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## Public open spaces in Nairobi City, Kenya, under threat

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The paper demonstrates that public open spaces in Nairobi City have been increasingly threatened by congestion and deterioration as result of the rapid rate of urbanisation (5–7.5%), poor planning, weak management and illegal alienation. According to the 1948 Master Plan for the city, city planning was premised on the neighbourhood concept with ample provision of public open spaces. However, after Kenya's independence in 1963, the implementation of the Master Plan was largely abandoned. Rapid and uncontrolled urbanisation meant that public open spaces that were intended to serve a population of 250,000 now serve over 3 million people. Public open spaces in the city suffer from degradation, overcrowding and insecurity, thus denying city residents access to the much-needed recreation and leisure facilities.

**Keywords:** public; parks; spaces; Nairobi; Kenya

### 1. Introduction

Public open spaces are an integral part of city life. Such spaces meet social, political, economic and aesthetic needs. The type and scale of public open spaces provided in a city typically affects a country's level of development. Urban public open spaces serve multiple functions, including: recreation; providing amenities that attract and retain jobs, a vibrant culture and talented people; and protecting the visual character, heritage and beauty of a city. Public urban open spaces are also created to satisfy a humans desire to commune with nature, and they play a significant role in preserving community identity (Smith and Riggs 1974).

Since its establishment in 1900, Nairobi City has experienced rapid population growth, but key infrastructure to support urbanisation and enhance the residents' quality of life, such as the provision of public open spaces, has not been provided at comparable rates (Obudho 1988). The population of the city increased from 11,500 in 1900 to 3.2 million by 2009. At present, the city's population is estimated to be 3.29 million. The city has also expanded geographically with the boundary being extended from 18 km<sup>2</sup> in 1900 to 690 km<sup>2</sup> in 1963 (Oyugi and K'Akumu 2008).

The development of Nairobi City is still governed by the 1948 Master Plan that was prepared to establish the colonial capital. The Africanisation of the city after independence in 1963 saw priority shift away from ideals of the colonial capital to

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addressing emerging problems such as housing, unemployment and poverty. The Master Plan, which allocated 27.5% of the city to public open spaces, was meant to serve a population of 250,000, but rapid population growth has over-stretched the existing public open spaces. In addition, parts of the public open spaces network have been lost to private developers through illegal alienation while the remaining ones have deteriorated due to poor governance and management. Illegal alienation of public open spaces has been covertly supported by the city's planning agencies, and political leaders also alienate public open spaces for various reasons, including rewarding party loyalists. The research question in this study is as follows: to what extent has the growth of Nairobi City affected the provision of public open spaces?

## **2. Research methodology**

This study makes use of both secondary and primary data. The collection of secondary data involved a review of literature on the concept and principles of public open spaces/public parks, Nairobi City, and public open spaces in the city using City Park as a case study. The study obtained primary data from City Park users, interviews with resource persons from Nairobi City Council (Departments of City Planning and Architecture, and Environment), Ministry of Lands and Settlement (Director of Physical Planning), East Africa Natural History Society and the National Museums of Kenya. In addition, one focus group discussion involving 20 park users was conducted to consolidate key issues emerging from the study; it identified the following key issues on City Park: deterioration of the park evidenced by congestion, insecurity, noise, poor waste management, alienation of land, and the introduction of incompatible land uses.

A sample of park users was taken through systematic random sampling during a one-week period from Monday to Sunday, between 8am and 7pm, to capture daily variations associated with working days and weekends. The survey was conducted during these hours because it is the time when the park is open to members of the public. Following a one week pre-survey, an interval of every 10th park user was adopted to sample the park users. On each day every 10th park visitor (or group where applicable) was sampled for the study, resulting in a total sample size of 260. This gave rise to a mean daily sample of 37 park users, although during weekends more park users were sampled as more people visited the park. In cases where the park users visited as a group, one member of the sampled group was asked to respond to the questions. A structured questionnaire was used to collect data from the sampled park users, while an interview schedule was used to collect information from the resource persons and during a focus group discussion. An observation sheet and photography were also used in the study.

## **3. Theoretical framework**

It was not until the nineteenth century that the public park became as we know it today, an area of land laid out primarily for public use amidst essentially urban surroundings. The creation of useful landscapes within the town for the use and enjoyment of the public at large is essentially a Victorian idea, first due to the phenomenal growth of the 'insensate industrial town' which created the basic idea for such areas, and second, perhaps to the later Victorian zeal for reform of sprawling and overcrowded settlements that became synonymous with the Industrial Revolution. There seems to

be a general agreement that a complete system of parks and other open areas is an essential part of the urban structure, although often used to separate zones of different uses or as providing thoroughfares for major roads (Chadwick 1966).

City parks and open space improve our physical and psychological health, strengthen our communities, and make our cities and neighbourhoods more attractive places in which to live and work. Regular physical activity has been shown to increase health and reduce the risk of a wide range of diseases. Green space in urban areas provides substantial environmental benefits. Trees reduce air and water pollution, they help keep cities cooler, and they are a more effective and less expensive way to manage stormwater runoff than building systems of concrete sewers and drainage ditches. City parks make inner-city neighbourhoods more liveable; they offer recreational opportunities for at-risk youth, low-income children and low-income families; and they provide places in low-income neighbourhoods where people can feel a sense of community. Access to public parks and recreational facilities has been strongly linked to reductions in crime and, in particular, to reduced juvenile delinquency (Sherer 2006).

