

Implications of Gated Community Housing on Urban Space: *A Case Study of Nairobi County, Kenya*

* **Juliet G. Muiga and Robert W. Rukwaro**

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Abstract

The purpose of this study was to establish the implications of Gated Communities (GCs) on the urban space. This study adopted a cross-sectional survey design. Questionnaires, interviews and observations were the research tools used to collect data from the 186 households spread across eight gated communities. Data was analyzed using qualitative techniques and findings were presented descriptively and graphically. The positive implications of Gated Communities in Nairobi County were that they presented a platform for the optimum land utilization form of high-density neighborhoods, offered compact, secure, well-served, well-planned and cost-effective neighborhoods. In contrast, the influx of gated communities in Nairobi County had negatively affected the urban fabric due to: reduced public space and permeability of a city, security measures that created social division of affluent versus poor leading to negative impact in terms of urban sustainability, and the high walls created physical borders indicating division in the city. The study recommends integrated housing master plan for Nairobi City County promoting maintenance of the urban structure and landscape with balance between private and public spaces, sharing of commercial, institutional, public open and entertainment zones by the poor and affluent neighbourhoods, and creation of continuous urban fabric with permeable spaces with no beginnings nor ends to enhance security on the city streets.

Keywords: Gated community, Secure neighbourhood, Segregated urban niches, Urban space.

INTRODUCTION

Gated community (GC) is a broad term that includes enclosed neighborhoods with controlled access through gates that transit existing roads, villages and complexes, including lifestyle (Blandy et al., 2004). These neighbourhoods provide the residents enclosed therein with a range of non-residential amenities such as schools, offices, shops, golf courses, recreation facilities, community facilities, and clubhouses and open spaces. Public access into the gated community is highly restricted with use of perimeter fences, surveillance cameras and guarded gates. There are more than 20,000 gated communities in the United States of America housing a population of more than 8 million. Those figures continue to rise with no indication of slowing down in future. In Africa, the concept of gated communities has experienced phenomenal growth, in South Africa, the metropolitan areas of Gauteng have witnessed growth in gated communities since early 1990s. In Johannesburg, GCs are built as safe havens to

protect the residents within from 'the rest', in what is perceived as one of the world's most crime-ridden societies, as described by Landman and Schönteich (2002). The gated community of Palm Hills, about 15 km west of Cairo, is one of dozens that have sprung up in the desert around the Egyptian capital to house the upper and middle-class Egyptians who feel they cannot stand the noise and pollution in Cairo (Ghonimi et al., 2010). In Nigeria today, the concept of gated communities is a fast-growing response to safety and security all over the country as there is rampant insecurity within the non-gated communities (Ajibola et al., 2011).

In Kenya, the modern phenomenon of GCs started in Nairobi and is fast spreading to other towns, rapidly gaining popularity in the housing sector. According to Hassanali (2009), there is a growing trend and belief in healthy living within a gated community. In Kenya, 90 percent of all such developments occurred within the last 5 years.

*Corresponding author:

Juliet G. Muiga, Lecturer at the Department of Construction and Real Estate Management, Kenyatta University, Kenya.
 Email: muiga.juliet@ku.ac.ke

Some of the famous GCs in Kenya are: Buffalo Hills (leisure and golf village), Thika Greens Golf City (retirement homes included among other facilities), Migaa Golf Village and Four Ways Junction in Kiambu, Simba Villas and Greenspan in Eastlands, Jacaranda Gardens in Roysambu area and Longonot Gate located in Naivasha. All these developments are of different forms, scale, variety of house design and size, type and number of amenities offered, and the size of the community in terms of population and ground coverage. One feature that is common in all is the controlled access within the developments surrounded by a non-permeable perimeter wall enclosing the neighborhood.

THEORY

Gated communities on the urban space

In the past few years, GCs have rapidly increased in Kenya. These types of homes are increasingly popular among urban upper and middle-class residents. A casual observation of the Kenyan urban housing market today reveals a great craving for gated neighborhoods. This phenomenon is visible in the housing adverts in all forms of marketing media such as newspapers and magazines, radio, television, real estate product exhibitions and network marketing platforms. Developers, marketing parcels of land and complete houses, promise the goodies of GCs in advertising brochures using fascinating terms such as: relaxed, friendly ambience, serene, quiet, secure, safe, manicured lawns, immaculate fairways, carefully crafted water features, meticulous landscaping of the highest possible standards, among others. The phenomenon of GCs is thus not only a local but is also an international concern, as revealed in existing literature and the intense debates on GCs and their impacts on housing, policy, and the environment.

