assembly are entitled to approve the budget developed by the county executives. Besides approving budgets, politics also interfere directly or indirectly with professional decision on development matters. The study noted that there was much reluctance from the local politicians to consider improvement of Public parks as a key agenda in development. This can be seen on the recently approved budget of Kiambu County that saw no fund allocated to the improvement of Public Park in Thika despite the current parks statuses; sadly they don't consider public parks as a significant land use.

Weak synergy in various sectors in Kiambu County and Thika sub-county on development issues: it was noticed during interviews with key stakeholders and in the

focused group discussion that different departments in Thika Sub-County don't work together in order to deliver services. The sub-county is constituted by department such as Land, Planning and Housing, Environment, Roads and Transport, water and sewerage among others. The environment department manages Public Parks. The land, planning and housing department which has a Physical planner does not assist the environment department in establishing planning issues affecting the park. This setback is manifested by the huge deficit of public parks; maintenance or improvement of the park focuses on the environment element but disregards planning needs such as inclusivity in the design and lack of essential facilities in the park as well as economic and social sustainability. One of the key values of Thika Sub-County, teamwork is very wanting.

5.5.2 Legislations affecting utilization of Public Park in Thika

In the utilization of Christina Wangari garden, three categories of legislations can be identified. These include: The Kenyan Constitution (the most superior law in the land), Acts of Parliaments and the Thika Sub-County Bylaws. The study identified a number of challenges in the enforcement of these laws as explained below.

5.5.2.1 Constitution of Kenya (CoK 2010)

The Constitution of Kenya in Chapter 4; Bills of Right, Article 54 part C on the rights of the persons with disability requires every design to ensure reasonable access of these persons to all places. These vital requirements have not been enforced in Christina Wangari garden. Most gates in the park can't be accessed by persons in wheelchairs; Public Toilets are also not conducive for such persons. The design of Christina Wangari Garden also seems to be discriminating the old citizens, Children and the physically challenged which is unconstitutional.

The constitution also in different articles such as Article 69 part D requires public participation and awareness in development matters and in the management of public resources. Article 70 encourages enforcement of existing planning and environmental laws. Public participation and public awareness have not been enhanced in Christina Wangari garden, the interviewed park users said they have never been consulted about any development or modification in the park. It was also noted that most park users don't even

know that it's their right to be consulted and their decision taken into consideration especially when 65% of the park is closed for renovation for over two months.

5.5.2.2 National Legislations

The Acts of Parliament that touch on utilization of Christina Wangari Garden include: Urban Areas and Cities Act, EMCA, Forest Act, Public Health Act and physical planning Act. During the study, a number of métier were noted with the existing Acts of Parliament such as Urban Areas and Cities Act but there were weaknesses that hindered sustainable utilization of the garden.

Merits: Urban Areas and Cities Act was established to enact National Urban Development Policy and the requirement of Chapter 11, Article 184 of the Constitution of Kenya. Part II of the Act introduces a comprehensive way of how Sub-County Such as Thika will be managed and administered. It clearly boosts the management of Sub-County by introducing a board that will constitute different experienced professionals. The board will also be constituted by stakeholders from different sectors; this is a major enhancement to stake-holding, partnership and public involvement in development matters.

Part V of Urban Areas and Cities Act requires development of an integrated plan for the Sub-County of Thika. It would involve a comprehensive study of the Sub-County that could assist in capturing the needs of public parks in Thika. The Act requires public awareness and participation of all stakeholders in development of such plan; this could be a revolutionary move to enhancing community participation in decision making. The study noted processes are already set in place to ensure that before the end of three years transition period these requirements will be fully implemented.

Weakness: The study noted that there is no Act of Parliament that sets a clear guideline on the management of public parks in the country. This for example can be explained by the process that resulted to conversion of Moi garden in Thika town from a public park to a residential and commercial land use despite the acute shortage of space for Public Parks.

The study noted that there is weak enforcement of the existing laws in the utilization of Christina Wangari Garden. For example, Public Health Act requires proper sanitation and hygiene in all public places but the study identified the level of hygiene was inadequate

characterized by littering, human stool along the fence of the park and foul smell from the Public toilet and the smoking area. On the other hand, proper disposal of Solid waste as required by EMCA has not been enforced. There are no Trash containers in the park and visitors therefore just drop litters anywhere in the park

5.5.2.3 Local Legislations (Thika Sub-County Bylaws)

Three main by-laws that affect utilization of Christina Wangari Garden were identified in Thika Sub-County. There was a by-law that restricts visitors from dropping litters in the park and elsewhere in the Town. Despite having this Bylaw, the Sub-County of Thika has not provided trash containers in the garden. This show disconnects between the Bylaws and the Sub-County endeavor to facilitate such requirement. The other Bylaw restricts hawkers/mobile vendors from operating in the garden but the study identified 12 hawkers in the park at one particular time. There is a recent constituted Bylaw that restricts Saloon and Nail painting. There has been a positive effort in stopping saloon activities in the park but on weekends when the supervision is low, a lot of such activities in the park are evident. The capacity to enforce such Bylaws is low due to the inadequate personnel to supervise the garden and negative political interference.

5.5.3 Planning Policies affecting utilization of Public Park in Thika

Policies that may affect the development of Thika town include: National Urban Development Policy, Vision 2030, Nairobi Metro 2030 Plan and Physical Planning Handbook 2008. Kiambu County Integrated Development Plan and Thika Strategic Plan are the main planning documents that may have effects on Public Parks in Thika. The study identified a number of setbacks in these policies while some of them never emphasized planning for public parks as a special area of concern.

Physical Planning Handbook (2008) gives the planning requirement for public parks in urban area. This planning policy specifically explains the land budgeting for Public Park as 1 to 2 hectares of land for every 10,000 persons. It also gives the facilities required for a Public Park in Urban areas. The study noted that the office mandated to manage the park is not familiar with this document and therefore its requirement is not implemented. This policy suffers one setback since it does not explain the planning requirement for different parks

hierarchy from Neighbourhood to Metropolitan Level. The Policy does not also specific land size that has been specified for development of a public park in a district town like Thika. It also remains silent about utilization of public parks.