In the study of Fairmount Park System of Philadelphia, Brownlow (2006) applied political ecology to explain the nature of public space. He noted that the relative 'health' (normatively defined) of local ecologies and ecosystems are indicative of larger patterns of social inequality and marginality. The decline of social control mechanisms, both formal and informal, changes the nature of human-environment experience from one of perceived safety and order to one of perceived fear and disorder.

The importance of public open spaces in a city's bio-physical and socio-economic environment has been widely researched in the literature. Public open spaces are important not only for leisure and recreation, but also for economic and political functions. However, the quality of public open spaces provided in a city depends on the long-term political commitment of the city. Failure to prioritise development of public open spaces is detrimental to the city due to increasing risks of congestion, insecurity and environmental degradation.

#### **4. Origin and growth of Nairobi City**

##### ***4.1. The origin of Nairobi City and its growth in the colonial era***

Nairobi City owes its birth and growth to the Uganda Railway. The town was first established as a railway station in 1899 and later grew to become an administrative centre. Nairobi was first classified as a township in April 1900, covering an area of 18 km<sup>2</sup> with a population of 11,500 residents. In 1907, Nairobi was accepted as the official capital of Kenya and in 1909 Nairobi was elevated to a Municipal Council with full corporate rights. As a result of the rapid population growth and infrastructure investment, the boundary of the township was further extended in 1927 to cover an area of 25.37 km<sup>2</sup>. By 1948 the population of the township had grown to 118,976 as the city's boundary was again extended to cover an area of 78 km<sup>2</sup>. As at independence in 1963, the city's population had reached 345,000 with an area of 690 km<sup>2</sup> including 114 km<sup>2</sup> covered by Nairobi National Park (Oyugi and K'Akumu 2008).

The 1948 Master Plan was meant to guide the development of the city until 1975. The Master Plan took into consideration all important aspects of urban form and function. These included the relationship of the city to the railway, industrialisation,

population growth, regional development, population dynamics, aesthetic characteristics of the city centre, the industrial area and the road network. The plan also identified various issues whereas in European towns there was no intricate slum clearance problem, there were adequate open spaces, public authorities had sufficient access to land, and the beauty spots of the city were well conserved. In the plan, the component of open spaces received much emphasis, covering 27.5% of the total land use. The areas surrounding the municipality comprised greenbelt areas, and game and forest reserves. Nairobi City as a colonial city was premised on the neighbourhood concept. The Master Plan structured the city into distinct neighbourhoods defined along different races living in the city – Europeans, Asians and Africans. The network of green areas and open spaces, in conjunction with the organisation of the road system, generated the urban structure of the City of Nairobi (Thornton 1948, Nevanlinna 1996).

#### 4.2. *The growth of Nairobi City since independence in 1963*

Since 1963, Nairobi City has registered a rapid rate of urbanisation mainly because of the following factors. First, during the colonial period the immigration of Africans to the city was restricted to those whose skills/labour were required, which resulted in a modest rate of urbanisation. However, independence in 1963 guaranteed freedom of movement, leading to the higher rate of urbanisation. Second, the increasing incidence of poverty in the rural areas against perceived better opportunities for earning a living in the capital city spurred a rapid rate of rural-urban migration. The incidence of poverty remains high (50%), but during the 1990s and early 2000s mean national poverty rose to approximately 60%. Third, the rapid population growth (3–4%) in the country during the period 1963/99 because of improved health care contributed to the rapid rate of urbanisation (Mireri 2000). In addition, improved transport and communication has made it easier for people to move to and from urban areas. Further, an increasing incidence of insecurity in the rural areas, particularly during the last two decades, has triggered a movement of people to the urban areas. Increased insecurity has been caused mainly by deteriorating poverty as well as politically instigated ethnic clashes. As a result, the relatively well off and displaced persons seek refuge in the urban areas where security is relatively better. The rapid rate of urbanisation has overstretched the capacity of the existing infrastructure and services and even public open spaces have not been spared.

The Master Plan had envisaged a city of 90.64 km<sup>2</sup> with a population of 250,000 by 1975. As shown in Figure 3, in 1963 the population of the city had increased to 345,000 and by 1970 it had risen to 509,000. This prompted Nairobi City Council to set up the Urban Study Group in 1970 to come up with a new Master Plan. In 1972, the government prepared the Nairobi Metropolitan Growth Strategy to replace the 1948 Master Plan. Unfortunately, the Growth Strategy was not approved because of competing political interests, but some of its proposals have been implemented on an *ad hoc* basis. Consequently, the development of the city is still guided by the outdated 1948 Master Plan. The strategic plan provided a framework for expansion of the city covering mainly residential, industrial and transportation land uses. It also shows that the city's growth would take the northwest direction (Nairobi–Thika corridor) (Republic of Kenya 1973). Unlike the 1948 Master Plan that set aside approximately 30% of the land area for public open spaces, this was not prioritised in the city's Metropolitan Growth Strategy.



