

The Potential of Urban Planning in Enhancing Liveability Through Ecological Wellbeing and Human Health:

A Case Study of Nairobi City

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Abstract

Cities are complex settlements that can create economic and cultural wealth while generating serious environmental degradation with life threatening outcomes. Researchers consider urban planning, underpinned by collaborative governance an important tool in ameliorating urban challenges thus enhancing liveability in ecological wellbeing and human health. This study aimed to examine urban planning and its approaches that enhance these fundamental features and to assess their application in three cases studies in Nairobi City. Qualitative research method formed the study design. Document reviews, face-to-face interviews, participant observation and multiple case studies comprised research instruments. The unit of analysis was the purposively selected geographic areas of Karura Forest, Uhuru Park and Lavington Estate with results displayed in descriptive form. The study findings showed limping urban planning, alienation of public open spaces and one case of collaboration that advanced liveability. It recommended transformation of urban planning, repossession of especially non-substitutable critical capital and collaborative governance.

Keywords: Ecological wellbeing, Frameworks, Human health, Liveability, Nairobi City, Urban planning.

INTRODUCTION

Urban planning was instituted in its current form in the 18th Century Britain to ameliorate deadly environmental and health impacts of the industrial revolution. The profession was based on rational theory and delinked from finance (Csepely-Knorr, 2011). Its primary dictate was to seek solutions to existing urban challenges in order to make cities liveable through creation of ecological wellness and human health (Duhl and Sanchez, 1999). In modern times, UN-Habitat (2018) considers urban planning as a potential tool for ensuring urban sustainability.

With the global adoption of urban planning by governments, the profession accompanied colonialism to Kenya. It made its first major imprint in inland Kenya with the 1927 Nairobi Plan for Settler Capital (UN-Habitat, 2016). Over the years especially after independence in 1963, urban planning related challenges in Nairobi City like environmental degradation, deforestation,

slums, urban sprawl, traffic jams, unplanned densification and others have increasingly become major features of the cityscape (Oyugi et al., 2017; Mwaniki et al., 2019). This study intended to review global urban planning and its approaches that enhance urban sustainability and liveability and to examine their application in Nairobi City.

THEORY

Urban planning is synonymous with terms such as city planning, urban planning, urban and regional planning, town and country planning and land use planning among others depending on the period in history and the functions at hand (Carmon, 2013). The current study upheld the name 'urban planning' due to its topical relevance. The profession is generally defined as dynamic with the primary aim targeted to improve community welfare and quality of life by creating places that are convenient, healthy, efficient, equitable, aesthetic, accessible and environmentally vibrant with biodiversity. The founding fathers trusted its

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power to solve social problems though changes in man-made physical environments expressed in physical plans such as master plans and hence the term 'physical planning' (Csepely-Knorr, 2011).

Nevertheless, 'physicalism' is not the profession's only primary mandate. On-site social-cultural, ecological and geographic features, pertinent planning, economic, social and environmental theories and others are critical inputs in the planning process. Using comprehensive research driven by contextual parameters, set visions, goals, objectives both current and future for generational equity, development strategies are formulated, scientifically translated into pertinent land uses through the aid of existing planning and legal frameworks, contextualized on space and translated into plans and drawings with appropriate intervening scientific reviews. These are later employed as blue prints for implementation (Carmon, 2013).

The resultant cities were considered liveable due to their enhancement of human health and ecological wellbeing (Alderton et al., 2019). The criteria for wellbeing was defined by Tirla et al. (2014) as the simultaneous provision of psychological, physical, social, economic and environmental health. The authors supported an earlier definition of 'health' by World Health Organisation (2010) as a state beyond the absence of infirmity and debility to encompass total mental, social and psychological wellbeing. It thus equated genuine 'health' to 'liveability' initially generated by sustainability achieved at the integrative overlap of the three pillars of development (Moir and Carter, 2012). More attentive nurturing of sustainability under collaborative governance produces the progressive state of liveability indicated by high quality of life, health, cleanliness, sense of belonging, equitable wealth and access to infrastructure and services coupled by increasing absence of unemployment, poverty, slums, crime, discrimination, pollution, stress and others (Alderton et al., 2019).

Sustainability, defined as development that satisfies the current generation's needs without compromising the ability of future generations to meet theirs (World Commission on Environment and Development, 1987) and liveability are

suggested as interchangeable by some researchers (Leach et al., 2016). In practice though, Alderton et al. (2019), among other authors, detected differences, noting a closer affinity between liveability, health and wellbeing. Wellbeing was seen as happiness, security and comfort. This paper advances the definition of liveability as linear progression of the wellbeing of environments and all life forms from basic to higher forms without ever achieving the perfect state.