National Urban Development Policy: This Planning Policy specifies the land requirements for recreational land use and how it is supposed to be utilized but does not specify the planning requirements for Public Parks or explain differentiate parks and sporting facilities such as Stadiums. It was noted during the study that the park administrators are aware of this policy but know nothing about its contents on Public parks and other Recreational places.

Thika Municipal strategic plan did not notice acute shortages of Space for Public Parks and therefore didn't have specific improvement strategy. The document noted there was planning issues in the management of recreational facilities and therefore proposed to develop a policy framework which was never developed though the plan expires this year (2014). The study noted during focused group discussion that Thika Sub-County did not commit itself toward implementing this section of their strategic plan.

Kiambu County Integrated Development Plan (2013-2017): The plan was developed last year (2013), to guide development of the county for five years. The document further has a comprehensive order of priorities of projects and budget of the projects that will be implemented by the county government for the five years. This plan remains completely silent about Public Parks in Thika town.

Vision 2030 and Nairobi Metro 2030 Plan propose enhancement of land banking for Public Park and recreational facilities in the country and in the entire Nairobi Metropolis where Thika town lies within its boundary. The documents also propose revitalization of open spaces in the country and Sustainable approach in their management and utilization. The study considered these documents to be well equipped in terms of Public Parks management and utilization as compared to the other policy documents. These policy guidelines borrow a lot from international policies such as Millennium development goals on sustainable development and from The Brundtland Report on sustainability. These two planning policies needs to be implemented before the year 2030 but for the 10 years since the two Policies were prepared no attempts was witnessed to implement them during the study. Some people, during the Focused group discussion said that these two Planning policies were too utopia to be implemented.

5.6 Proposed measures for sustainable utilization of the garden

Planning is done to satisfy the needs of the main users of the area in question. The best way of measuring the success of any project is by finding out the level at which the main beneficiaries of that project are satisfied. To enhance the quality of planning intervention, a planner needs to take the planning views and suggestions of the public and key stakeholders because they are always the most affected by those interventions. Through the application of professional knowledge one is able to scrutinize the applicability of proposed interventions by the public and make informed and wise recommendations. The users of Christina Wangari garden and other Key stakeholder suggested the following intervention.

5.6.1 Provision of missing facilities

Over 50% of visitors noted that Christina Wangari garden needed a Kiosk to buy soda, sweets, cake, cigarette and such like commodities. About 57% the park needed trash container and should be distributed all over the garden. They said trash containers would reduce littering in the park and therefore keep the park tidy. Smokers noted the smoking zone needed a shelter that should be roofed and with seats and trash container. They said they were exposed to the other park users and they felt uncomfortable. Smoking is always perceived as a social vice by most people and therefore smokers don't feel contented being exposed. Park users also felt the public toilets lacked bathrooms and suggested sometimes visitor may need to take a bath due to the hot temperatures or due to health reasons. Visitors also said facilities for the children should be provided on one part of the garden. Other said the park lacked facilities for the physically challenged and complained about the conditions of some gates, inaccessible to the physically challenged persons. 34% of the respondents said the park need uniformed security officer who would make visitors feel more secure and may report vices or insecurity behavior in the park

These views were supported by different key informants in the focused group discussion though someone said the stakeholders felt the smoking zone should be removed citing that smoking is an activity that needs to be segregated from a social place. Some felt that since smoking is culturally unacceptable it is therefore not compatible with social places. Some Key informants especially from NEMA also added that trash containers should ensure separation of non-biodegradable and bio degradable at the park for easy management.

5.6.2 Improvement of existing facilities and redesigning the park

95% of the park visitors noted that the available seats in the park were inadequate. Suggestions were made that the seats need to be increased and spread all over the park rather than being concentrated at the middle of the park. They should also be kept tidy always. Visitors suggested the beauty of the park should be enhanced by proper maintenance of the flower beds and ensuring the internal fences in the park are flowery and attractive. Visitors also noted that the Monument has been poorly maintained and suggested that the splashing water in the monument should be revived and the fish should also be rejuvenated and the monument should be repaired. They said when water used to splash on the monument the park was more attractive and beautiful. 80% said that the water points in the park needed to be repaired and kept tidy always, 26% of the respondents said water points need to be distributed evenly to allow easy access by the visitors. 10% said the gate of the park should be located in a way that should discourage walking through the park. They also suggested that the design of the walking path should not be so straight but should have attractive pattern. 11% of the park users suggested that there should be pedestrian crossing marks and bumps adjacent to the gates of the park along the road to calm the traffic therefore enhancing the safety of accessing the park

Majority of the visitors said the park was so congested because of the closed parts of the garden that were under renovation. Most people suggested that the Sub county of Thika should adopt a permanent solution to ensure that no more than 30% of the park is close at any given time. They said congestion on the functional part of the park has caused wearing out of the green grass that used to exist. They said if it were not for the congestion the park would still be green rather than the bare land. Most of the views suggested by the visitors were complemented by the key informants but also added that Christina Wangari garden and Mama Ngina garden were not enough to serve the town. They noted that the town requires over 100 acres (40 hectare) to cater for the future needs of park in the town. Land banking should therefore be done to complement the demand for Public Parks as well as reclaim the encroached land intended for the parks.

5.6.3 Improve park management and administration

In a focused group discussion, suggestions were made on how the park should be utilized and managed sustainably. The sub county of Thika should ensure the park is able to generate funds from donors and partners to enhance economic sustainability but also balance that need with the social and environmental sustainability. Awareness campaigns should be done to boost the level of partnership and the willingness of the private institution and especially the neighbouring higher learning institutions and other companies to support the improvement of the garden without expecting any favour from the sub county government. These should enhance companies and institutions social responsibility on voluntary bases. It was also noted that the public are not fully consulted when decisions are made about the garden and hence suggestions were made to ensure that the local community should have their input considered in development activities and that could eliminate cases of missing facilities in the park. Overcrowding is a major obstacle in achieving environmental sustainability in a park. It is therefore necessary to balance the number of users of the park and its carrying capacity. This ecological demand for sustainability require different stakeholders to figure out how land can be acquire to balance the demand for Public Park and the required space.

5.7 Data Synthesis

This part will focus on the SWOT analysis, problem tree mapping of issues that affect Christian Wangari Garden. This part is critical in understanding the main causes of problem and the specific site affected in the Park. In addition Main planning issues and concerns will be examined which affords significant part that will help in informing the recommendation in the next chapter of this research.