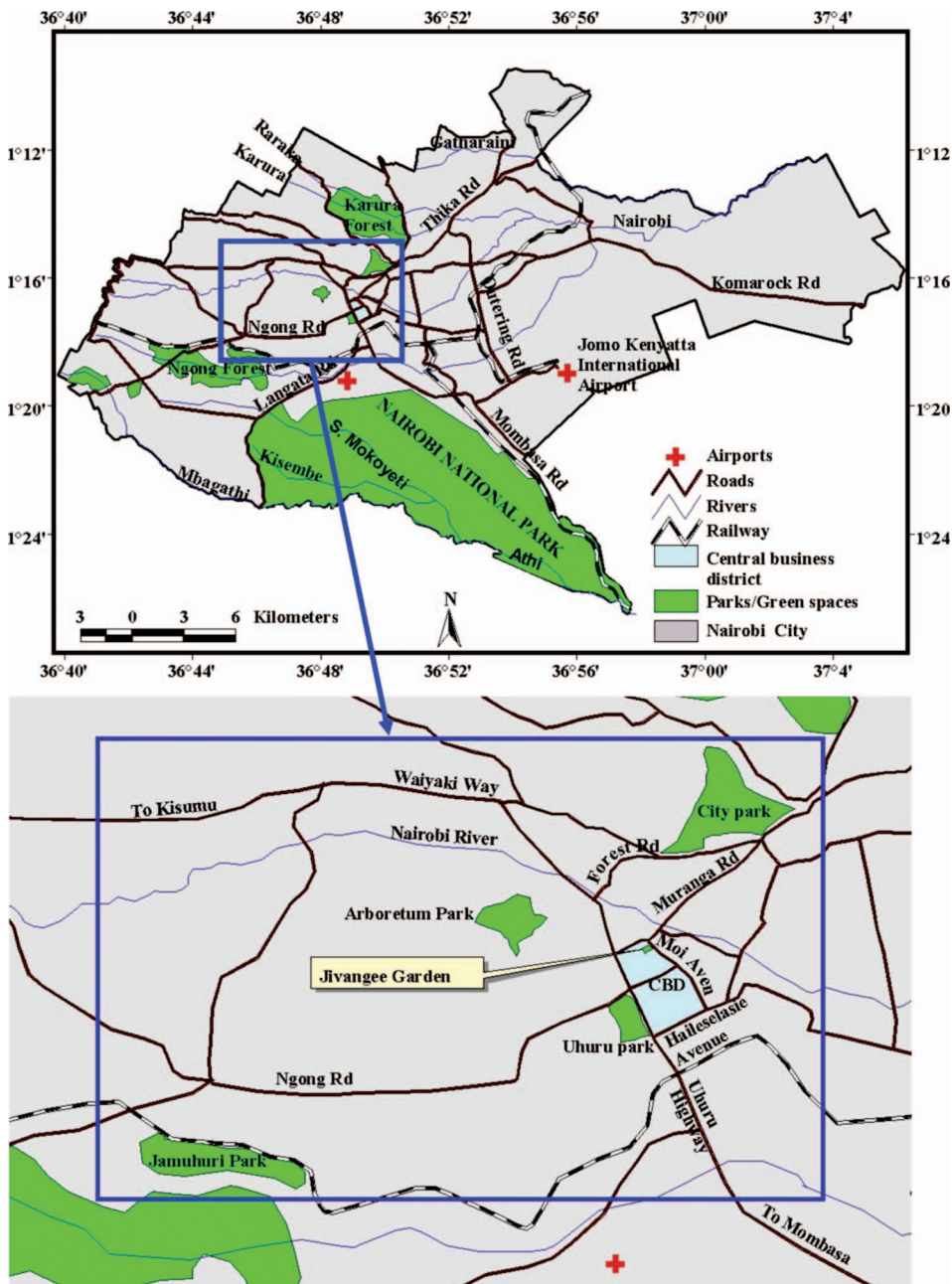


Figure 1. Nairobi City and the major public open spaces.  
Note: See online colour version for full interpretation.

As shown in Figures 2 and 3, Nairobi City has registered steady growth since independence in 1963. According to Shihembetsa and Olima (2001) the population of Nairobi City rose rapidly from 345,000 to 2,143,254 in 1963 and 1999, respectively. At present, the population of Nairobi City is estimated at 3.29 million

