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Citizen Perception of Green Spaces Prioritization in Urban Kenya: The Case of Kisumu City and Eldoret Municipality

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Abstract

Kenya is currently experiencing rapid rate of urbanization which is considered as one of the highest in the region, with over 30% of its population living in urban areas. It is projected that by 2050 Kenya will be predominantly an urban nation as half of its population will be living in cities and urban areas. This underscores the need for urban planners and managers to address themselves to the issues of provision of physical and socio-economic infrastructure services to match population growth, one of them being planning for green spaces. Green spaces are sacrosanct as they satisfy the socio-economic and environmental demands of urban dwellers. Availability of green spaces is considered as an indicator of measuring sustainable cities, smart cities and urban resilience. The Kenyan Urban planning norms recognizes sufficient availability of green spaces as a criterion for classification of cities and urban areas. Using case studies of Kisumu city and Eldoret Municipality, the study was aimed at examining the perceptions of citizens on green spaces planning. The study is underpinned by basic needs theory which informs ranking of priority needs of communities. A total of 1030 users of green spaces who visited seven green spaces in Kisumu City and two green spaces in Eldoret Municipality were randomly selected for interviews with the purpose of soliciting data on their views on the place of green spaces according to their felt needs. Based on frequeñcy analysis, 28% of respondents indicated that education should be put as the first priority, followed by job creation in industrial areas (23%), and housing provision in residential areas (21%). Provision of water and sanitation services (10%),improvement of business environment(7%),and transport infrastructure (5%) ranked fourth, fifth and sixth respectively while 4% of the Respondents ranked both provision of green spaces and public purposes to be in the seventh and the last position in their scheme of priorities .The study concludes that green space planning is not considered as an immediate need by citizens in urban Kenya, and hence the need for planners and urban managers to initiate urban planning forums to enlighten citizens on the value of green spaces.

Keywords: Urbanization, Green spaces, Priorities

INTRODUCTION

Kenya is currently experiencing rapid rate of urbanization which is considered as one of the highest in the region, with over 30% of its population living in urban areas. It is projected that by 2050, Kenya will be a predominantly an urban nation as half of its population will living in cities and urban areas. This underscores the need for urban planners and managers to address themselves to the issues of provision of physical and socio-economic infrastructure services to match population growth, one of them being planning for green spaces. The 21st Century is witnessing great interest in urban green spaces planning, more than during the times of Ebenezer Howard of Garden City movement. The importance of urban green spaces has been documented in literature as green spaces are considered important parameters for functional and livable cities because they play a recreational role in everyday life; contribute to the conservation of biodiversity; promote cultural identity of the city; improves the environmental quality of the city; and brings natural solutions to technical problems such as in sewage treatment in cities (Ole, 2006; Goro, 2016). Availability of green spaces is considered as a measure of sustainable cities, smart cities and determination of urban resilience. The Kenyan urban planning norms recognizes sufficient availability of green spaces as a criterion for classification of cities and urban areas (Republic of Kenya, 2011). Green space planning in Kenya is being undermined by uncontrolled urbanization occasioned by push and pull theory associated with rural -urban migration and inadequate understanding of the value of green spaces by citizenry. Using case studies of Kisumu City and Eldoret Municipality, the study was aimed at examining the perceptions of citizens on green spaces planning in relation to overall urban development planning priorities.

Rapid urbanization in Kenya is presenting a myriad of challenges to urban planners and managers which include; urban sprawl, proliferation of slums and informal settlements; traffic snarl-ups, urbanization of poverty, inadequate provision of social amenities such as schools, health facilities and green spaces amongst other urban conundrums. The traditional planning approach require that 5% of the land in an urban area is to be reserved for recreational activities while WHO recommends that $9m^2$ per capita of green space should be made available in city planning (WHO, 2016).

It is documented that access to green areas has a positive influence on visitors' wellbeing and can reduce stress-related illness such as mental fatigue and headaches, and additionally also can have a restitution effect (Ole, 2006). Kisumu City and Eldoret Municipality are among the secondary towns in Kenya that are experiencing rapid growth which come as a result of natural urban population growth, rural to urban migration and increased socio-economic developments which are associated with devolution and decentralization of resources from Nairobi city, the core area.

According to the 2019 Kenya National Population and Housing Census, Kisumu City also known as a lake-side city has a population of 610,082 people occupying an area of 297 km^2 excluding 120 km^2 covered by Lake Victoria, while Eldoret Municipality has a population of 475,716 people with an area of 147.9 km^2 (Kenya National Bureau of Statistics (KNBS), 2019a). Like other Kenyan towns, provision of adequate green spaces remains a challenge and hence the need to plan for green spaces commensurate with population growth. The study therefore sought to assess what residents of the two towns think about green space planning in relation to their immediate and long-term urban development priority needs.