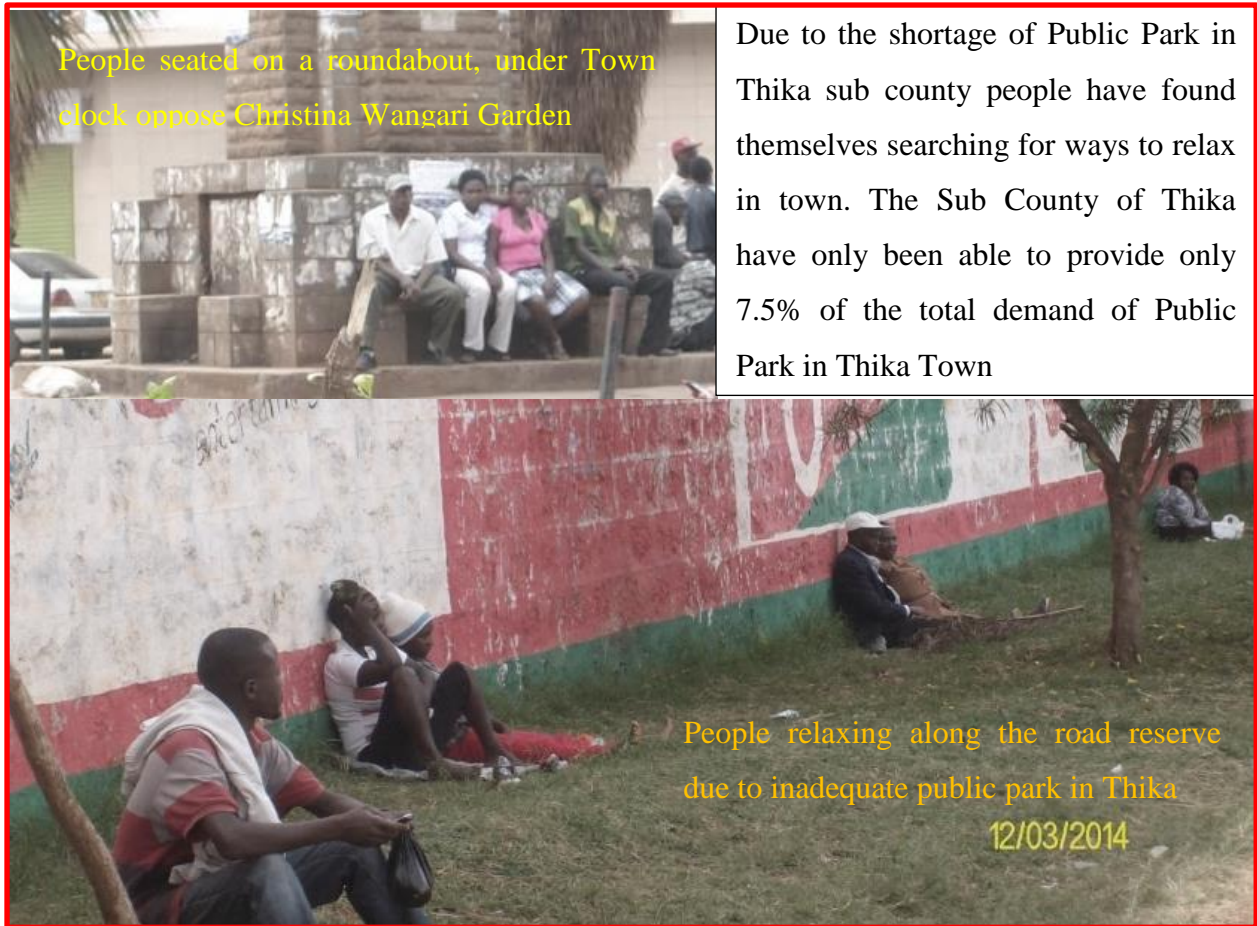
5.7.1 Main planning issues/concerns

Main planning issues/concerns section tries to interrogate causes of challenges manifested in the park. Challenges that Christina Wangari garden is facing is caused by a bigger problem that has manifested itself in different ways in the garden. It is through exploring these key problems that solutions and interventions can be derived. These Main Planning issues are discussed below.

5.7.1.1 Inadequate Public Parks in Thika Sub County

From the literature review, it was noted that Thika requires 100 to 250 acres of land for Public Parks. This requirement is also complemented in the Kenya Physical Planning Handbook (2008) that requires 2 to 5 acres (1 to 2 hectare) of land for Public Park to be provided for every 10,000 urban residences. Thika Sub County has 3 parks: Mama Ngina (2 acres), Cristina Wangari Garden (1.5 acre) and Starehe ground (4acres). The total acreage of Public Park in the entire Sub-County is 7.5 acres. This is only 7.5 % of the minimum land requirement for public parks. This means the county requires a minimum 92.5 acres to adequately provide for Public Parks in the entire sub county. The manifestation of inadequate parks is Overcrowding of the available parks resulting to environmental degradation that is characterized by open bare land and soil erosion. The town residents also find relaxation in very uncomfortable places such as on the roundabout of road reserve as a result of the shortage. The maintenance activities are so overwhelmed resulting to closure of parts of the park. Socially, the perception of the users has been negative about Public Parks hence they are visited by the low income population and the street persons who can't afford better services. The main intervention that this study seeks to address is how can the demand for Public Park in Thika be balanced with the supply? How can the Sub County of Thika and other stakeholder acquire at least 92.5acres? Where is the most suitable location or locations to acquire land for Public Parks? Finally, how can the confidence of the middle and high income population be achieved and their perception on Public Parks changed?

Figure 39: Coping mechanisms due to inadequate Public Parks in Thika



Source: Field survey 2014

Plate 8: Potential land for development of a Public Park in Thika Sub-County



Source: author 2014

5.7.1.2 Inadequate financial and professional capacity in park administration

The study noted that investment on Public Parks in Thika Sub County was very low with only Ksh 40,000 used annually to maintain and improve Christina Wangari garden .These means the Sub County uses Ksh 7 to maintain and improve 1M² annually while Post Office Garden in Boston (one of very successive case study) use about Ksh 2,500 (29 US dollar) to maintain and improve 1M² annually. The amount of money used in Christina Wangari Garden which has a similar location and size with Post Office Garden is only 0.28% of what is used in Boston.