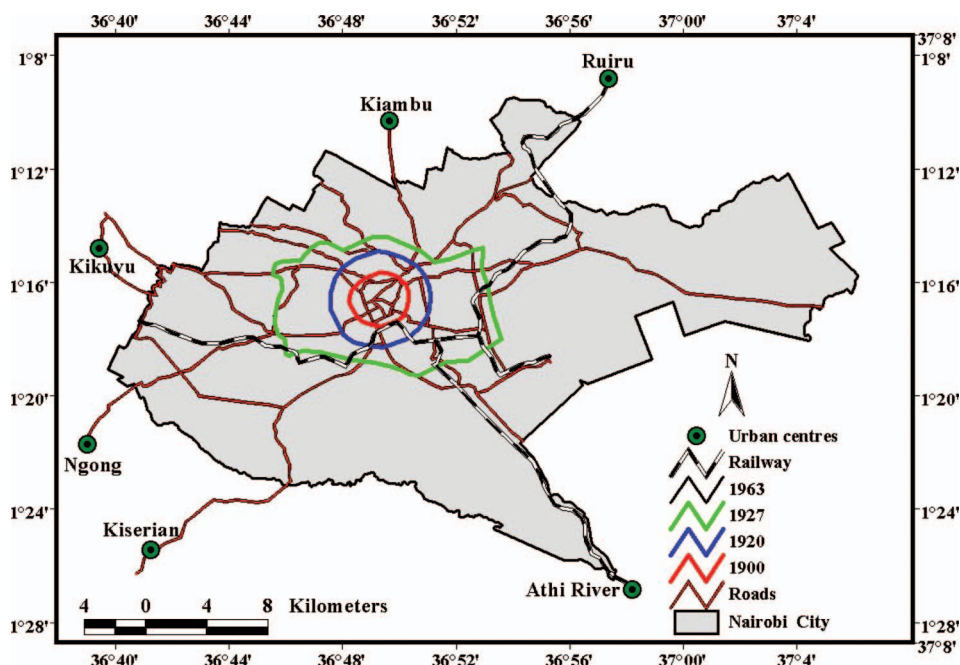


Figure 2. The spatial expansion of Nairobi City.  
Note: See online colour version for full interpretation.

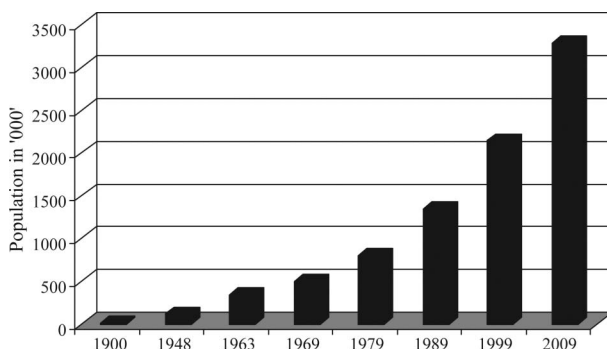


Figure 3. Population growth of Nairobi City.  
Note: Generated from Shihembetsa and Olima (2001) and Republic of Kenya (2001).

and it is growing at an annual rate of between 5 to 7.5%, mainly due to rural-urban migration. As discussed previously and shown in Figure 2, the city witnessed boundary changes between 1900 and 1963. The boundary of Nairobi City has not been revised since 1963 despite the rapid growth. Further, the major boundary change in 1963 was not based on planning and development of requisite infrastructure and services.

The growth of Nairobi City has exhibited the basic characteristics of a conurbation. Rapid growth has occurred outside planned settlements, where over 70% of the city's population lives. The slum settlements are growing by

approximately 11% per year. Indeed, slum/informal settlements have come to epitomise urbanisation in independent Kenya. The rapid growth of Nairobi City has led to the mushrooming of informal settlements devoid of basic infrastructure, including public open spaces.

### **5. Provision and governance of public open spaces in Nairobi City**

The neighbourhood unit proposed in the 1948 plan not only organised the built urban forms but was a social plan to initiate a community where the physical forms and social services supported the development of social bonds between inhabitants. Each neighbourhood had adequate provisions for public open spaces. The neighbourhood was to be the means of injecting modern social values and practices into the newly urbanised citizens whose earlier experiences were limited to tribal associations (Nevanlinna 1996).

The 1948 Master Plan for Nairobi City had allocated 24.96 km<sup>2</sup> of land for public open spaces, which represented 27.5% of the total land area (90.64 km<sup>2</sup>). As shown in Figure 1, the city has six major public open spaces: Uhuru/Central Park, Jamhuri Park, City Park, Arboretum, Kamkunji, Jevanjee Gardens and two forests areas (Karura and Ngong Road Gardens) (Chege 1992). Serious threats to public open spaces have been more apparent since the 1970s with increased densification of settlements in total disregard of the zoning specifications provided in the Master Plan. Maina (1982) alluded to the densification of settlements in Nairobi City. He stated that on average the estates built during the colonial era had 2730 people per hectare of neighbourhood open space while the newer estates have 3588 per hectare. Apparently, the City Council views open spaces as a burden, particularly if they do not generate an economic return. Usually plots unsuitable for building because of shape or access have been left as open space due to a lack of alternative use and not necessarily because of the need to provide open space.

Between 1948 and 1963 the colonial authority implemented the Master Plan, but things changed after independence. After the colonialists left in 1963, major changes were expected in the implementation of the Master Plan as Africans took over the rein of power. Before independence the immigration of Africans into the city was highly restricted and even those who found their way there could live only in the Eastlands of the city, a pattern that was expected to change after independence. The Africanisation of the city resulted in changes of leadership and settlement patterns as Africans occupied the neighbourhoods that were previously a preserve of Europeans and Asians. The Africanisation of the hitherto colonial city was driven by a rapid rate of urbanisation. While the Master Plan envisaged an optimal city population of 250,000 by 1975, by that time the city population was more than double that figure. The Africanisation of the city also saw priority shift towards emerging problems, namely the creation of housing and employment for the rapidly growing urban population.