The greatest concern raised by scholars and researchers is whether this phenomenon can ensure a sustainable urban future. So far, GCs are perceived as having dramatic impacts on neighborhoods, cities, as well as on the quality of the urban life of the people. The influx of GCs has attracted the attention of researchers in what can only be termed a global issue. Studies by Ilesanmi (2012); Xavier (2008); McKenzie (1994); and Goix

(2005) view GCs as sustainable forms of housing, while others reveal some threats in sustaining GCs on the urban space.

Development of sustainable gated communities should be guided by the principles of good community design such as: social equity, efficiency, diversity, workability, affordability, as well as environmental responsibility, in order to attain social, environmental and economic sustainability. The United Nations (2005) defines environmental sustainability as meeting the needs of the present without compromising the ability of future generations to meet their needs. Gated communities should be environmentally sensitive, providing places for people to live and protecting the environment. Gated communities (GCs) with a sustainable urban physical space, well designed and built featuring quality built and natural environment, well connected with good transport services and communication linking people to jobs, schools, health and other services; promote higher density, good urban design features and urban infill as opposed to sprawl. The manner in which a particular gated community has incorporated these features in its development can have significant and long ranging impacts in environmental health (The Bristol Accord, 2005).

The influx of GCs has adversely affected the urban space; indeed, the walkability and circulation of urban space has been curtailed due to non-permeability that prevent people from walking through places. The eligibility of the urban space is adversely affected by the high, opaque, perimeter walls shrinking the public spaces in terms of access and visibility resulting in poor urban form.

In Kenyan cities, especially in Nairobi, economic segregation started early in the colonial era, when zoning and city planning practices were developed for preserving the position of the advantaged, with subtle modifications in building and density codes. Gated communities have aggravated it with several aspects, including creating physical barriers to access and making public, not merely individual space, but private. GCs privatize previous public responsibilities, for instance, parks, recreation and a range of civic functions such as garbage collection, street maintenance; among others,

leaving the poorer citizens dependent on the ever-reduced services of the County Governments.

Ghonimi et al. (2010) state that GCs always promote micro interest at the cost of macro spillover, this is not only in livability but also in safety, sustainability and other different characteristic of good urban form. Calthorpe (1993) noted that GCs create imbalance between public and private space. Jacobs (1961) and Borsdorf et al. (2008) observed that neighborhoods that work have no beginnings or ends thus opposing spatial segregation marked by boundaries and gates. According to Islam (2004), gates lead to low quality urban space, which is then physically unsustainable. This study attempted to analyze the implications of gated communities as an emerging housing typology on the urban space in Nairobi, Kenya. The guiding research question for the study was; 'What are the implications of gated communities on urban space?'

Implications of Gated Communities

This section presents a theoretical discussion on the impact of gated communities on the physical environment and how GCs are likely to affect the sustainability of the urban environment.

Negative implications of gated communities on urban space

In Eastern Europe, GCs are being viewed as remarkable forces, capable of altering the existing urban structure and landscape. Csizmady (2011) notes that there are signs that the structure of cities developed during the communist era have been transformed significantly by GCs. Squares and roads formally accessible to all cease to exist, and fences around GCs block the passages, excluding the former users (Senkantuka, 2009).

According to Calthorpe (1993), the new urbanism claims that communities cause imbalance between public and private space. The argument is that as gated community private space increases, the public space decreases. Jacobs (1961) observed that neighborhoods that work have no beginnings or ends. This was later supported by Lynch (1981) who stated that any good city form has a continuous fabric, therefore, when gates are raised,

they cause impermeable urban space and with the reduced public space, the surrounding area fails to improve in quality (Islam, 2004). Urban space thus, is viewed as under threat with this form of housing delivery (Ozkan and Kozaman, 2006). Davis (1992) views gated communities as manifestations of the 'militarization of urban space' and as a class struggle for space. As such, while in the past the housing market forced the poor into the more or less closed ghettos in the cities, today, the affluent segregate themselves within their own exclusionary and fortified enclaves. Where this exists, sustainable urban growth is endangered.