Over time, urban planning diverted from its original mandate of making cities and neighbourhoods sustainable and liveable due to its failure to establish basic guiding principles and approaches. Urban planners generated conflicts within the three-pillar development triangle that favoured the rich at the expense of the poor through unfair zoning, inequitable land and other resources allocation, selective application of development control measures and discretionary plot ratio enhancement powers wielded often with serious environmental degradation. The political nature of urban planning made it easier to lean towards the rich (Campbell, 1996).

These negative practices coupled with the length of time urban planning took to produce master plans, their rigidity and inability to timely handle emerging urban challenges led to its abandonment by governance, its existential lifeline, for market driven urban growth (Narang and Reutersward, 2006). The profession was re-adopted in the new millennium when negative impacts of unplanned developments exemplified by environmental degradation, climate change, resource depletion and loss of biodiversity, including some essential capital, bore heavily on governance and the environment (Narang and Reutersward, 2006).

To regain relevance, urban planning was reformed in the Global North by borrowing and enriching governance's six collaborative principles. As noted by Narang and Reutersward (2006), meaningful co-operation between governance and urban planning demanded the 'slaughter of the sacred cow' to adopt the principles of subsidiarity, collegiality, transparency, equity, efficiency and participatory engagement. This opened urban planning to other professions, the



poor and the disadvantaged becoming integrative, precautionary and people oriented (**Figure 1**).

Urban planners increasingly adhered to the principles of sustainable urbanism based on scientific investigation and equal treatment of the three pillars of development anchored on the three capitals each with its own areas of concentration (Newmayer, 2010). Specifically, interventions in the fields of human health and general wellness, environmental health and manmade knowledge were equitably enhanced within the planning process to attain higher levels of urban liveability (**Figure 2**).

In demystifying urban planning and adopting

modern technologies, greater efficiency ensued shortening planning time in line with governance. Old philosophical worldviews were abandoned for modern ones like Environmental Sustainability, Collaborative Planning and Psycho Evolutionary Stress Reduction Theories. New planning models such as eco-city, green urbanism and smart city enriched the profession while effective policy instruments enhanced orderly, compact growth and enriched open spaces delivery (Tirla et al., 2014).

The consequent cities were cross generationally equitable, inclusionary, healthy and energy efficient, technology-based, interactive, wealth generating and interlinked with adequate open spaces that provisioned full ecosystem services