Densification of settlements escalated in the 1990s and persists today, disproportionately increasing the population compared with the existing public open spaces and taking place in the absence of a planning framework. It is important to point out that the zoning specifications for Nairobi City have not been changed as there are no requisite by-laws to effect such a change. However, the City Council of Nairobi has since informally implemented major changes in zoning specification without the requisite planning and investment in infrastructure. Neighbourhoods



designated as low density residential areas such as Parklands, Westlands, Lovington and Kilimani have seen high-density settlements authorised by the city authority. Informal changes of low-density neighbourhoods into high-density neighbourhoods have increased pressure on the available infrastructure and services including public open spaces.

Other studies have similarly pointed to the fact that the city authority has a low priority for the planning and development of public open spaces. The causes of low prioritisation of public open spaces in independent Kenya remains unclear, but it could be attributed to the absence of clearly defined concept of an African city. The City of Nairobi has gone through largely organic changes that have lacked a clearly defined order, form and function. The City of Nairobi inherited from the colonialists was typically a European city. However, since the country attained independence, the African leaders have yet to conceptualise the place of public open spaces in a city and they have thus prioritised other sectors, which meet the direct needs of the city population such as housing and industry. Muiga (2009) stated that open spaces for recreation and environmental protection are given low priority in the development and spatial planning of Nairobi City. New neighbourhoods are constructed without open spaces or playgrounds.

Since independence, the country has operated without a national land policy, which has been partly blamed on poor management of public open spaces. In 2009, a National Land Policy was passed. Some of the national land policy principles of relevance to open spaces are: equitable access to land; secure land ownership; effective regulation of land development; sustainable land use; access to land information; and efficient land management (Republic of Kenya 2009). The national land policy identifies the problem of illegal alienation of public land for private use. The policy addresses the prevalence of public land privatisation through the illegal allocation of such land to private individuals and corporations with total disregard to the public interest during the post-independence period, popularly known as land-grabbing (Republic of Kenya 2009). Despite the noble intentions of the national land policy, it has not addressed public open spaces. Instead, the policy has realized housing, commercial, industrial and infrastructure development. Since the land policy has not included public open spaces, its implementation is unlikely to adequately address the challenges facing public open spaces in the country. In addition, given that the policy seeks to undertake major legislative and institutional reforms, it will take several years to realize its impacts.

## **6. The management of City Park**

### **6.1. City Park**

City Park is located approximately 3 km north of the Central Business District. As shown in Figure 1, it is surrounded by Limuru Road to the West, City Park Road to the North, Forest Road and Muranga Road to the South. City Park is the only natural park in the city, as shown in Figure 4. According to the East African Nature History Society (EANHS), an estimated 50 indigenous tree species and orchards, some of them found only in Kenya, are found in the park. The park has approximately 300 bird species and is also home to hundreds of insects, Dikdik and the Sykes monkeys. It is the habitat of approximately 2000 Sykes monkeys. According to the 1948 Master Plan, City Park was meant to serve the Parklands neighbourhood. As discussed in detail in the next section, City Park was originally



Figure 4. A section of the remaining natural forest in City Park.  
Source: Field Survey (2009).

approximately 150 acres, but has since lost 50 acres to private developers through illegal alienation. The illegal alienation of public open spaces is blamed on poor governance as it occurs with total disregard to the existing by-law and is not policed.

The alienation of parts of City Park for private use was in contravention of City Council by-laws. The by-laws established for City Park are aimed at preventing damage, ensuring security and conservation of biodiversity. However, the enforcement agents presided over alienation of parts of the park with total disregard to the existing by-laws due to weak enforcement mechanisms. The following City Council by-laws may suffice to demonstrate that they are meant to protect public parks. By-law number 508 states that a person shall not carelessly or negligently deface, injure or destroy any part of any wall or fence in or enclosing the park or any part of the building, barrier walling or of any fixed or movable seat or any other structure or exaction in the park. By-law number 515 says that any person shall not kindle a fire in the park. By-law number 517 forbids anyone from injuring or destroying any bird or butterfly or spread or use of net, or set of any snares, instruments or any other means for taking, injuring or destruction of any bird or butterfly. By-law 524 says that a person shall not create a disturbance or be drunk or disorderly or be guilty of any quarrelsome, violent or indecent behaviour in the park.

The park is currently in a poor condition. The few old and worn out dustbins in the park are filled with uncollected solid waste. This is mainly because of inadequate budgetary allocation for the park's management. Brownlow (2006) reported that Fairmount Park System in Philadelphia suffered serious deterioration due to inadequate budgetary allocation. Chege (1992) similarly reported a decline in the quality of City Park. Park facilities have greatly deteriorated because of poor maintenance. Consequently, the park is characterised by broken facilities. Even Karura River which flows through the park is laden with solid waste, a section of

which is shown in Figure 5. The dumping grounds for the Bowling Green Restaurant and the Hawkers' market are health and ecological hazards to park visitors, animals and insects.

## 6.2. *Illegal alienation of City Park*

The park was planned to serve the Parklands neighbourhood, which traditionally housed the Asian communities. The park remained intact and was well maintained until the onset of illegal alienation in the 1980s. During the 1980s the government disbanded the popularly elected City Council of Nairobi and placed the management of the city under the leadership of Nairobi City Commission. The City Council was disbanded due to increased political intolerance by the then ruling party KANU. The City Commission presided over most illegal alienation of public open spaces, including using City Park's land for the Hawkers' market, Hindu temple, cemetery, hockey stadium and school as well as conversion of the Bowling Green into a restaurant. As a result, the park lost 50 acres of land to private developers.

