

# An Assessment to The Challenges Facing Urban Green Spaces a Case of City Park in Nairobi

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**Abstract:** Urban green spaces are a paramount element of the urban ecosystem. However urban green spaces have been facing challenges which if not timely dealt with, the urban green spaces will not be in a position to provide the urban inhabitants with the important ecosystem services they provide. Kenya like many other countries in the developing world have been experiencing rapid urbanization. Rapid urbanization comes with a variety of challenges among them included challenges on the urban green spaces. The focus of this paper is on describing the challenges that are facing Nairobi City Park, Nairobi. The study was therefore conducted in Nairobi city park. The study adopted descriptive research design where questionnaires an interview guide were used as the major instruments of data collection. Data collected during the study was analyzed using qualitative and quantitative data analysis methods. The results of the study pointed out that there are indeed challenges facing Nairobi City Park. The paper has presented the challenges in to three main categories namely environmental challenges, social challenges and management challenges.

**Keywords:** Rapid urbanization, Urban green spaces, Nairobi, City Park, County Government of Nairobi.

## I. INTRODUCTION

Urbanization is one of the major global trends which is no longer considered recent. Urbanization is triggered by a number of factors which include rural- urban migration, economic growth, growth of infrastructure among other factors [1]. Recent studies indicate that more than half of the world population is currently living in the urban areas [2]. Although urbanization is considered a major contributor to economic growth and social transformation, urbanization is also a major source of negative implications. The negative implications of urbanization are however more felt in the developing countries than in the developed countries, a scenario which is attributed to the rapid rate of urbanization which is experienced in the developing countries [3].

### 1.1 Theoretical Review

Born in 1850 in the United Kingdom, Ebenezer Howard is widely recognized for his publication in 1898 “Garden Cities of Tomorrow”. Garden City Model is a theory in urban planning that calls for a harmonious coexistence between human beings and nature. Howard’s publication led to the foundation of Garden City Movement that realized several garden cities in Britain [4]. The theory has got crucial relevance to the contemporary urban planning as it gives priority to the conservation of the naturally and ecologically sensitive areas such as green spaces and parks.

Founded in 1928 and disbanded in 1959, international congress of Modern architecture was responsible for a series of events and congresses arranged across Europe by the most distinct architects of the time. One of the major achievements of the congress was the formulation of “principle of intelligent urbanism” which is a theory that is composed of ten propositions for city planning and

city design. One of the propositions in the theory is the principle number one “balance with nature” [5]. The principle gives a clear distinction between use and exploitation of resources. The focus of the principle is on extent beyond which deforestation soil erosion, aquifer deterioration, siltation and flooding reinforce one another in urban systems leading to destruction of life support systems. The principle is relevant to the contemporary urban planning since it promotes environmental assessment of ecosystems to identify the fragile zones, natural systems under threat and identifies strategies that can be adopted through conservation, density control, land use and open space planning [5] .

## **1.2 History of the City of Nairobi**

Urbanization in Kenya has a long history. The oldest urban areas can be traced back as early as 9<sup>th</sup> century AD with the agglomeration of trading centers to urban areas. The city of Nairobi was born as a result of construction of the Kenya Uganda Railway. Nairobi became the capital of Kenya in 1907 and a city in 1950. The population of Nairobi has been increasing ever since its birth as a result of both natural populations increase and rural-urban migration. The growth of urban population has led to the need for development of infrastructure hence increased demand for natural resources. One of the major effects of urban population growth in Nairobi is the challenge to the urban green spaces [6]

## **1.3 Importance of urban green spaces**

Equating green spaces with a monetary value is complex as it is not always possible to relate it to quantifiable economic value [7]. However, urban green spaces offer a variety of benefits which include social, economic and environmental benefits.

The social benefits of urban green spaces and the one that is mostly recognized relate with the leisure and recreation. The social benefits are in most cases measured in terms of aesthetic value, individual perception, common interest etc. [8]. Environmental psychology suggests green spaces as a source of human and mental health which comes with human contact with nature[7], [8]. Urban green spaces also offer an array of environmental benefits which include storm water management, provision of habitats for wild animals and plants, carbon sequestration hence enhancing air quality, creation of a micro-climatic condition, reduction of the effects of urban heat islands and the reduction noise pollution from traffic [9]. Urban green spaces also have benefits that relate to economic and financial gains such as a favorable image for a place, increased tourism, enhancing inward investment etc.[8].

## **II. STUDY AREA**

Nairobi City Park is a public recreational ground located in the Parklands area in Nairobi. The park receives visitors on a daily basis and there are no entry fees. The park is located where Limuru Road and Forest road diverge. A canalized stream by the name Kabagare flows through its lower reaches. The park has a geographical extent of 60 hectares comprising of botanical gardens and portions of the rich indigenous forests that once extended over much of Nairobi. The park is managed by Nairobi City County, Department of Environment, whose employees are stationed here. These include the park superintendent, the assistant superintendent and a host of support staff who work in the nurseries. There is also Friends of City Park, which is a voluntary association concerned with conservation of the park it has rich biodiversity, which includes troops of Sykes monkeys, silvery-cheeked Hornbills and hundreds of beautiful butterflies plus very diverse plant life. The park also provides a seed bank for tree nurseries and reforestation Centers. The Park boasts a cultural legacy too, being the final resting place of Joseph Murumbi, who was Kenya’s second vice president and Pio Gama Pinto, an Asian who was assassinated in 1965 and was a pioneering human rights activist. The park also has a Jewish and world war one memorial cemeteries, The Bandstand and the maze.