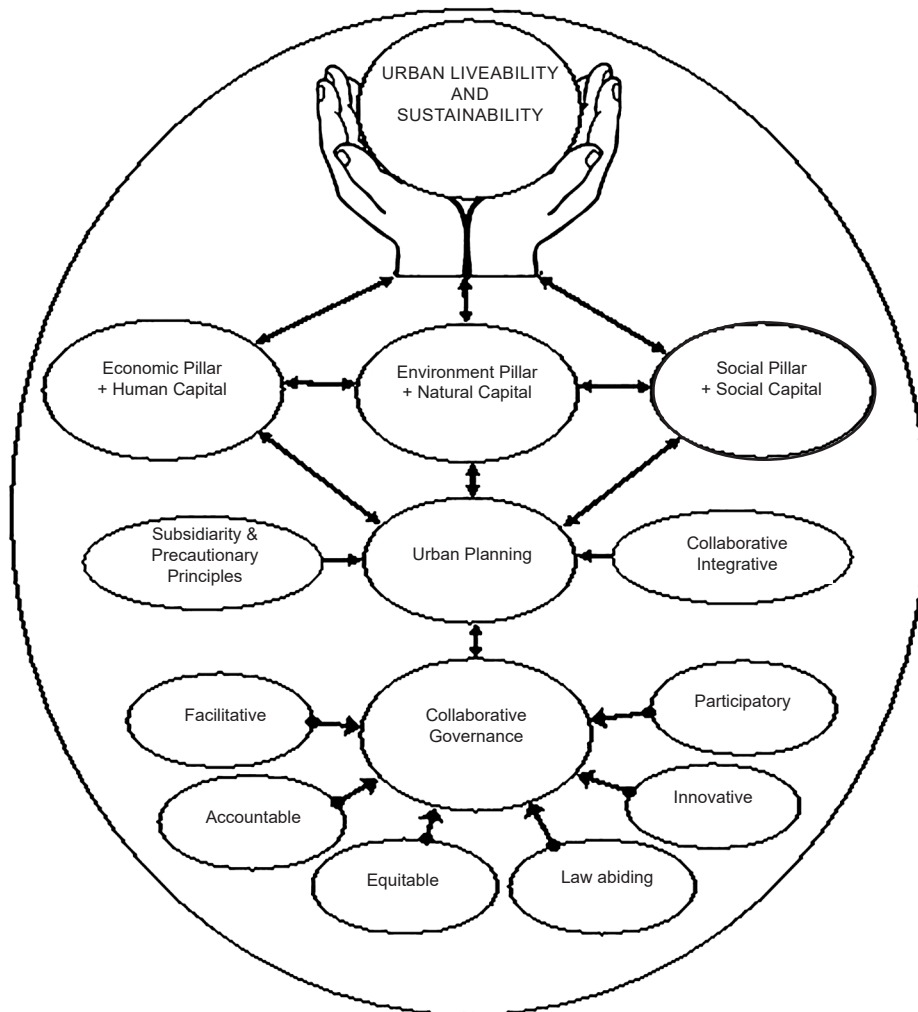


FIGURE 1
 Better practice urban planning model
 Source: Author 2019

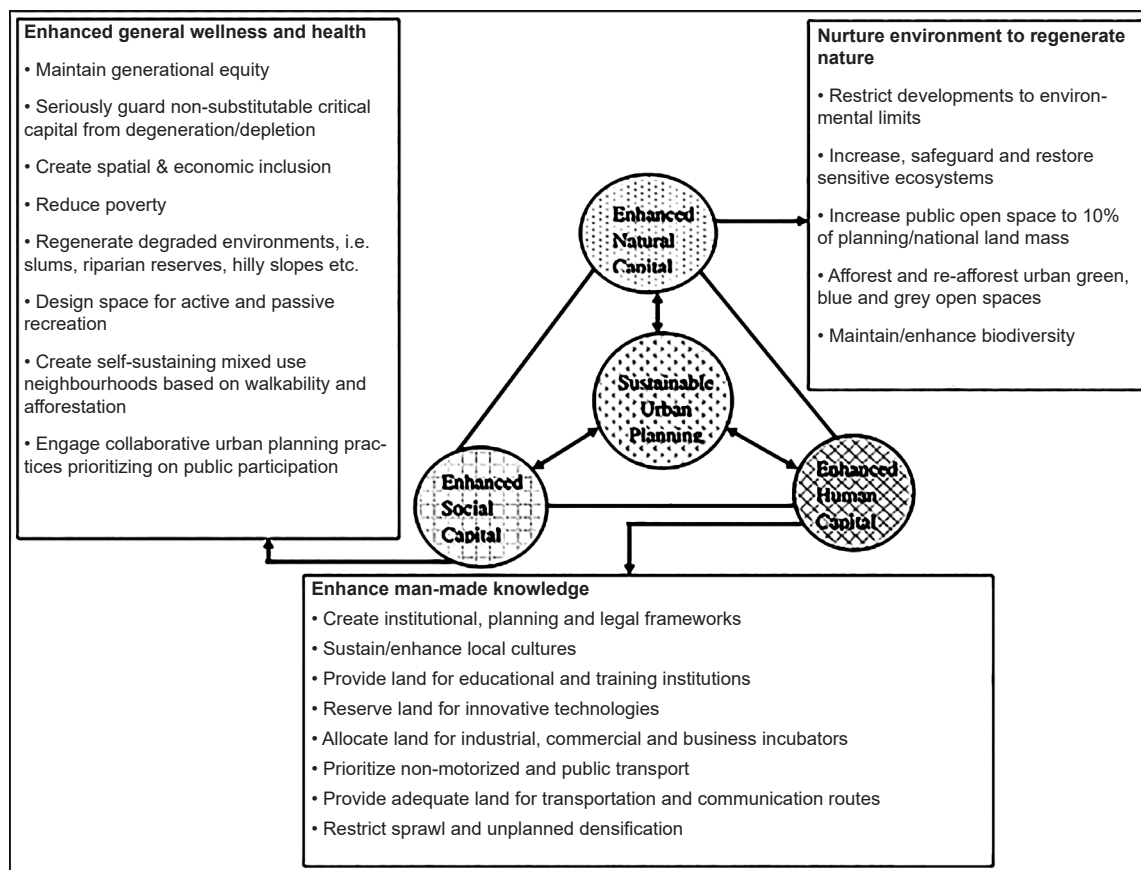


FIGURE 2
Three-pillar and three-capital liveability model for urban planning
Source: Author 2019

(Tirla et al., 2014). The transformative results made urban planning indispensable in the creation of liveable cities (WHO, 2010).