The study also noted that the Sub County lacks enough professional capacity to manage the garden successively. The office entitled with the management of Park and Thika for example doesn't have the data on the size of Christina Wangari Garden and does not even have knowledge about requirement of a Public Park or its demand in the town. The office doesn't have future plans for the parks in Thika. Due to inadequate professional customs of addressing planning of Public park, the design and improvement activities of Christina Wangari Garden have never been implemented, the requirements of Kenya constitution on the rights of the Physically challenged persons and the requirements of Kenya Physical Planning Handbook on the demand and designs for public. The only thing the office does is to maintain and improve the existing garden. The Strategic Plan for Thika Sub County that was prepared in the year 2008 did not note shortages of public parks or even make recommendations of acquiring land. The main issues that this study advocates addressed are therefore; how can the Sub County source funds to invest in Public Parks? How can the professional approach in utilization and management of public goods be achieved in Thika Sub County?

5.7.4.3 Weak stake-holding and partnership

Stake-holding and partnership is one of the main pillars of any community related undertaking. Stakeholders add a lot of professional and material value to any planning related activities. It's a requirement locally, as manifested by the Kenya Constitution and even internationally, Millennium Development goals require the participation of stakeholders as a way of achieving social and economic sustainability in development activities. There are only 4 stakeholders in the management of Christina Wangari Garden, the value of these stakeholders to the maintenance and improvement of the park is less than 2% of the total maintenance and improvement requirement. Stakeholders and Partners get into partnership with the Sub County if they are benefiting especially through Billboard advertisement, branding or Signpost.

In the case study of 1.7 acre Post Office Garden in Boston the park is fully maintained by a group of stakeholders called "The Friends of Post Office Garden". The local authority only offers security in that Garden. These groups of stakeholders invested in the park by developing a development design for the garden and funding 100% implementation cost.

They were able to expedite economic sustainability of the park through establishment of 1500 underground parking spaces. The charges from the parking spaces are enough to maintain the entire park and the parking garage whose revenue is over 18.5 million annually. In Kenya, Jeevanjee Garden is under design process to improve it through place-making, a process that is made possible by Partnership and donation from different local and international stakeholders and well-wishers. A similar approach can be achieved in Thika through engagement of stakeholders. This study therefore needs to address the way in which the Sub County of Thika can enhance voluntary partnership and stake-holding in the development and improvement of Public parks

5.7.4.4 Unprofessional park designs

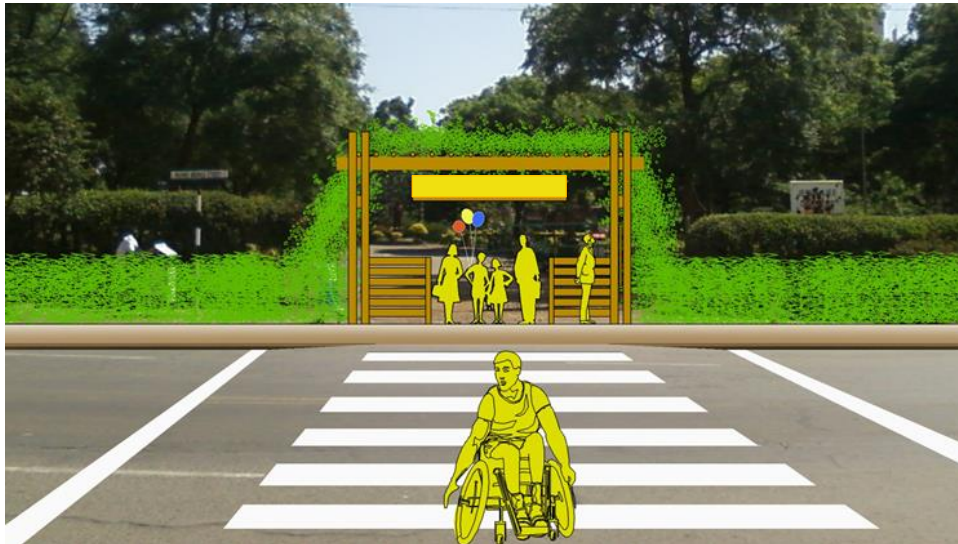
The design for Christina Wangari garden is a major planning concern. The park lack essential facilities and some of the existing facilities are not distributed evenly in the park. Location of gate and provision of straight walking path running from one edge of the park to the other attract non genuine users who only pass through the park causing congestion and disruption of the peaceful social environment. Gates location at the busy roundabouts is a menace. A very participatory approach is required to ensure the design achieve social, economic and environmental sustainability. This study seeks to explore possible design requirement that can help in improving the state of the park and enhance sustainable utilization.

Figure 40: Inclusive Drinking fountains design



Source: author 2014

Figure 41: Example of an inclusive gate



Source: Author 2014

Figure 42: Example of a Curvy footpath with flowers along the paths



Source: Central Park New York 2013

5.7.4.5 Weak Community Participation

In Kenya and especially in County government, the Governor and Members of county assembly are entitled to approve the budget developed by the county executives. Besides approving budgets, politics also interfere directly or indirectly with professional decision on

development. Thika Sub County lies in Kiambu County and any funding to improve the state of public parks depend on the approval by the political body. The demand and the significance of public parks in Thika have never been established since there has been no research done on the same. Public parks are not major priorities according to most politicians, county fund go to project such as infrastructure that is considered more important. History has established that public parks such as Moi Garden in Thika town was grabbed and developed for other land use such as commercial and residential. Most politicians and leaders perceive public parks as waste land potential for development that can generate revenue. In order to ensure improvement of Public Parks in Thika is adequately funded by the County government, this study recommends various measures that can help in win the political good will in the County.

5.7.4.6 Lack of aesthetic features in the park

The beauty of Public Park is very essential in attracting visitors in parks. As it was noted in the literature review and in the two case studies, the aesthetic value is very important in winning the confidence and positively changing the perception of users and potential users for Public Parks. Christina Wangari Garden for example does not have beautiful and attractive features and from a distance it's not a place one would admire visiting. The beauty of the park is attributed to the indigenous tress in the park. Maintenance and improvement activities concentrate on recovering the green cover of the park that is lost because of overcrowding. The unattended flower garden and the monument are clear evidence of this observation. The recommendations of this study address concerns such as; how can the aesthetic values of Public Parks be realized in Thika town particularly in Christina Wangari Garden?