Some of the land uses introduced in City Park are incongruent with a typical natural park. The Hawkers' market is characterised by solid and liquid waste and air pollution, which makes it impossible for the park to function effectively as a habitat for biodiversity and centre for recreation and leisure. The alienation of parts of City Park has led to loss of biodiversity, vegetation and wildlife. Some of the activities such as the Hawkers' market, hockey stadium, a temple (as shown in Figure 6 below) and a school in the park's alienated land seriously conflict with the park's core functions, namely leisure, recreation and nature conservation. Poorly managed waste from Bowling Green restaurant and the Hawkers' market can disrupt biodiversity resources, as wildlife is exposed to pollution risks, including feeding on artificial food and wastes from such sources. In addition, the Hawkers' market attracts a huge population, which scares away some wildlife.

City Park was saved from further illegal alienation as a result of the declaration of the park as a national monument through a legal gazette notice in 1997 by the



Figure 5. A section of poorly managed solid waste from City Park Hawkers' market. Source: Field Survey (2009).





Figure 6. A section of Hindu Temple located in the alienated City Park land.  
Source: Field Survey (2009).

National Museums of Kenya. Although further alienation of the park's land to private developers was halted by this notice, the already introduced land uses remain, which have irreparably changed City Park.

### 6.3. *Personnel, finance and equipment for park management*

The management of City Park falls within the Department of Environment, Parks Section of Nairobi City Council. Currently, the park does not have specific personnel and facilities allocated to it. Before the centralisation of the park's management in the early 1990s, City Park had a workforce of 250 people to maintain it and the surrounding environment. At present there are no personnel, facilities and resources allocated specifically for the management of City Park. Nairobi City Council Parks Section rotationally maintains all the parks within its area of jurisdiction on an *ad hoc* basis as there is no clearly defined schedule of park maintenance. Failure to allocate resources specific to the park makes it difficult to regularly maintain it. Field survey results show that the Parks Section lacks the requisite personnel and facilities to manage all the parks within the city. The personnel are not only under-staffed but most of them are poorly qualified. While the officer in charge of parks in the city is somewhat relevantly qualified in park management (forestry, agro-forestry and social forestry) the rest of the workforce have no professional training. For effective management of City Park, an all round team of qualified personnel is required. Both the Assistant Director and Superintendent (Parks Section) concur that the Section greatly needs the services of planners, landscape architects and horticulturalists

(from interviews). Oyugi and K'Akumu (2008) also discussed the weak management capacity of the City Council. They stated that Nairobi City Council has a large numbers of unskilled workers at the expense of required technical personnel. The situation is further worsened by lack of a clear institutional culture and human resource development policy, thereby impeding the degree of general discipline and productivity among Council staff.

The financial budget proposal for the Parks Section falls into two categories: recurrent and capital expenditures. The recurrent expenditure takes care of the routine financial needs of the section whereas capital expenditure finances capital improvement as well as rehabilitation of existing facilities such as septic tanks in the park. According to the Parks Superintendent, the approved recurrent expenditure for any given year falls far below required financial resources. Further, capital expenditure proposals by the section are never approved as the city suffers from a heavy burden of budget deficit. This implies that the Parks Section undertakes neither capital improvements in the existing parks nor the development of new parks. Therefore, the parks that were meant to serve 250,000 people are now serving 3.29 million city residents.

Similar to Nairobi's City Park, inadequate financial allocation, budget cuts and the redeployment of personnel away from park management fundamentally affected the quality of Cobbs Creek Park. Brownlow (2006) noted that the Park Guard, once over 500 strong (17.4 acres per Guard) and distributed among six districts that spanned the entire Fairmount Park System, was currently represented by 24 Park Rangers whose beats no longer included Cobbs Creek. The number of full-time park personnel had dropped to an all time low of just over 200, a 66% reduction in size since the early 1970s. Routine maintenance activities dominated park management protocol; however, even among maintenance workers, staffing was a fraction of the recommended levels. Fairmount Park was under-staffed and existing park staff were overworked, with each staff member responsible for nearly three times the recommended workload. In 1974 Mayor Rizzo axed the entire Fairmount Park System, allotting it just 1.1% of the city's total budget expenditures, a 50% cut from the previous administration and the smallest allotment in the park's history up to that time. It appeared that Fairmount Park's financial and political needs were widely considered expensive and unnecessary luxuries alongside Philadelphia's more pressing social and economic woes. Since the early 1980s, Fairmount Park's operating and capital budgets represented less than 1% of the city's expenditures. Adjusting for inflation, Fairmount Park has not experienced a budget increase in more than three decades.

As shown in Table 1, the parks lack basic equipment and materials to effectively discharge their duties. In order to improve park management, the City Council should increase the supply of the following equipment and materials: tractors, lawn mowers, power saws, aluminium ladders, forked *jembes*, pangas, secateurs, *lister engines*, hosepipes, fertilisers, chemicals, water bowser/tankers and trucks. Most of the existing facilities are either inadequate or in a state of disrepair, making it impossible for the Parks Section to effectively manage the parks.