### III. MATERIALS AND METHODS

The study adopted descriptive research design. The design was preferred since it describes the character, opinions, preferences, subjects and perception [10]. Questionnaires and interview guides were used in the study as instruments for data collection. The questionnaires had both open ended and closed ended questionnaires which were administered randomly to a hundred respondents. Data was analyzed using Microsoft excel and Statistical package for social sciences (SPSS) and presented in form of text and figures.

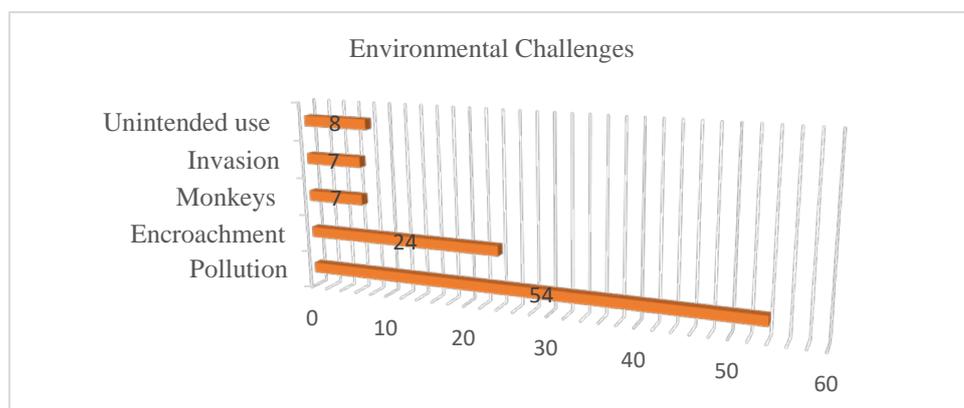
### IV. RESULTS AND DISCUSSION

The study sort to identify the challenges that are facing Nairobi City Park. The results presented here is however categorized in to three major categories that is the environmental challenges, social challenges and management challenges.

#### 4.1 Environmental challenges

The study identified that Nairobi City park is facing a number of environmental challenges.

The study revealed that there are indeed environmental challenges facing City Park environmental problems with 86% of the respondents indicating that there are environmental challenges and 14% indicating that there are no environmental challenges. The study revealed that the environmental challenges are also a variety and range form pollution, encroachment for expansion and spread of the city, illegal land use, human wildlife conflict and invasion by alien plant and animal species.



**Figure 1: Environmental challenges facing Nairobi City Park**  
Source: Field Survey, 2019

#### 4.1.1 Pollution

Like in most other areas within a city, city park experiences solutions pollution that ranges from air pollution, water pollution and land pollution. The major source of air pollution in Nairobi City Park is from vehicular especially from Thika Super highway and a number of vehicles that pass through the park. Water pollution is also evident in Nairobi City Park. Kabagare stream that passes through the park has been polluted as a result of discharging of raw sewage from the surrounding residential areas. The stream has also been polluted by disposal of solid waste near or in the stream. Poor solid waste disposal also leads to land pollution in Nairobi City Park especially improper disposal of non- biodegradable waste such as plastic bags, textile by products, construction debris etc.

#### 4.1.2 Encroachment

Nairobi City Park is at a threat of existence; this is as a result of encroachment of the park as a result of need for development and growth of the city. With rapid urbanization in the City of Nairobi, there is need to create more housing units and also develop infrastructure for the city inhabitants. As a result, Nairobi City Park has been encroached for construction of houses both for residential and commercial purposes. Encroachment of the park has got effects both on flora and fauna that is mothered in the park. The effects come in form of destruction of habitats for both plants and animals, extinction of some plants and animal species as well as human wildlife conflicts. Development of infrastructure has also costed the Nairobi City Park, for example in the year 2017, a number of mature trees were brought down at the edge of the park for purposes of creating a new advertisement board. Although after the then Karura member of parliament pointed the bringing up of the bill board illegal and was brought down after wide media coverage, the trees were lost

#### **4.1.3 Unintended use**

Nairobi City Park is also facing the challenge of being used for purposes that it is not meant for. Nairobi City Park is mainly used for leisure purposes specifically viewing of birds commonly Yellow-breasted Apalis, Brown-backed Woodpecker and the Pallid Honeyguide and monkeys such as Syke's monkeys. However, as this study pointed out the park has of late been used for unintended purposes. The study determined that the park has been used as a grazing area for cattle, sheep and goat especially during the dry season. Some tree species have also been exploited by traditional medicine men who either strip off the barks of the trees continuously or uprooting the entire tree which has led to either reduction or extinction of some indigenous plant species in the park.