Urban planning could not alone produce the wonders that are modern Global North cities. It required the collaboration of all levels of governance and other professions (World Economic Forum, 2015; UN-Habitat, 2017). Collaborative governance upholds urban planning and indeed all the other professions, providing finance, planning and legal frameworks that support its functions including tax and development incentives and backing for policy implementation and development control (UN-Habitat, 2017b).

Governance sets up the vital institutional frameworks that provide the setting for production and delivery of urban planning outcomes. The preferred models are horizontal and networked

as opposed to hierarchical institutional models (Inam, 2002). For these reasons Campbell (1996) faulted the triangular planning model based on rational philosophical outlook recommending the collaborative governance inclusive rectangle, without which cities are doomed to fail irrespective of the professional superiority of their technical teams.

This insightful deduction is unfortunately true for African cities including Nairobi (World Economic Form, 2015; UN-Habitat, 2017b). Amoateng (2015) pointed out Africa's ever-rising urban poverty. Researchers have posited cities in the continent are uniquely African in their unplanned chaos, slums, expensive traffic jams, environmental degradation, deforestation, unemployment, loss of biodiversity, urban sprawl, climate change and unhealthy lifestyles devoid of recreation space (UN-Habitat, 2016). World Bank (2016) noted inadequate water supply, low sewer and wastewater treatment access, poor delivery of

services and income disparities in Nairobi City.

Mwaniki et al. (2019b) noted the loss of about 83% (2,440 hectares) of recreational open spaces and forests in Nairobi City witnessed since 1948 and lack of subsequent new delivery. Part of this public land loss was taken from Karura Forest, the first case study, gazetted in 1932 with an area of 1,063 hectares. Between 1958 and to 1996, about 495 hectares were professionally excised, planned, surveyed, issued with title deeds and allocated to individuals and companies (Green Belt Movement, 2010). The forest was saved by many stakeholders and interested publics leading to cancellation of many title deeds (Green Belt Movement, 2010). The enactment of the Forest Conservation and Management Act (Government of Kenya, 2015) enabled the creation of collaborative governance practices that redeemed the forest with the keen involvement of Friends of Karura Forest.

The 1948 Nairobi Master Plan for colonial capital created the 12.9 hectares Uhuru Park (White et al., 1948), constituting the second case study. Located within the zone reserved for exclusive use of Europeans, Africans recreationally enjoyed the park after the 1963 independence. Uhuru Park was professionally planned, designed and managed through rational theory. In 1989, a 62-storey Times Tower belonging to the national government in power was designed and nearly constructed but for the great outcry and mass action by many stakeholders; including Professor Wangari Maathai, who underwent physical and emotional abuse, including incarceration (Ebila, 2015).

The third case study was Lavington estate privately developed under rational theory by the Holy Ghost Fathers on approximately 459 hectares having Land Reference Number 3734 (Local Government Commission, 1927). The estate was developed in the late 1950s as high end, low-density estate with about 86 hectares of open spaces comprising 18.7% of the total plot (Mwaniki et al., 2019b). Documentary review show that all open spaces in the estate have been alienated and nearly all developed including part of the macadam constructed and street lighted El Moro Drive.

RESEARCH METHODS

This study was conducted in Nairobi City, the national capital and headquarters of many international organisations. Its theoretical framework was based on three interrelated theories with Environmental Sustainability Theory as over arching towards achievement of urban sustainability underpinned by the balancing of the three pillars of development, guided by the three capitals of development (Moir and Carter, 2012). The operational philosophy of the second applied Collaborative Planning Theory is based on consensus, transparent and facilitative face-to-face dialogues involving all stakeholders in the urban planning processes (Nikolaidou et al., 2012). In creating urban liveability, these two theories are in the study knit together by the Psycho-Evolutionary Stress Reduction Theory whose basic philosophy is the innate and indispensable bond between nature, represented by open spaces in cities, and all living organisms including humans (Nikolaidou et al., 2012). These theories closely interrelate with urban planning as the independent variable and planning approaches, frameworks and liveability as dependent variables.

The study utilized a conceptual framework showing strong linkages between collaborative urban planning and urban liveability anchored on collaborative governance (UN-Habitat, 2016). The study employed qualitative design to capture unique longitudinal contextual data such as feelings, experiences and important anecdotes of the participants (Creswell, 2014). Document and map reviews, face-to-face interviews, participant observation and multiple case studies comprised research instruments.