Figure 43: Example of a well maintained flower Garden



Source: Central park New York 2012

5.7.4.7 Poor economic sustainability approach of park

Kenya is a capitalized nation where every development is evaluated on its cost and economic benefit or returns. There is a perception that for any project worth implementing, the amount of money used should be recovered after completion of the project. The case study of Post Office Garden shows despite the high maintenance cost, the park is able to generate enough money to fund its entire financial requirement. This economic sustainability is achieved while the park remains very affordably since its 100% free for users. The amount of revenue generated from Christina Wangari garden is only 25% of the total annual expenditure making it economically unsustainable. Economic sustainability helps in winning political good will and confidence of investors and stakeholders. The recommendations for this study seek to figure out how economic sustainability can be achieved in line with social and environmental sustainability.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This study examined planning issues that could inform provision of solutions for public parks in Thika and more particularly Christina Wangari Garden. This chapter therefore provides concrete recommendations on possible ways the planning issues identified can be solved in a sustainable way. The main theme of this study was to enhance sustainable utilization of Urban Public Parks and therefore recommendations will be geared toward achieving that theme. This Chapter will give conclusion of the study and areas of further research.

6.2 Conclusion

The study on Sustainable utilization of Christina Wangari Garden in Thika Sub County aimed at filling the existing gap on the current use and level of utilization of the garden, the factors influencing its utilization, the factors constraining effective utilization and examination of the legal, policy and institutional framework that influence sustainable utilization of Public Parks. This information acts as a baseline for proposing possible interventions that could ensure sustainable utilization of Public Parks.

The findings of this study led to discussions on genesis of unsustainable utilization of Public Parks in Thika and the long term effects of unsustainable utilization. Uses and level of utilization of Christina Wangari garden was one of the areas the finding of this study examined. It was observed that Christina Wangari garden is used as an area for relaxation, a place for interaction with environment, place for commercial activities, a short cut for pedestrians to pass through to the opposite side of the town, and home for street families, a place where Thika residents access unique facilities such as public toilets and smoking zone and a zone for voluntary activities such as blood donation and fire assembly point. It was also noted that Christina Wangari attracts more visitors during lunch hour and in weekends. Due to its being very affordably most of its visitors are low income that are mostly youths studying or working in the nearby institutions. The utilization of the park has resulted to conflict of competing land uses; commercial verse recreation land use, otherwise the size of the park is far much less that the demand in the town resulting to over use thus overwhelming maintenance activities. The issues related to the uses of the park genesis from under provision

of land for Public Park and weak capacity by Thika Sub-County to sustainably manage Public Park. For the Sustainable and effective functioning of Christina Wangari garden the recommendation of this study therefore need to address how the acute under provision of land for Public Park can be solved in Thika. The recommendation also need to figure out how the park can attract all groups of the community such as the rich, the poor, the elderly, the physically challenged and the children among others.

The finding of the study examined the factors that attracted user to visit Christina Wangari garden. This was specifically done to help note the factors that the people of Thika consider significant and worth considering when planning for public park. Factors such as comfort, affordability, availability of rare unique facilities, security/safety, centrality or proximity to the work place/home and landmarks were found to be attracting people to visit Christina Wangari garden. These factors originate from cultural behaviors of urban residents and their level of income. When planning for Public Parks in Thika and other towns such factors should be considered ensuring that urban residents are not limited or restricted from visiting Public Parks due to these kinds of problems.

The study also investigated the factors constraining effective utilization of Christina Wangari garden. The study through field survey noted a number of challenges that has limited Thika residents from visiting Christina Wangari garden. Un-conducive condition of the park characterized by lack of essential facilities such as facilities for children or physically challenged and inadequate facilities such as water points, lawn for resting and shade among others. Some facilities are poorly located such as gate resulting to accessibility problems and safety issues due to motorist-pedestrians conflict. Poor maintenance and improvement (evidenced by littering, untidy facilities, unattractive fence and flower garden) and congestions of park visitors were a major constrain in visiting the park. It was also noted that negative perception of Thika residence on the need for a park and the poor design of Christina Wangari garden were constraining the effective utilization. Unsustainable utilization and management was considered as the cause of this constrain and therefore planning approaches should be developed to figure out the solutions of these constraints thus making Public Park in Thika more attractive to its residents.

The study in addition noted that the International, National and Local Public Park planning Polices and the legislations have not been implemented fully in Thika in the management of

Christina Wangari garden neither have they been site specific. For example the requirement standards for land provision of Public Park in a district town have not been catered for resulting to acute shortage. On the other hand the government and community institutions responsible for ensuring the implementation and enforcement of these policies and legislation do not commit themselves enough or lacks adequate capacity in terms of funds and manpower.

Possible solutions were suggested by the local community and key informants about how Christina Wangari and other Public Parks in Thika can be improved to ensure sustainability in utilization. Among the proposed interventions include; provision of missing facilities such as trash contains, redesigning of Christina Wangari garden, acquiring land for expansion of Public Parks, enhancing land banking to cater for the future needs of Public Parks, improvement of funding and budgetary allocation for Public Parks, development of policy framework for management of Public Park and enhancing effective maintenance and revitalizing the existing public spaces in Thika town. These suggestion need to be examined further and there applicability measured by a group of planners so that recommendations can be drawn.

Recommendations and interventions should be formulated to address the planning problems of Public Parks in Thika and particularly in Christina Wangari garden. Such recommendations should therefore ensure effective and sustainable utilization and management of the garden. Implementation of such recommendations should change the negative perception of users about Public Parks. It should provide adequate space for Public Parks, enhance aesthetic, and address the current need and the future needs of Public Parks, secure and sustainable parks that would attract all income groups. They should also ensure protection and conservation of natural environment that is under threat of being encroached by built environment. It is through such approach that Thika residents and the neighbouring hinterland can enjoy the benefits of Public Parks.

In summary, it is very important to meet people's current and future needs in Urban Public Parks. **Rutledge** states clearly that it is important not to generalize these needs; the understanding of needs must be site specific. According to **Drivers (1977)**, people's needs are subject to their desire to meet certain goals and objectives and get benefits from them.