Planning function of Green Spaces can be better examined from the dimension of having a well- designed green space which provide pathways for people to travel either by foot or by bicycle for recreation or commuting. A network of green spaces connecting residential, business, institutional, and leisure areas can help to

improve the accessibility and attractiveness of local facilities and employment centers. Green spaces may also function as a boundary landscape separating areas of distinct socio-economic characteristics (Goro, 2016).

Planning Standards of Green Spaces

There is no consensus about conventional standards on needs of green spaces. Other than WHO, which states that the per capita green space requirement is $9m^2$, different regions, countries, and cities have their own specific standards that govern green spaces planning (WHO, 2016). As an example, table 1 shows different standards of Green Spaces in selected regions and cities.

Table 1: Standards of Green Space Planning

SNo	Country/City	Standard/Target
1.	City of Berlin, Germany	6 m² urban green per person
		Recommend that every resident should have access to urban green of minimum 0.5 ha within a 500 m distance from home.
2	Leipzig, Germany	10 m² per capita
3	United Kingdom (UK)	minimum 2 ha within a distance of 300 m from home
5	United Nations	20-25 m² percapita
6	France	18 m²
7	America	14 m²
8	Calcutta	1.2 m²
9	Bagdad	1.4 m²
10	California	15% of Planning area
11	Australia	15% of Planning area
12	Kenya	5% of Planning area

Source: Ole, 2006, Physical Planning Handbook, 2007, Goro, 2016.

In Kenya, the Physical Planning Handbook (2007) which is used as a planning tool states that, there should be a small area of recreational space within a 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. Additionally, when carrying out planning designs, 5% of the total planning areas must be reserved for green spaces (Kenya, Physica Planning Handbook, 2007).

Priority Needs of Urban Dwellers

There is paucity of standard literature on prioritization of the needs of urban dwellers, as needs vary from one region to another, city to city and from one neighbourhood to another. Citizens living cities in developed countries have different priorities as compared with people living in cities in developing countries due to uneven availability of resources and infrastructure capacities. A study by Przywojska et al. (2019), on identification of the priority policy/practice areas and interventions to solve sustainability challenges in 460 Polish municipalities, revealed that the Mayors (and their executive teams) assign higher priority to policy/practice areas and interventionsrelated to economic, and social domains, and slightly lower priority to environmental ones. It is further argued that these priority policy/practice areas and interventions do not correspond well to some of the contemporary sustainability challenges in Polish cities. The authors recommend that effective tackling of urban environmental, economic and social

problems would require the implementation of new approaches related to smart cities, the circular economy and/or cultural diversity (Przywojska et al., 2019).

According to Racodi (2001), in her discussion of diagnosis for urban management priorities in developing countries, noted that rather than devoting resources to improving the quality of urban spatial plans and development regulation, urban managers should concentrate on governance. Attention must concentrate on governance arrangements, politics and the processes of decision making. Without this, spatial development plans are unlikely to be any more useful than in the past.

Policy, Legal and Institutional Framework of Green Spaces in Kenya

At the global scale, countries around the world are committed to localizing Sustainable Development Goals (SDGs), where SDG number 11 on sustainable cities and communities, underscores the need to integrate green space components in urban development planning. The New Urban Agenda, which is premised on" leaving no one behind" advocates for infusion of new standards for sustainable urbanization including; provision of basic services for all citizens, ensuring equal access to opportunities without discrimination, putting in place measures that support cleaner cities, strengthening resilience in cities to reduce the risk and the impact of disasters, addressing climate change by reducing their greenhouse gas emissions, respecting the rights of refugees, migrants and other vulnerable persons, improving connectivity and support innovative and green initiatives, and finally promoting safe, accessible and green public spaces (UNDP, 2021) The latter entails detail planning of green spaces and associated auxiliary amenities.Kenya is on its pathway towards realization of the New Urban Agenda ambitions, through the Constitution of Kenya 2010 and supporting legislation. More specifically, Article 184 of the constitution provides for establishment of the principles of governance and

management of urban areas and cities; and participation by residents in the governance of urban areas and cities (Kenya, 2010). The Urban Areas and Cities Act No. 13 of 2011 and the Physical and Land Use Planning Act No.13 of 2019 provides guidance on green spaces planning.