The unit of analysis was the purposively selected geographic areas of Karura Forest, Uhuru Park and Lavington Estate. The three case studies were purposefully selected. Karura Forest is well organized, teaming with biodiversity and diverse visitors. The search for knowledge prompted its choice to understand the form of planning and governance that delivered the outcomes. In contrast was popular Uhuru Park right in the middle of the central business district showing signs of neglect and over usage while Lavington Estate persistently lost open spaces and underwent densification noted through participant

observation. Understanding the causal effects and operative solutions towards situational liveability going forward was of significance in the choice of the two cases.

Twenty key informants were purposely sampled for face-to-face interviews on their expertise to enrich the study. These were drawn from urban planners in key leadership positions, architects, land surveyors, leaders of resident associations, residents of Lavington Estate and management of Uhuru Park and Karura Forest.

RESULTS

Governance does not understand urban planning and its importance

The study findings found urban planning in Nairobi City as experiencing many challenges that hinder the acquisition of its full mandate and its professional outcomes. The first is the absence of a concise, clear definition of the profession. The repealed Physical Planning Act (1996) did not define the profession that went by its name. The physical and land use Planning Act (2019) changed the name to itself due to perceived differences by governance and senior planners in the definition and functions of 'Physical Planning', 'Land Use Planning' and 'Spatial Planning.'

The second challenge relates to lack of understanding by governance of the role of urban planning relative to other professions in the built environment. Section 58(4) of the Physical and Land Use Planning Act (2019) opens development permission, the critical end result of planning, to non-planners. The act omits the requirement that the County Executive Committee Member (CECM) in-charge of urban planning be a registered urban planner despite the lead role and heavy planning duties invested by Sections 2(b) and 17 of the Act. Key informants confirmed that CECM in charge of planning functions was a non-urban planner. They also noted the absence of planners' mandates to display their particulars on construction billboards or to complete planning aspects of development projects to their final processes.

Urban planning in Nairobi urgently needs the commitment of governance

Governance uses legal frameworks to ensure compliance with approved planning strategies and approaches. The state of urban planning in Lavington Estate as reported by key informants and proved by participant observation bears witness to lack of commitment to urban planning practices in Nairobi City by governance. Development densities are higher than granted by the current zoning ordinance confirmed by key Nairobi City informants as one dwelling unit per minimum plot of 0.1 hectares under sewer services. Yet the estate hosts three level residential flats.

Key informant stakeholders in Lavington Estate confirmed alienation of all area public open spaces and indiscriminate cutting of mature trees without their involvement. They attested to the traumatizing experiences with police and ineffectual courts battles over their efforts to protect Lavington Estate's social, economic and environmental integrity. They argued that with political and development control powers, governance would have intervened had they desired to maintain the planned integrity of Lavington Estate or instituted sustainable planning approaches for densification.

Urban planning in Nairobi City operates on a poor institutional framework

Documentary review showed Nairobi City as consistently having poor urban planning institutional frameworks. Records show that urban planning was secondary to more developed professions such as engineering, public health, education, social services and others. In the defunct City Council, Urban Planning started as a section within the City Engineer's Department. Currently, the technical arm of the Nairobi County has 11 sectors equivalent to departments with urban planning functions scattered within 3 sections, 6 units and 17 sub-units constituting Land, Urban Planning, Urban Renewal, Housing and Project Management Sector (Figure 3).