“The environment and the economy are really both two sides of the same coin. You cannot sustain the economy if you don’t take care of the environment because we know that the resources that we use whether it is oil, energy, land ... all of these are the basis in which development happens. And development is what we say generates a good economy and puts money in our pockets. If we cannot sustain the environment, we can’t not sustain ourselves.”

Quote from **Professor Wangari Maathai** that the study alludes to.

6.3 Recommendations

Study recommendations are designed to address and give solutions to the planning issues identified by the study. The study identified the main planning challenges associated with Public Parks in Thika Sub County as; inadequate space for public parks, inadequate financial and professional capacity in park administration, weak stake-holding and partnership, poor park designs, poor political good will, lack of aesthetic features in the park and poor economic sustainability of public parks. The recommendations in this study were informed by the knowledge that was gathered from the two successive case studies, the study findings and the Literature review.

6.3.1 Redesigning Christina Wangari Garden for sustainable utilization

From the interactions with the park users, Key stakeholders and representatives from Thika Sub-County the following recommendations for ensuring sustainable utilization of Christina Wangari garden were born.

- i. Establishing a “Park management Committee” that should constitute different professionals and selected stakeholders who should champion overall management of the garden.
- ii. Relocation and widening of entrances , they should be inclusive to allow free movement of the physically challenged
- iii. Introducing Pedestrian crossing and bumps adjacent to the new entrances for safe access
- iv. Redesigning and providing curvy footpaths to discourage people to pass through the park and to reduce speed of movement. The path should be inclusive thus conducive for all the categories of park users.

- v. Relocation of the public toilet, introduction of bathrooms
- vi. Establishing playground for children to cater for the interest of the children in the park
- vii. Introduction of a conducive place for **lactating mothers** to breastfeed and change diapers
- viii. Establishment of Christina Wangari Statues, a historical table and a notice board. This will be important for discovery and historical preservation of the park while the notice board would inform the park users of the upcoming events and jobs adverts.
- ix. Establishment of Christina Wangari Statues, a historical table and a notice board. This will be important for discovery and historical preservation of the park while the notice board would inform the park users of the upcoming events and jobs adverts.
- x. Provision of movable and permanent seating at the ratio of 1:1 in the park. Moveable seats would be necessary during the wet season when visitors cannot seat on the lawn
- xi. Provision of ten pairs of biodegradable and non-biodegradable Trash Containers.
- xii. Introduction of two mobile kiosks to sell fruits, soft drinks, sweets, cigarettes, diapers and biscuits among other goods required by park visitors as well as stall for painters and photographers
- xiii. Installation of WI-FI hot spot in the park to help users accesses internet in the park using their laptops, cell phone or tablets. This would help student study in the park and also make the park more attractive to all income group of town residence.
- xiv. Installation of CCTV that would help in improving security, supervision and data collection about number of visitors.
- xv. Removal of smoking zone, hawkers and drainage channel that drain storm water in the park from Kwame Nkrumah Road. The parking space along Uhuru Street and flower beds along Kwame Nkrumah road also need to be removed to pave way for a wider pedestrian footpath.
- xvi. Provision of a sheltered smoking zone Centre that's lacking in Thika sub county

6.3.2 Balancing demand and supply of Public Parks

The demand for public Parks in any town depends mostly on the total population of the town and the population structure; on income and age structure. Low income population requires a

Public Park due to its affordability while high population of youths and children in an area increases the demand. Provisions of Public Parks are achieved through exploring the current demand and the future demands for Public Parks in a town. The study noted a current shortage of 92.5 acres of land for Public Parks, considering the standards.

6.3.3 Strengthening institutions and coordination in management of Public Parks

The study noted that there capacity in terms of skilled man power and finances in the management of Public parks in Thika. The case study of Post Office Park that there is need for employment of skilled labour in the design and management of Public Park.

The study therefore recommends that Thika Sub-County should employ the required professionals in the designing of the Parks and also in management to afford all the required facilities and the best location in the park, as well as ensuring proper departmental coordination and synergy in administering of Public Parks.

6.3.4 Advocacy on positive perception towards Public Parks

The study noted that middle income and high income population do not visit public parks because over time they have developed negative perception on Public parks and views it as a place for idle people and street families. This study recommends that a study should be conducted to identify the specific needs for high and middle income population in Planning for public parks. In addition, Public awareness, provision of adequate space for Public Park and professional design that provides world class facilities and also proper management like in the case of Central Park in New York, may attract middle and high class population.

6.3.5 Enhancement of voluntary Public Private Partnership and Stake-holding

Stake-holding and partnership is a vital element in achieving successive planning, implementation and management of any project. The study of Christina Wangari garden indicated that the level of stake-holding and partnership is weak. In the case study of Post Office Park it can be recalled that the entire designing, implementation and management of that park was done by a group of private partners and stakeholders.

The study recommends that Thika Sub-County should look for ways of engaging stakeholders and partners who should help in administration of the park. This can be achieved

through public awareness and direct and formal persuading potential partners and stakeholder and pursue them by explaining the importance of such a move to the community.

6.3.6 Enabling sustainability in the design and management of Public Parks

Successive case study like Post Office Park in Boston shows a good example of sustainable utilization of Public Park. For example, in Boston, economic sustainability has ensured that the park generates more revenue that the money required for management annually without diminishing social and environmental requirements.

The study recommends that sustainable approach be employed in designing and utilization of public parks. This can be realized by ensuring that the designs and utilization take in to consideration the physical/environmental, social and economic interests of the park without diminishing the future needs.

6.4 Areas for further research

Further research should be done to determine the level of demand and design requirements of Public Parks at the Neighbourhood level and community level.