## 7. The level of utilisation of City Park

This section examines the socio-economic characteristics of the City Park users, specifically age and gender, education, employment and income. The level of



utilisation is analysed in relation to the origin of park users and the time they frequent the park. The problems facing the park are also covered.

## 7.1. Socio-economic characteristics of park users

### 7.1.2. Age and gender

Field survey results show that City Park is used mainly by youths. Only 22% of the surveyed park users were under 21 years of old, while 53% of them were between 21–30 years of age. The high proportion of youths in the park is explained largely by the high rate of unemployment (40%) and the associated high incidence of poverty (50%). Unemployed youths with nothing to do seek solace in the park. The majority of park users were males, constituting 62%. The relatively low proportion of females using the park is due to congestion and safety risks. The findings of this study are similar to that by Marcus and Francis (1998), who said that fewer women than men visit parks due to the associated fear of crime (sexual violence). With increased security risks and congestion, the females and elderly tend to stay away from the park. Brownlow (2006) stated that perceived absence of control is central to the ever-growing fear of violent victimisation among urban women, especially the fear of male sexual attack in public spaces.

Table 1. Nairobi City, Parks Section equipment and material requirements.

Item	Purpose	Current no.	Condition	Adequacy status	Extra no. required.
Tractor	<ul style="list-style-type: none"> <li>● Ploughing</li> <li>● Mowing</li> <li>● Transporting plants etc.</li> </ul>	12	2 not operational 10 broken	Inadequate	12
Lawn Mowers	Mowing	3	Operational	Inadequate	50
Power saws	Cutting dangerous trees	2	Operational	Inadequate	12
Aluminium ladders	Climbing trees	A few	Operational	—	—
Forked <i>Jembe</i> , Pangas, Secateurs.	Ploughing, cutting and pruning	Many	Operational	Adequate	Nil
<i>Lister engines</i>	Pumping water at City Park	5	All broken	Inadequate	3
Hose pipes	Irrigation	—	—	—	50 rolls.
Red soil	Plant nurseries	—	—	Inadequate	400 tons per year.
Chemicals (Pesticides and fungicides)	Plant nurseries	—	—	Inadequate	—
Fertilisers	Plant nurseries	—	—	Inadequate	500 kg per year.
Water bowser/tanker	Transporting water	None	—	Not there	1
Lorries	Transporting plants and soils	3	Operational	Inadequate	4

### 7.1.3. *Education, employment and income*

Survey results show that the majority of park users have attained some level of education. The highest number of users attained secondary education (43%) followed by tertiary education (28%) and primary education (23%). These figures can be explained by the following factors: the rural-urban immigrants are the most highly educated; the high rate of unemployment in the city; and the educated people may appreciate the intrinsic and instrumental value of the park as a recreational centre.

An analysis of the employment status of the surveyed park users indicates a high rate of unemployment and dominance of the informal sector in the urban economy. The study revealed that 37% of the park users were jobless while 25% were engaged in formal employment, whereas 10% were self-employed with a Nairobi City Council business license but 28% were self-employed without the requisite City Council business license. This shows that the park is attractive to the jobless and those in the informal sector. The informal sector contributes about 20% to the Gross Domestic Product.

The majority of the park users are low-income earners. A significant proportion (38%) of the park users surveyed earned very low wages, less than the city's minimum wage of US\$74 per month. A further 16% of the respondents earned US\$74–143 per month. The low-income levels could be associated with informal activities the park users engage in. The low-income level is compounded by the high incidence of unemployment among park users. The low-income earners have no other choice for leisure than to visit local public parks. Marcus and Francis (1998) concurred that only a small proportion of the affluent occasionally visit a public park as they have a choice of spending their leisure time in private environments. The findings of this study concur with that by Brownlow (2006), who found the conditions of Cobbs Creek Park were dominated by social indicators of inequality and neglect: 12% unemployment; male unemployment near 50% and closer to 75% among young men between the ages of 16 and 19; the number of families living in poverty (16%) or headed by a single female (17%) were more than twice that of white Philadelphia. Of particular concern, violent crime rates were rising rapidly. Rape in Cobbs Creek increased at an average annual percentage rate of 11%, a pace 1.5 times that of the rest of the city.

### 7.2. *The level of park utilisation*

The surveyed park users regularly visited the park. Almost 90% of those surveyed visited the park between one and five times a month, particularly during weekends. Most city residents visit the park at weekends to relax when most workers do not go to work. Most of the surveyed park users (78%) visited the park between midday and 6pm hours. Parks are often visited in the afternoon for leisure and recreation. Further, the park users visited the park mainly for leisure (72%), to relax and to appreciate the natural environment. These exemplify the core functions of the park as a recreational area.

City Park is an important recreational area, not only for the neighbourhood (Parklands) but also other city residents. There are several recreational activities in City Park are: walking, resting/sleeping, picnics, viewing nature, children can play, photography, jogging, reading, barbecues and choirs. The park is frequented by Asians living nearby, who visit the park mainly in the evening and at weekends.