Blandy (2004); Gichuru (2011); Ozkan and Kozaman (2006) oppose the influx of gated communities citing their fears that gated communities negatively affect the urban fabric. This is due to the following reasons: they reduce the public space and permeability of a city, security measures create social division of affluent versus poor leading to negative impact in terms of urban spatial integration, and fears that the high walls are physical borders indicating division in the city. Atkinson and Blandy (2005) observed that most communities adjacent to GCs have less promoting movement behavior due to the sprawled low-density urban fabric that the community incorporates no uses for, as it is just boundary walls that discourage commercial, institutional and entertainment activities. There is thus no vitality in the day or night.

Positive implications of gated communities on urban space

Some scholars, such as Ajibola et al. (2011), perceive gated communities as a positive contributor to the city space in the following ways: secured areas, better infrastructure and utilization of inactive lands that count as contributions to the whole city, or at least the near vicinity. According to Bowers and Manzi (2006), residents within the walls and gates are able to control their own environment and to take ownership of their neighborhood as opposed to those residing in open communities. Bowers and Manzi (2006) oppose the conventional hostility against gating, noting that such opposition misses out on an important feature of the experiences of urban residents. It is important therefore, to explore the

effects of gated communities on the urban space from the perspective of residents, developers, adjacent communities and urban managers. This is an important way of determining the physical sustainability of GCs, through indicators such as house design, neighborhood design, connectivity, functionality, permeability and mobility.

RESEARCH METHODS

This study aimed at investigating the implications of Gated Communities (GCs) on urban space. The study used a cross-sectional survey design which enabled investigation of stakeholders' perceptions and make observations regarding the gated communities to evaluate their influence on urban space.

Gated communities within the Nairobi County that were complete, occupied and most accessible were selected for the study. The rationale behind this was to draw a sample of sites from across all county districts. The study covered only the lifestyle and prestige type aspects of gated communities. The house designs include semi-detached massionnetes and flats with shared community facilities and amenities. Neighborhoods with through roads open to public were not studied. Community members living or working in spaces adjacent to a gated community were interviewed in order to capture their views on gated communities. Other stakeholders in development of gated communities, both in production process, management and as regulators, were identified as interviewees.

Questionnaires, interviews and observations were the research tools used to collect data from 186 household spread in eight gated communities. Data was collected from the following randomly sampled eight gated communities' neighbourhoods; Chiluma Apartments, Dulexe Plaza, Ramis Court and NHC Park in Kileleshwa from Westland district, Greenspan Housing, Nyayo Estate Embakasi and Simba Villa from Embakasi and Kasarani districts, and two-gated communities were studied namely Jacaranda Gardens and Willmary Estate.

A sample of 60 households per district was chosen for adjacent communities' respondents. The members of adjacent communities who existed before the gated community was established and are still residing within a radius of 0.5km were identified. Random techniques were employed to obtain a sample of at least ten participants in each neighborhood.

Questionnaires were administered to residents of the GCs and they collected data on the demographic characteristics of the GCs households' and the general practices of residents that have implications for the social, economic and environmental sustainability of the gated communities. The reasons why residents of gated communities opt for gated living, their perceptions on the sustainability of gated communities as well as an assessment of the satisfaction level of residents living in gated communities in Nairobi, was also investigated.

Interview schedule for neighborhood manager/ developer was used for a dual purpose; one, to capture data from the developer of the particular gated community and second, to collect data from the manager of the company in charge of the day-to-day running of the GCs. The data collected from this group focused on the motivation for developing the GC, the size of the developments, facilities provided and how they are managed, the challenges of creating these developments, and the challenges that the GC management face, the future of GCs, as well as perceptions from the different interviewees on the sustainability of GCs.

Interview schedule for adjoining gated community was also applied. Communities adjacent to the GCs facilitated the triangulation of results and provided a general picture of GCs in Nairobi County. The data collected from this category touched on the demographic characteristics of the adjacent community, assessment of their social-economic classes, their perspective on the impact of the gated community on their neighbourhood, perceptions on drivers to gated living, and perspectives on the sustainability of GCs in Nairobi County.

Semi-structured questionnaires were used as a guide in the collection of data from key informants, such as planners at the Nairobi City Council, architects/urban designers, the director of housing, and regulatory bodies such as National Environment Management Authority. The data collected was useful for explaining the existing institutional arrangements and their contribution to the phenomenon of GC development.