Nairobi City governance and urban planners need to nurture nature

The current study findings reveal absence of public

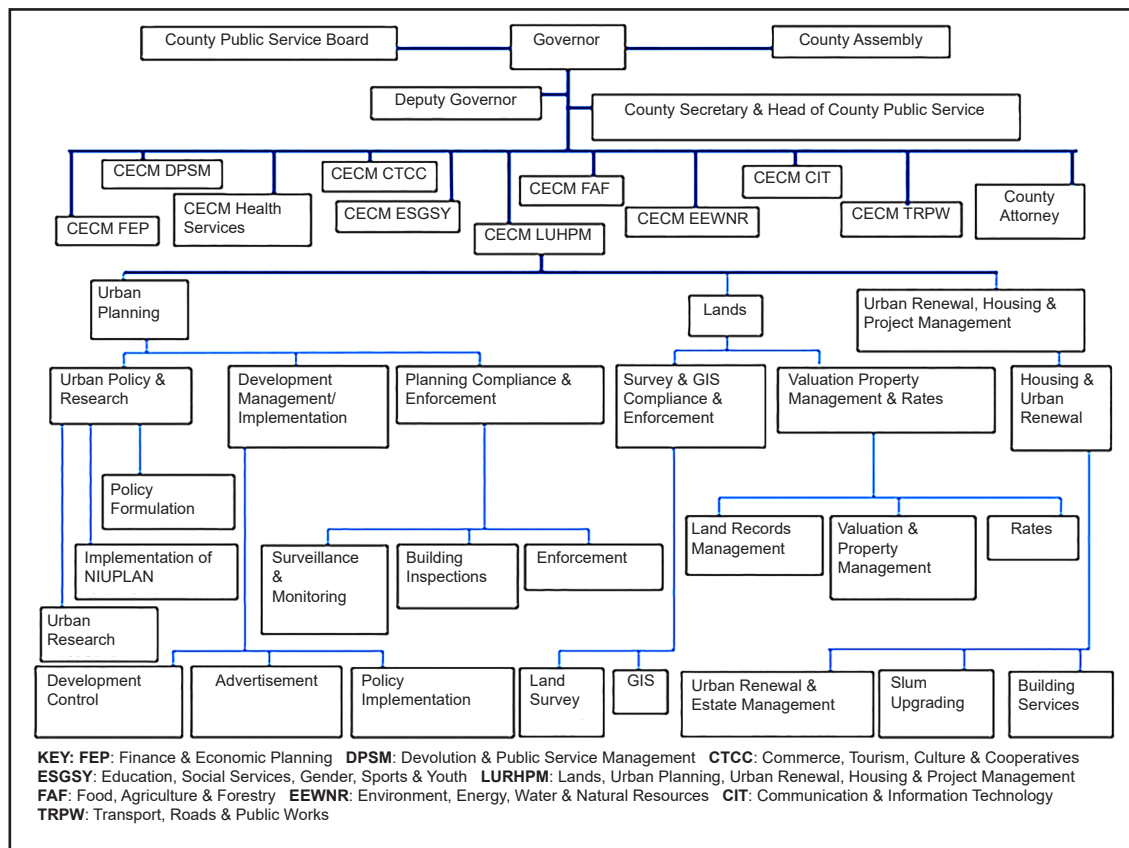


FIGURE 3
 Nairobi City County organogram reflecting urban planning functions
Source: Adapted from Nairobi County’s Organogram, CECM, CIT, 2018

greening delivery and protection frameworks. The provision of open spaces was traditionally derived from the repealed 1996 Physical Planning Act. Section 56(f) and 15(e) allowed reservation and preservation of land under planning application officially presented to developers as 10% free surrender to Local Authorities for public purpose, including open spaces. The constitution enacted in 2010 outlawed deprivation of property for any purpose without due compensation [Article 40 (3)(b)(i)]. Article 40(2) instructs Parliament not to enact laws that invalidate this constitutional provision. Consequently, the Physical and Land Use Planning Act (Government of Kenya, 2019) deals only with compensatory delivery of national monuments. Documentary evidence supports absence of a delivery framework in Nairobi City hence no major public greens have been provided in recent times even under serious open space alienation, pointing to neglect of nature by urban planners and governance.

Karura Forest has collaborative service delivery

Karura Forest has collaborative form of governance comprised of Kenya Forest Service (KFS), Friends of Karura Forest (FKF) and the neighbouring communities including the high end Runda and Gigiri Estates and slum communities on the fringe of the forest. These have formed Community Based Organizations (CBO) with democratically elected leadership. The forest is managed through the collaborative action of the three institutions under the headship of FKF with allocations from the Kenya Government through KFS and contributions by FKF. Some members of the CBOs are under full employment or daily contracts in Karura Forest. They perform a wide variety of maintenance activities such as security, bush clearing, weeding, watering, growing seedlings and others. They are allowed to harvest honey from the forest, which they process and sell to buttress their incomes.

The entire forest has been fenced off including the previously allocated areas through volunteer contributions. CBOs ensure round the clock security. Indigenous trees were planted in the deforested sections and areas with exotic trees incrementally replanted with the same species. The forest is teeming with biodiversity comprising of small animals, birds, butterflies and other insects. Cycle paths, walking and jogging trails have been provided to ensure full forest experience. School learning trips are arranged from far and wide. Key respondents including management, leaders of the CBOs and participant observation attested to the transformation of a mismanaged and crime invested forest to a thriving city 'lung' through the collaborative actions of many actors.