Urban Areas and Cities Act 2011, gives powers to City and Municipal management Boards to control land use, land sub-division, land development and zoning by public and private sectors including industry, commerce, markets, shopping and other employment centres, residential areas, recreational areas, parks, entertainment, passenger transport, agriculture, and freight and transit stations within the framework of the spatial and master plans for the city or municipality as may be delegated by the county government. On classification of urban areas and cities and by Services, provision of recreational parks and stadium is used as a criteria for designation as cities or urban areas. On the other hand, the Physical and Land Use Planning Act No 13 of 2019, defines " public purposes", as public parks, playgrounds, gardens, and sports facilities which must be provided through the preparation and implementation of various types of plans which include; the National Physical and Land Use Development plan, Inter-County Physical and Land Use Development Plans, County Physical and Land Use Development Plans, Local Physical and Land Use Development Plans, A Special Area Plan, and Renewal and Re-Development Plan. Development control and enforcement is used to ensure optimal land use; to protect and conserve the environment. There is a leeway also under the County Government Act 2012 for the County Governments in Kenya to reserve and maintain all the land planned for open spaces, parks, urban forests and green belts in accordance with the approved physical and land use development plans (Republic of Kenya, 2011, 2012a, 2019b).

Kenya operates under a devolved system of government, whereby the national

government through Commission for Revenue Allocation (CRA) allocates funds to county government using a formula that takes into account population and poverty index, for performance of devolved functions (Republic of Kenya, 2012b). Once financial resources are remitted to the counties, the counties are in turn mandated by law to set aside 5% of the allocations for planning and development of urban areas and cities. It is from this point that low prioritization is given to green space planning as resources are limited and are directed to some critical areas such as roads, water and sanitation as well as for recurrent expenditure.

Kenya is currently in pursuit of two policy agenda which do not directly address the concept of green space planning, notably, Vision 2030 and the Big Four Agenda. Vision 2030 aims at transforming Kenya to be a middle-income country by 2030 and is anchored on three pillars on, economic, social and political aspects. Planning falls under the social pillar and covers issues of environment, housing and urbanization. The Big Four Agenda of the Government focuses on manufacturing, food and nutrition security, universal health care and affordable housing.It is evident from these policy initiatives that Kenya still has a long way to go in terms of having a standalone policy on promotion of green spaces.

Theoretical Framework

The study adopted the basic needs theory as a framework for ranking priority needs of green spaceusers in Kisumu City and Eldoret Municipality. The theory postulates that in determining the needsof communities, there is a tendency to be merely based on the order of preference of respondents, in terms of the perceived importance of a need or set of needs. The theory provides a guide on assigning weights on the importance or seriousness of one of the needs up against another which, results in a wish list of needs which can be used in problem diagnosis in planning process. The basic needs theory introduces the concept of priority. To determine the priority of a need, respondents are not asked to rank their needs in order of importance only, but by conflating respondents' perception of the importance of a given need with their current level of satisfaction vis-à-vis that same need in order to reveal the relative tolerance with the current situation regarding the mentioned need (Schutte, 2022).

METHODOLOGY

The study areas are; Kisumu City and Eldoret Municipality, secondary towns in Kenya, which are situated at a distance of about 150km apart. Figure 1 shows the location of the study areas.
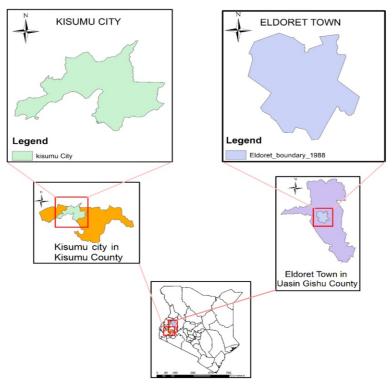
Figure 1: Location of Kisumu City and Eldoret Municipality in Kenya.

In terms of population, Kisumu City is home to 610,082 people occupying an area of 297 km^2 excluding 120 km^2 covered by Lake Victoria, while Eldoret Municipality has a population of 475,716 people with an area of 147.9km^2 (KNBS, 2019).

The methodological approach adopted for the study involved questionnaire interviews, whereby the users of green spaces in Kisumu City and Eldoret Municipality formed the sample population. A total of 1030 users of green spaces who visited; Jomo Kenyatta, Jamhuri, Victoria, Oile and Taifa Parks in Kisumu City and the two green spaces at Nandi Park and Huruma Stadium in Eldoret Municipality were randomly selected for interviews with the purpose of soliciting data on their views on the place of green spaces according to their felt needs. The interviews were conducted daily for one week from Monday to Sunday starting from 7.00 am in the morning to 6.00 pm in the evening and only one user of green space was

interviewed once. The data obtained from tallies gave an indication of frequency of visitations to specific green spaces. During the interview, Respondents were requested to answer an open- ended question on what they considered important according to their needs and their responses were analyzed in order to get their general assessment on the place of green spaces in their urban development agenda.