#### **4.1.4 Monkeys**

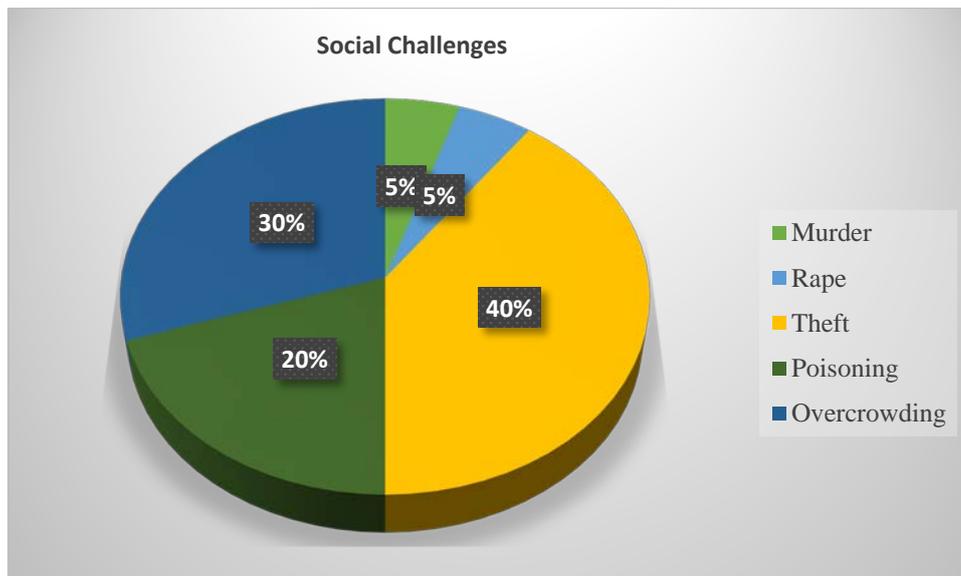
The study pointed out that the Sykes' monkeys has also become a challenge in the park. This is due to the rapidly increasing number of the monkeys to an extent of becoming a threat to the biodiversity. The study pointed out that the monkeys sometimes invade the birds' nests in search of eggs making it difficult for the birds to hatch. The monkeys also have the tendency of killing snakes.

#### **4.1.5 Invasive species**

The interviewees confirmed that in recent year there had been influx of invading shrubs and weeds such as Lantana camara and Datura stramonium, which are difficult to eliminate once established.

#### **4.2 Social challenges**

The study pointed out that Nairobi city park is experiencing some social problems. The results of the study pointed out a number of social challenges facing the Nairobi City Park, among the challenges include murder, rape, theft, poisoning of fish ponds and overcrowding as shown in the figure below;



**Figure 2: Social challenges facing Nairobi City Park**  
**Source: Field Survey, 2019**

The results above point out that the most manifested social challenge in Nairobi City Park is theft, with the rapid increase of population in the city of Nairobi and the composition of the population being the youth, there are high cases of unemployment and poverty which in most cases lead to cases of theft and robbery in the park. Overcrowding is another social problem facing Nairobi City Park; however, overcrowding is mostly experienced during the weekends when most people are free, being a recreation site with no charges attached, there is a tendency of attracting a very huge population. Overcrowding exacerbates issues such as pick-pocketing and indiscriminate disposal of waste. Poisoning of fish ponds is another challenge facing Nairobi City Park. Initially, the park used to have a number of fish ponds, however, cases of fish ponds poisoning were experienced leading to the death of all the fish, as at the time of data collection for this study, there were no fishponds in Nairobi City Park. Murder and rape are also social problems that are facing the Nairobi City Park; although their prevalence are low each attributed to 5% of the social challenges facing Nairobi City Park, their implications are undoubtedly high. Murder and rape in Nairobi City Park in most cases happen in the forests.

#### 4.3 Management challenges

This study pointed out that there are indeed management issues facing the Nairobi City Park. The most common management issues that the study pointed out are shortage of man power and low/lack of expertise. City Park falls under the Parks and Open Spaces Section of the department of environment, Nairobi City County. According to the respondents, this section has only 50 employees tasked with working in the nurseries and other general work. The 50 are then divided among all the parks and open spaces run by Nairobi City County. City Park is therefore understaffed and this definitely affects its operations. Respondents asserted that the nurseries were the most affected, as there is always a lot of work to be done while the employees are few. Nairobi City Park is also facing the challenge of low/lack of expertise. Being a host to abundant plant and animal species, the park ought to have experts in botany and zoology, however, the study pointed out that most of the employees are hands-on-men and women without specialized knowledge on park and wildlife management.

#### V. CONCLUSION

The focus of this paper is on the challenges that are facing urban green spaces in Kenya with a specific focus to Nairobi City Park. The study identified three broad categories of challenges that is environmental, social and management challenges. However, it is worth noting that this study has not provided any solutions to the challenges identified, however, the paper has acted as an eye opener for future research in developing a strategy for sustainable management of urban green spaces in Kenya.



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