Local liveability in Lavington Estate is consistently eroded

Documentary evidence and the design of Lavington Estate attest to its sustainable and liveable development. Old maps reveal the wide expanses of public open spaces, inordinately wide internal circulation roads with widths of 15 to 25 metres and the necessary infrastructure and services planned in accordance with the target population of single family houses within each property. River sources and wetlands were safeguarded. Key informants and participant observation presently note the grazing of cattle and occasionally pigs and goats on the greens and dumped refuse on the road reserves. Reported too are informal traders and eateries serving food prepared on the road reserves. Lavington estate key informant residents noted the increasing multi-family developments that have created constant water shortages and often overflowing sewer manholes. They also noted too many land use changes to especially schools, offices and restaurants without citizen involvement. These actions increasingly reduce liveability in Lavington Estate.

Uhuru Park lacks in sustainability

Participant observation has highlighted serious overcrowding in Uhuru Park particularly on the weekends. Due to heavy usage Key informants reported a stressed park with drying grass and heavy dust pollution. They also reported introduction of crowd pulling games in recent years within the park initially planned and designed for

passive recreation. The informants further noted inadequate rest rooms, drinking water points, seats and over licensing of informal traders and hawkers who reportedly reduce the enjoyment of the park experience. These conditions indicate lack of park sustainability.

Built environment professionals have neglected their mandates

Documentary evidence reveals that existing legal provisions have not provided for governance to excise public land, subdivide, survey and value it, and create and transfer titles without direct involvement of a range of professionals. New owners of these properties require the professional services of architects, engineers, quantity surveyors and lawyers to effect approvals granted by their counterparts in public service and to acquire titles. These actions negate professional ethics designed to enhance sustainability and liveability.

DISCUSSION

The study suggests a very weakened urban planning regime in Nairobi City. The challenges that have crippled its functioning and transformative potential to make Nairobi City a sustainable engine of economic growth require urgent attention. The need to re-address the significance of urban planning is critical since Nairobi is of unique importance in Kenya. The city receives diversely numerous international and national visitors as a major African transportation hub and headquarters of many international organizations. Nairobi is the face of Kenya and demands specialized attention by the national government.

One of the more serious challenges facing urban planning in Kenya is the absence of a proper definition of the profession within the local context based on international scholarship outlining its mandate, functions and outcomes. Being political in nature and requiring heavy political input (Campbell, 1996), urban planning needs thorough understanding by governance to remain appropriately engaged and locally relevant as noted by Narang and Reutersward (2006).

The second urban planning challenge relates to inadequate differentiation by governance of the role of urban planning relative to other professions in the built environment. Symptoms of this are the opening up of critical development permission to non-planners and engagement of any profession to the position of County Executive Committee Members (CECM) in-charge of urban planning despite their lead role and heavy planning duties. The CECM in charge of planning functions should ideally have urban planning qualifications at second or higher degree levels as the profession sets operational platforms for many built environment occupations within and without the sector.

The third challenge requiring the attention of local urban planners is demystification of urban planning operations through circulation of its operational frameworks to all interested stakeholders. The planners additionally need to abandon rational outlook for modern theories exemplified by collaborative planning theory and adopt new planning models and approaches (Narang and Reutersward, 2006). These planning models have inbuilt approaches and principles that enhance equitable growth creating sustainability and liveability (Tirla et al., 2014).

The administration of Uhuru Park and Lavington Estate case studies depicted application of rational philosophical worldview devoid of stakeholder participation and counter indicated by modern planning and governance theories (Csepely-Knorr, 2011). Modern planning models and planning approaches like mixed density and land use neighbourhoods, walkability, inbuilt traffic mode segregation, linear greens and others recommended by researchers (Tirla et al., 2014) are not in use in Nairobi. Nairobi City urban planners need to adopt the principles of sustainable urbanism based on the three pillars of development as recommended by Narang and Reutersward (2006) scientifically blended with the three capitals of development (Newmayer, 2010).

Poor institutional framework is another serious challenge in Nairobi City. In support of Narang and Reutersward (2006), urban planning requires facilitative institutional framework that provides a springboard for effective urban planning

outcomes. The institutional framework for the sector that deals with urban planning in Nairobi city is hierarchical lacking horizontal cooperation in cross unit networking and employing rational administrative model discouraged by Inam (2002). This requires overhaul to include collaboration as indicated by collaborative planning and collaborative governance theories for effective delivery as demonstrated by the Karura case study.

As recommended by Inam (2002) institutional framework should be comprehensively designed. Nairobi City organogram has omitted critical urban planning components as noted by key respondents. They recommended enrichment of the institutional framework with additional sub-sectors. Further rationalization of the organogram to remove fragmentation and function misallocated would enhance planning outcomes. As an example, the four subsectors form core functions of urban planning. Policy Formulation in the Urban Planning Subsection ideally fits into Urban Research while implementation of the Nairobi Urban Plan forms a core mandate of Development Management and Implementation sub-unit.