Qualitative and quantitative analysis was carried out on the collected data from the field. For the qualitative data, the responses were paraphrased and in some instances reported verbatim. In cases where more than one respondent was interviewed based on the same questionnaire, the data was organized into themes. The study used an interpretative approach in order to continually interpret the data, draw inferences, and understand the meaning and implications of the data collected. Narrative and performance analysis were applied in order to discover and reveal repeated similarities in the perception of respondents', particularly on the challenges of the management of GCs and the implications of gated communities in Nairobi. These perceptions were drawn from key informants and the observations that were noted on the checklist (Mugenda and Mugenda, 2003).

Data from oral interviews was presented in the form of narratives. Descriptive statistics in form of percentages were used to analyze data, enabling description of the distribution of various variables in the study.

RESULTS AND DISCUSSION

The findings on implications of gated community housing on urban space were considered from the physical, environmental, social and economic footprints.

Positive implications of gated communities housing

Design principles of gated communities

The study established that the design professional category respondents agree that gated communities

are symbols of good community design; they uphold the principle of efficiency since from the design stage, professional designers were involved and the designs approved by the relevant authorities. Due to the cosmopolitan nature of GCs, as captured in the study, GCs score highly on the principle of diversity. The walkability principle embraced within GCs, with good pedestrian walkways, and traffic calming features, are good urban design practices. The respondents agreed that GCs uphold the principle of environmental responsibility with their emphasis on Environmental Impact Authority reports, submission and regular audits to monitor the GCs Environmental Management and Coordination Authority compliance.

The study was also informed by the Director of Development Control at Nairobi City County (NCC), that GCs have provided several opportunities such as; adequately housing the middle-income groups in safe, secure and serviced neighborhoods. The studied GCs were well-serviced, since they had facilities and services such as recreation, well-maintained residential infrastructure such as streets, solid waste disposal systems, good storm water drainage systems, manicured grass lawns, water supply, and recreation facilities among others (**Figures 1, 2 and 3**). More so, GCs were aesthetically attractive living environments that were homogeneously designed, in various sizes with uniform external finishes.



FIGURE 1
 Ramis Court landscaped outdoor spaces
 Source: Authors 2020



FIGURE 2
 Ramis Court entrance court parking
 Source: Authors 2020



FIGURE 3
 Ramis Court swimming pool
 Source: Authors 2020

The view was supported by an architect who stated that middle-class housing development has been neglected for a long time by the government, the last one being Loresho Estate in the early 1980s. As a result, the private sector was relieving the county government from the burden of providing housing infrastructure. In addition, this presents an opportunity for the NCC to redirect public funds and resources saved in this form to the low-income neighborhoods. Some scholars in the field such as Ajibola et al. (2011); Bowers and Manzi (2006), support this finding since they perceive gating as a good opportunity for urban space development. Further, Ajibola et al. (2011) perceive gated communities as a positive contributor to the city space in the following ways:

secured areas, better infrastructure and ability to utilize inactive lands, which positively impacts the whole city. Bowers and Manzi (2006) also support that gated communities' residents use walls and gates to control their own environment and take ownership of their neighborhood.

Maximize the utility function for residents

The study established that GCs are offering the following opportunities to urban housing: improved security, satisfactory provision of neighborhood services delivered as per residents' needs and control of living standards. The study findings support the Club Goods theory, explaining why taxpayers would opt to pay for civic and public services, and still demonstrate high level of satisfaction. The works of Bowers and Manzi (2006); McKenzie (2005) explain the Club Goods theory, stating that; firstly, gates provide increased security and maximum utility function to members. Secondly, the gates secure the limited divisibility of the goods to members and their guests. The purpose of the club is to capture and maximize the utility function for its members. Further, Webster (2005) thought that gated communities offer a more secure and sustainable method of delivering a set of 'standard of living' rights. In addition, the perimeter walls offer visual screens that promote residents' privacy. More so, the physical barrier limits access by unauthorized persons, in addition to defining property boundaries to the members, and enhancing a feeling of ownership among them.