RESULTS AND DISCUSSION
Green Space Situation in Kisumu City and Eldoret Municipality
An accurate understanding of green space status will help in linking existence of Green spaces and users perceptions. The study revealed that Green space Users in Kisumu City and Eldoret Municipality visits seven popular green spaces which include; Jomo Kenyatta measuring 7.77 ha; Jamhuri Park (3.30 ha); Oile Park (0.75 ha), Taifa Park (0.740 ha); Victoria Park (0.61 ha);Huruma

Grounds (31.68 ha) and Nandi Park (0.69 ha). It can be seen that Jomo Kenyatta Park is the largest green space in Kisumu City followed by Jamhuri Park and Victoria Park. On the other hand, the largest public green space in Eldoret Municipality is Huruma Grounds and Nandi Park in the Central Business district is the smallest. Plates 1 and 2 shows selected green spaces in the two towns.

Plate 1: Jamhuri Park, Kisumu City; Plate 2: Nandi Park, Eldoret Municipality.

Perception of Green Spaces Prioritization in Kisumu City and Eldoret Municipality
In Kisumu town, Figure 2 shows that the most prioritized land use need was industrial 23.4% followed by education 22.0% and the least prioritized land use was public purpose 2.2%. Recreational function encompassing green space was ranked second last in the hierarchy of needs of urban dwellers.
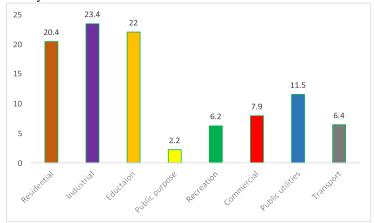

Figure 2: Ranking of felt needs in relation to green spaces in Kisumu City.

It is clear from Figure 3 that the most prioritized land use function is education at 31.1% followed by industrial with 23.0% and the least is recreation as a green space accounting for 2.3% in Eldoret town.
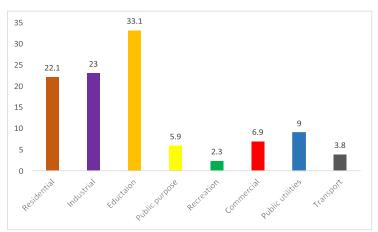
Figure 3: Ranking of felt needs in relation to green spaces in Eldoret Municipality.

Further analysis of the means of ranked priority needs according to respondents in Kisumu City and Eldoret Municipality revealed that what citizen want as the first priority is education is including; schools and colleges together with fees for school going children, accounting for 28% of responses. The second priority on average was industrial involving provision of industrial-based employment as cited by 23% of respondents. Better residential housing provision was prioritized by 21% of the respondents as the third immediate need. Provision of public utilities such as water and sanitation services were ranked in the fourth position as indicated by 10% of respondents.

Other priority needs mentioned by respondents were opening up of commercial and business opportunities (7%), provision of good roads (5%). Recreational function and by extension green spaces was ranked together with provision of public purposes to be in the last (4%) position in the order of immediate needs of citizens living in Kisumu City and Eldoret Municipality. Needs assessment and public participation are important governance principles which should be considered in planning and design of sustainable urban areas and cities as espoused by Racodi (2001) and Przywojska et al. (2019). The findings also resonate very well with two elements of Kenya government's policy on Big Four Agenda of manufacturing and provision of affordable housing.

CONCLUSION AND RECOMMENDATIONS

The paper has examined citizen perception of green spaces prioritization, using Kisumu City and Eldoret Municipality to reflect what people living and working in the urban areas in Kenya think about the place occupied by green space in order of their priority needs. Using basic needs theory, the study established that immediate needs of urban dwellers in Kenya include; provision of educational facilities and associated expenses; provision of employment opportunities through industrialization; provision of better residential housing and provision of utility services such as water and sanitation. Provision of green spaces was ranked last in the scheme of priorities of residents in urban Kenya. Arising from these, the following policy recommendations are made:

a) There is need for Urban planners and policy makers to initiate citizen forums for sensitization of residents on the importance and value of green spaces,

b) Due to competing interest over allocation of niggardly available resources, there is need forpartnership and networking on provision of green spaces,

c) There is also need for counties to set aside specific part of 5% of funds allocated for urban development operations for green space expansion.

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