Urban sustainability and liveability need enhancement as recommended by Alderton et al. (2019), and others. Adequate professional knowledge is essential to guide sustainability and liveability within specific technical fields. It is essential therefore that each profession in Nairobi City practices according to its core training. Cross cutting superficial knowledge provided to give a general perspective across built environment professions does not equip for future practice. Section [58(4)] of the Physical and Land Use Planning Act (2019) ought to be amended to ensure subjection of professional practice to full technical training and admission to a pertinent professional body for purposes of accountability and instillation of professional discipline.

Towards ensuring full accountability in the planning field, urban planners should display their particulars on advertisement and construction billboards and conclude the planning aspects of development projects. Failure to do so could compromise their diligence in professional

practice and environmental integrity of the area under planning application as noted by Campbell (1996) and indicated by the Lavington Estate case study. To create sustainability and liveability right from individual properties to megaprojects and the city as a whole, a certificate of environmental compliance signed by project planners should be introduced to confirm implementation of end project ground coverage and plot ratio, building lines, side spaces, provision of on-site open spaces; including their development, and others.

In support of Campbell (1996), urban planners in Nairobi have to build-in and inculcate principles of resilience and sustainability into all plans irrespective of location, scale or type as a matter of urgency and create integrative teams for improved designs and landscaping of existing facilities like Uhuru Park. They need to undergo a paradigm shift to realize the indispensable necessity of collegially tending the environment and protecting open spaces and sensitive ecosystems against encroachment while seeking legal ways to expand them per capita in accordance with formulated and approved typology and standards (Mwaniki et al., 2019b). In support of Jennings et al. (2016) and others, urban planners in Nairobi City must believe in the essential nature of urban greens and the serious deprivation impacts. Otherwise the burden of proof as demanded by the precautionary principle lies upon them.

The inordinate loss of public open spaces in Lavington Estate is a tragic reality as noted by Jennings et al. (2016) and postulated by the Psycho Evolutionary Stress Reduction Theory. Governance through the advocacy of urban planners need to provide open space delivery and protection frameworks and to allocate adequate financing for planning functions. Of necessity too are quicker and more transparent development approvals, equity in development control, reduction of approval fees and freedom to plan for urban growth and guidance without undue centralization and political interferences (Narang and Reutersward, 2006). A legal framework for repossession of alienated open spaces in Lavington Estate and elsewhere, particularly natural drainage way leaves, riparian reserves and wetlands constituting non-substitutable critical capital (Newmayer, 2010) require urgent formulation and

implementation.

In addition urban planners and other built environment professionals should be accountable for their professional performance. Changes of use and subdivision in Karura Forest had serious repercussions on urban sustainability and liveability. Land use changes to power stations and block of flats in low-density developments like Lavington Estate have huge potential for serious liveability challenges. Such applications could be deterred if the names of all consulting professionals are publicly displayed.

In addition, all built environment professionals bear full responsibility for alienation of non-substitutable critical capital and indeed alienation of all the public open spaces in Nairobi City over time including overall lack of sustainability and liveability. With proper and persistent professional advise to governance, the critical loss and overall environmental and social cultural degradation in Nairobi may have been avoided. Professional associations should ensure their members stay clear of community damaging activities going forward.

CONCLUSION

This study set out to examine urban planning and its approaches that sustainably created liveable cities and to assess their application in Nairobi City. The study revealed a limping urban planning operating on a poor institutional framework devoid of an open space repossession and delivery framework and therefore unable to create sustainability and liveability in any of the three case studies.

The study revealed absence of operational modern planning approaches in all the case studies especially in Lavington Estate contributing to threatened liveability. Environmental degradation in the estate is revealed as alarming due to densification, alienation of public open spaces including non-substitutable critical capital and widespread deforestation nurtured by autocratic governance and rogue professionalism so highly counter-indicated by Collaborative governance, Collaborative Planning and Psycho Evolutionary



Stress Reduction Theories. This study notes only one incidence of collaborative governance and liveability in Karura Forest, driven not by governance or built environment professional practices but by Friends of Karura Forest.

RECOMMENDATIONS

In appreciation of the importance of urban planning in enhancing sustainability and liveability, the study recommends its redefinition, greater support by governance and transformation guided by Collaborative Planning Theory. The study additionally recommends repossession of alienated open spaces in Lavington Estate and particularly the non-substitutable critical capital. To enhance sustainability and liveability, the study further recommends introduction of collaborative governance through formation of Friends of Uhuru Park and strengthening of resident associations in Lavington Estate.

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