A much higher proportion of park users come from residential areas neighbouring the park. Just over 50% of the park users surveyed came from the high density Eastlands residential area compared with 23% originating from the park's adjacent neighbourhoods such as Parklands. The low proportion of park users from Parklands where the park is located may be indicative of class conflicts. The Parklands neighbourhood is a middle-high income residential neighbourhood, unlike the Eastlands area whose residents are mainly low-middle income groups. The alienation of parts of the park for private use attracted low-income informal activities. Therefore, the population within the relatively affluent Parklands area may be reluctant to visit the park because of large numbers of low-income park users, park congestion, an increased security risk, noise emanating from the Hawkers' market and general deterioration of environmental quality.

The problems facing the park revolve around insecurity, the management of solid waste, overcrowding, noise, management of wildlife, poor maintenance, inadequate facilities, and outlawed and unco-ordinated activities. Field survey results show that the most serious problems affecting the park are insecurity (40%) and poor solid waste management (38%). The results of this study are similar to that of Muiga (2009), which reported that park users put a high premium on security, preferring secure open spaces. Because of the security concerns, a City Council by-law makes it an offence to breach the peace in the parks. For example, by-law 524 states that a person shall not create a disturbance or be drunk or disorderly, or be guilty of any quarrelsome, violent or indecent behaviour in the park. However, enforcement of such a by-law remains a great challenge, as evidenced by increased incidences of insecurity in the park.

Other problems facing the park are: poor maintenance (22%) and lack of/inadequate facilities (18%) in the park. The park is characterised by inadequate and broken seats and a lack of functioning toilets. As a result of broken toilets, park users may be forced to respond to the call of nature anywhere in the park, thus further lowering its environmental quality. Malfunctioning toilets predispose the users to risks of pathogenic contamination. For the park to remain attractive, basic infrastructure and services such as water and sanitation, security and solid waste management must be provided.

Browlow (2006) found similar problems in Cobbs Creek Park. He stated that Cobbs Creek Park had become infamous, renowned more for dysfunction, neglect and disorder than for its social and recreational opportunities or its environmental amenities, with commensurate change in its significance and meaning to the Cobbs Creek community and the local imaginary (Latty 2000, in Brownlow 2006). Drug use, crime and prostitution were chronic problems. The stripped, burnt out shells of stolen cars and appliances, regularly augmented by heaps of illegally dumped construction and restaurant waste, had become defining features of the landscape's new topography. Moreover, all of these activities and perceived disorders were accompanied and hidden by an emerging ecological structure that was the product of political neglect and ecological change.

## **8. Conclusion**

This paper has demonstrated that the provision of public open spaces in Nairobi City is threatened by a rapid rate of urbanisation against the weak capacity of city authorities to cope with the growth. The results of this study show that while the

population of Nairobi City has rapidly increased, particularly since independence in 1963, little effort has been made to conserve the existing public open spaces, never mind create new ones. Nairobi City was originally premised on a neighbourhood concept with approximately 30% of the city devoted to public open spaces. The Master Plan was meant to serve the city up to 1975 with an optimal population of 250,000. The country's independence in 1963 ushered in rapid urbanisation and Africanisation of the city. Despite the rapid urban growth, the 1948 Master Plan has not been revised to date. Attempts to revise it following the preparation of Nairobi Metropolitan Growth Strategy in 1972 failed because of competing political interests. Public open spaces, which were meant to serve 250,000 people, are now serving 3.29 million, exemplifying the serious shortage of public open spaces in the city. Furthermore, illegal alienation of public open spaces by both the state and members of the general public have made matters worse. The political leadership with the active engagement of technocrats have presided over the illegal alienation of public open spaces for private use.

City Park, measuring 150 acres, was planned for the Parklands neighbourhood. However, the park has suffered neglect, overcrowding and alienation for private use. It has lost 50 acres of its land to private developers through illegal alienation by the state officials. The rising urban population and loss of parts of the park's land to private developers has heightened the demand for public open spaces. The establishment of the Hawkers' market and other private businesses in hitherto park land has created land use conflicts because of noise, solid and liquid waste, and overcrowding in proximity of the park. As a result, the park is overcrowded and its facilities are over-stretched. At the same time, Nairobi City has failed to allocate adequate resources to manage the park. City Park initially had a workforce of 250 people supported with adequate facilities, but currently the city's Parks Section is ill-equipped and lacks qualified personnel. City Park does not have specific budget, personnel and equipment for its maintenance. Therefore, the value of the park as a quiet and serene environment for leisure, recreation and nature conservation is increasingly threatened.

Efforts geared towards improving the provision of public open spaces in Nairobi City should consider the following measures. First, preparation of either a new Master Plan or a strategic plan of Nairobi City is a plausible means of creating new public open spaces to not only improve access to open spaces but also decongest the existing ones. Second, lobby the city authority to improve resource allocation (personnel and facilities) for park management. This is important in empowering the city authorities to appreciate the importance of public open spaces, the need for effective management and the resource requirement. Third, to consider innovative approaches to park management that may include the private sector and park users. Park management could be improved through public private partnership, which could be done by creating a commission/trust for park management. This would facilitate active engagement of the key stakeholders in park management, especially government, park users, the private sector and civil society organisations interested in park conservation.

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