Optimizing social capital and economic resources of homeowners

On the suitability of gated community housing, the study found that respondents preferred living in GCs because of the security of both residents and neighborhoods. GCs have solved a social problem where the traditional detached houses became fortresses and very anti-social forms of housing and thus the need to break away from that trend. The advantages of gated community housing are; first, social advantages like living as a community, ability of homeowners to pool resources together, and provide and maintain public amenities for their families. Second, economic advantages, where for a long time the County Governments had not managed to ensure adequate provision of

housing and thus private provision was the only option; it promises economic sustainability. Gated communities are viewed by respondents as cost effective in the sense that developers were able to save funds on shared infrastructure including sinking boreholes, installing solar panels, providing security, setting up boundary walls, providing water, sewerage, and power supplies; among others, since they negotiated better prices for bulk supply of goods and services gaining on the economics of scale.

Respondents from the housing department in the Nairobi City County agreed that GCs are part of the solution to the urban housing challenge in Nairobi. Further, people have different tastes and preferences and therefore they need to be given a variety of housing forms to choose from. The private sector is market driven and therefore provides what the homeowners want. The private sector has filled the gap in providing housing, because provision of housing by the public sector has proved unsustainable thus far. Gated housing has become very popular in Nairobi, cutting across all income levels. For example, the studied GCs communities belonged in upper and medium class levels; Ramis Court, Dulexe Plaza and Chiluma Apartments are high income class GCs while Greenspan Housing, Nyayo Estate Embakasi and Jacaranda Gardens are middle income class GCs.

Physical environmental sustainability

The gated communities minimized the negative impact on the environment by providing more spaces to greenery through its compaction nature, thus enhancing environmental sustainability. The management of common facilities and services was easy in a gated community set up. Respondents argued that gated community developments promoted environmental sustainability within the urban set up, indeed, it is observed that GCs are formal developments and have safeguarded environmental sustainability through Environmental Impact Assessments and Environmental Audit, emphasized by development controls by regulatory bodies. Additionally, the open spaces were highly valued by the high and middle-income earners who have the advocacy and machinery to protect them within their neighborhoods.

The study established that GCs provide an opportunity for the adoption of green technology, possibilities of waste separation and recycling, and shared facilities. These opportunities promote the efficient utilization of resources. Further, because the GCs are viewed as more organized and efficient in the delivery of utilities and amenities, one can conclude that gated communities have the potential of promoting sustainable physical development in Nairobi County. GCs developments' are paving way for the emergence of strong Home Owners' Associations (HOA) in form of private local government units. These offer opportunities for participatory urban governance as it gives the GCs residents' negotiation power when dealing with both public and private service providers thus improving the quality of life within the urban space.

Negative implications on gated communities housing

Integrated planning of gated community housing

The study found that in Kileleshwa, maisonnettes are being brought down and replaced with five or more floors gated communities' blocks. Thus, the construction of flats has completely changed the structure and context of the urban landscape. GC housing in Nairobi is dominated by high-density apartments with 74 percent of the GCs being five floors high, or more. Most apartments are three and two-bedroom house units. All the GCs were developed either as infills or as redevelopments of brown fields.

Jacaranda Gardens GC is an example of a compact development with 840 apartments in blocks of 5 floors (**Figure 4**). The house sizes are 2, 3 and 4 bedrooms. The adjacent community presents low rise structures with inadequate infrastructural and social services. The study established that the Nairobi City County perceives no problem with the privatization of public spaces such as streets and parks, commenting that it is worse with the surrender of public utilities, which are not developed after subdivisions. Indeed, almost 10 percent of land surrendered for public utilities is either grabbed or neglected, thus not serving the intended community service. The finding resonates with Rukwaro and Olima (2002) which supports the NCC view that public utility spaces

are not protected. Further, a study by Muiga (2009) revealed that either individuals or groups later converted some recreation land resources, formally allocated by the Ministry of Lands and the developers' surrender in subdivisions, into other urban uses. This calls for privatization of such spaces building residents' ownership that triggers their protection. Muiga (2009) observed that recreational facilities owned and run by the public sector are poorly maintained. In a further interview, the study established that despite the fact that the NCC has strength in planning of GC neighborhoods, and has developed good policies, it was evident that NCC lacked capacity to implement the policies in terms of technical personnel at the local level to ensure compliance of the regulations, which is a major weakness. In addition, the findings indicate that the policies on gated communities' development is wanting because the existing planning system is not equipped with the prescriptions needed to deal with the unique needs of GC developments.