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9. Give reason in order of priority for your preference

- i)
- ii)
- iii)
- iv)

10. What is your main purpose of visiting this park? (tick)

- (i) Relaxation
- (ii) Smoking
- (iii) Socialization
- (iv) Engagement with the natural environment
- (v) Waiting or meeting someone
- (vi) Discovery
- (vii) Washrooms
- (viii) Commercial activities (specify)

Saloon

Photographing

Nail polish

Hawking

- (ix) Any other (specify)

11. What attracts you most to visit this park?

- i) Affordability
- ii) Proximity to your home/place of work
- iii) State of the park
- iv) Security
- v) Other (Specify)

12. During your visit to the park how long do you take before you leave?

(hours)

13. How frequent do you visit the park?

- (i) Daily
- (ii) At least twice a week
- (iii) At least once a week
- (iv) At least once in a month

(v) Any other (specify)

14. Which time of the day do you prefer visiting the park?

- (i) Morning
- (ii) Lunch hour (1.00- 2.00 pm)
- (iv) Evening

15. Give a reason for question No. 14

- i)
- ii)
- iii)
- iv)
- v)
- vi)

16. Have you noted any improvement/ maintenance in the park for the last...?

Time frame			Explain the improvement or maintenance activity
	Yes	No	
Last 1 year			
Last 3 years			
Last 5 years			
5 years and above			

17. From your own understanding, how is this park important to Thika Sub-county?

.....

.....

.....

18. Which facility in this park do you visit/use most frequently?

- (i) Seats
- (ii) Walking path
- (iii) Open green grass
- (iv) Trees/shade
- (v) Washrooms
- (vi) Smoking zone
- (vii) Saloon/nail polishing
- (viii) Photographers
- (ix) Other (Specify)

19. Which reasons do you have for the above question 20 above

.....
.....

20. Which important facilities are lacking in the park?

.....
.....

21. How can you describe maintenance activities in this park

- i) Very poor (ii) Bad (iii) Average (vi) Good (v) Very good

22. Which problems/challenges is the park is currently facing?

i)

ii)

iii)

iv)

23. Fill the table below stating the problem and giving the possible solution.

		Very poor	poor	average	Good	Very good	Main Challenge/problem	Pos
Facilities	Green spaces							
	Seats							
	Washrooms							
	Smoking zone							
	Monument							
	Walking path							
	Flowers							
	Trash Points							
	Water Points							
	Fence							
	Other(specify)							
Accessibility	Position of entrance/exit							
	Location of the park							
	Other (specify)							
Aesthetic values								
Security								
Maintenance/improvement								
Others(specify).....								

24. Any other concern/ issue/ recommendation

.....
.....
.....

THE END (Thank you for your cooperation)

Appendix 2: Interview schedule for Thika sub-county

UNIVERSITY OF NAIROBI
DEPARTMENT OF URBAN AND REGIONAL PLANNING
M.A. (PLANNING) DISSERTATION
Research Thesis by Gacihy Jacinta Njambi

**SUSTAINABLE UTILIZATION OF PUBLIC PARKS IN URBAN AREAS: A CASE
STUDY OF CHRISTINA WANGARI GARDEN IN THIKA SUB-COUNTY**
Interview schedule for Thika sub-county

Declaration: *The information provided in this questionnaire shall be strictly confidential and it is meant for academic purpose only*

1. Give a brief history of Christina Wangari Garden?

.....
.....
.....
.....
.....
.....

2. What are the roles/functions of Christina Wangari Garden to Thika Sub-County?

.....
.....
.....
.....

3. What is the role of Thika Sub-county in Managing Christina Wangari Garden?

.....
.....
.....

4. Does the sub-county of Thika partner with any stakeholders (such as individuals, private institutions and other government institutions) to improve the conditions of the park? If yes, mention these stakeholders and explain the capacity at which they partner or are willing to partner.

Stakeholder	Capacity at which they partner

5. How can you describe the cooperation with the above mentioned stakeholders

- (i) Very good (ii) Good (iii) Average (iv) Bad (v) Very bad

Explain the above answer.

.....

.....

.....

.....

6. a) Does the Sub-county of Thika generate any form of revenue from the park?

Yes () No ()

b) If yes, what are the main sources of this revenue?

.....

.....

.....

.....

b) What is the total annual revenue collection from the parkKsh

7. What is the total annual expenditure of Thika Sub-county on Christina Wangari gardenKsh

Mention the

Expenditure.....

.....

.....

8. Do you have statistics about the users of Christina Wangari garden? If yes please explain
- (i) Average number of users in a month
 - (ii) Average number of users per day
 - (iii) Which months does the park experience the highest number of users (*list from the month with the highest to the lowest*)
 - (Month)..... (Number of visitors)
 - (Month)..... (Number of visitors)
 - (Month)..... (Number of visitors)
 - (Month)..... (Number of visitors)
 - (Month)..... (Number of visitors)
 - (iv) Which day in a week does the park experience the highest number of visitors?
.....

9. What are the challenges/constraints facing Christina Wangari Garden?

.....

10. Suggest possible intervention for the above challenges/constraints?

.....

11. Any other concern/comment or recommendations

.....

THE END (Thank you for your cooperation)

Appendix 3: Check list

UNIVERSITY OF NAIROBI
DEPARTMENT OF URBAN AND REGIONAL PLANNING
M.A. (PLANNING) DISSERTATION

Research Thesis by Gacih J Jacinta Njambi

**SUSTAINABLE UTILIZATION OF PUBLIC PARKS IN URBAN AREAS: A CASE
STUDY OF CHRISTINA WANGARI GARDEN IN THIKA SUB-COUNTY**

Check list

**Declaration: *the information provided in this questionnaire shall be strictly confidential
and it is meant for academic purpose only***

1. Size of the parkM²
2. Number of users table in any particular time during the day ((C- children (1 to 15 years),
MA- Middle Age (16 – 60 years), O – Old persons (60 and above))

Days in a week	Morning			Lunch hour			Evening			Total		
	C	MA	O	C	MA	O	C	MA	O	C	MA	O
Week day (Monday – Friday)												
Saturday												
Sunday												

3. Activities practiced by users in the park

Activity		Number users practicing	Description on the activity
Commercial activities	Nail Polish		
	Photographing		
	Hawkers		
	Saloon		
	Others (Specify).....		
Resting on the grass			
Resting on the seats			
Smoking(in the smoking zone)			
Standing in the park			
Active activities (jogging, children playing etc)			
Washrooms			
Others(specify).....			

4. Which part of the park has the highest number of users and which has the least

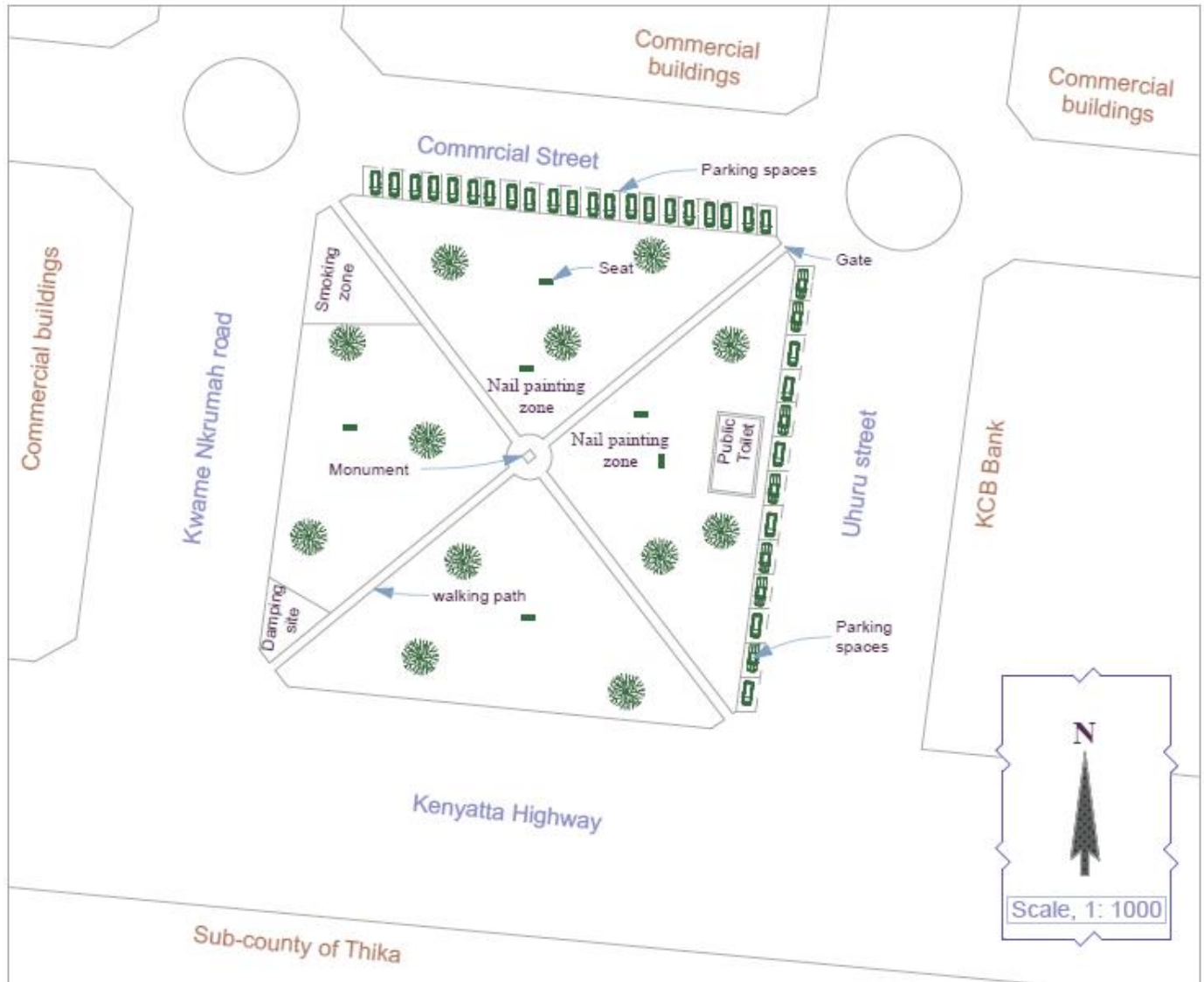
.....

5. What are the characteristics of the part of the park with the highest number of users?

- (i)
- (ii)
- (iii)

- (iv)
- (v)

6. Mark the distribution on the map according to user density



7. What are the characteristics of the part with the lowest number of users?

- (i)
- (ii)
- (iii)
- (iv)

(v)

8. Fill in the table the factors that attract people in the park?

	Condition/ state	Main issues
Accessibility		
Aesthetic values		
Security		
Maintenance/ improvement activities		
Others(specify).....		

9. Mark the available facility and explain their condition

Facilities	number	Condition/main challenge
Location of Entrance		
Fence		
Open green spaces		
Seats		
Washroom		
Smoking zone		
Flowers garden		
Walking path		
Trash containers		

Monument		
Security light		
Water point		
Others(specify).....		

10. Inclusivity of facilities

	Available facilities	Their state and challenges
Physically challenged	(i) (ii) (iii) (iv) (v)	
Children	(vi) (vii) (viii) (ix) (x)	
The elderly	(xi) (xii) (xiii) (xiv) (xv)	

11. Any other concern/ Issues/Comment

.....
.....
.....
.....
.....

THE END (Thank you for your cooperation)

Appendix 4: Focused Group Discussion Guide

UNIVERSITY OF NAIROBI
DEPARTMENT OF URBAN AND REGIONAL PLANNING
M.A. (PLANNING) DISSERTATION

Research Thesis by Gacihhi Jacinta Njambi

**SUSTAINABLE UTILIZATION OF PUBLIC PARKS IN URBAN AREAS: A CASE
STUDY OF CHRISTINA WANGARI GARDEN IN THIKA SUB-COUNTY**

FOCUSED GROUP DISCUSSION GUIDE

Topic to be discussed

1. History/Genesis of the Christina Wangari Garden
2. Available recreational open spaces facilities frequently visited in Thika Sub-county and the reason why they are preferred.
3. Functions/roles of Public Parks such as Christina Wangari garden
4. a) Challenges faced by Urban Public Parks in the Country
b) Changes faced by Urban Public Parks in Thika sub-county and specifically Christina Wangari Garden
5. What are the possible interventions to the Challenges/issues facing Public Parks in Thika Sub-county and specifically those applicable to Christina Wangari Garden
6. a) The current stakeholders in the management of Christina Wangari Garden?
b) Roles of current stakeholders
c) Challenges faced by current stakeholders in improving Christina Wangari Garden
d) Potential stakeholders and their possible roles
7. Possible sources of funds for the improvement of Christina Wangari Garden
8. Any other Concern/Issues/Comment

THE END (Thank you for your cooperation)