FIGURE 4
Compact Jacaranda Gardens
Source: Authors 2020

This implies that even though gated community housing policies exist they are weak and not unenforced, hence it is the developers who are driving development of the gated communities. This has resulted in GCs being developed in unplanned zones for such type of housing. This means that the integrated planning of all housing neighbourhoods' typologies were not respected and that GCs development occurred in ad hoc planning process manner during the approval period.

Segregation factors

On the urban community integration concern, it was noted that community integration is non-existent and segregation is evident with the gated community developments in Nairobi. This study established that the Director of Development Control at the NCC strongly disagreed that GCs were a symbol of good community design on the basis of the following principles. First, affordability, the respondent argued that GCs were not affordable for a majority of the city dwellers; secondly, social equity principle, the respondent argued that GCs excluded the poor due to non-affordability and it follows that gated communities are mostly homogenous in social-economic class and lifestyle. This study revealed that where GCs are developed, there is further development of unplanned informal structures in the immediate surroundings. Hence, GCs can be viewed as symbols of the affluent community design and hence pose a threat to the social and economic sustainability of urban space. **Figure 5** demonstrates segregation of adjacent communities and gated communities as informal business structures are observed in the immediate neighborhood of Jacaranda Gardens GC across Kamiti Road.



FIGURE 5
Informal business structures in the immediate neighborhood of Jacaranda Gardens GC across Kamiti Road
Source: Authors 2020

Other perceived threats of GCs include: it could be just a new pattern coming up which may change with time as fashions are temporal by nature, social segregation as homogenous social economic classes cluster into isolated neighborhoods in far

locations making the residents car dependent as they commute to work and in search of sustenance for their daily needs.

Security measures

The respondents noted that the increase of gated communities have negative effects to the urban fabric because the security measures, such as high walls and gates, are creating physical borders hence division in the urban space. The study found that GC developments are physically secure from residential crime associated with high perimeter opaque walls and in most cases reinforced with an electric fence at the top. All gates are guarded and patrolled 24 hours by security personnel and access by non-residents is highly restricted requiring a host resident's approval (**Figure 6**). Further, this security measure creates social division of affluent versus poor leading to negative impact on urban space sustainability. This finding is supported by Gichuru (2011); Blandy et al. (2004); Ozkan and Kozaman (2006).



FIGURE 6
 Main entrance to Jacaranda Gardens
 Source: Authors 2020

Urban experience

Adjacent residents of the gated communities strongly felt that the reduced public space and permeability of gated communities' neighbourhoods miss an important feature of urban resident's experiences and threatens the functionality of democratic urban space for urban users. This further leads to

imbalance between public and private space in the urban design and development of GCs. This observation was supported by Jacobs (1961) who believes that neighborhoods that work have no beginnings or ends indicating that the boundaries of GCs negatively affect the functionality of neighbourhoods and hence the urban experience.

Inadequate infrastructure provision services for both gated communities and adjacent communities

The study established that despite the rapid redevelopments of the formally single dwellings to high-rise multi dwelling flats in the inner city, the County Government does not keep pace in upgrading the infrastructure such as sewerage and roads to accommodate the increased population. The study observed serious deterioration of the area manifested by sewer overflow and tight traffic snarl-up, especially in Westland's district. The expansion of infrastructure to match the change of land use from single dwelling units to multi-dwellings of high-density flats has not taken place. If the situation is not urgently addressed, it is felt that the GCs residents might get discouraged from residing in high density zones and may soon start relocating to the suburbs and hence urban sprawl threat of urban space will intensify. **Figure 7** shows lack of integration of infrastructure for both gated communities and adjacent communities, for example, as residents of Maziwa Estate have to go around Jacaranda Garden to access main Kamiti road.



FIGURE 7
 Independent adjacent roads of Maziwa Estate and Jacaranda Gardens accessing main Kamiti Road
 Source: Authors 2020

On the issue of privatization of civic responsibilities including security, education and recreation, the study established that in Nairobi, privatization of such services is not a unique element for GC housing only, but rather, is a common urban feature in all neighborhoods. Even in open neighborhoods, residents have to rely on private provision of cleaning, garbage collection, security, street lighting, and recreation facilities because for a long time, the Nairobi City County has been unable to provide these services to neighborhoods. With regard to changes in the environment based on perceptions of the community surrounding the gated community, the number of trees, parks and lawns has decreased substantially.

Affordability and maintenance of GCs physical infrastructure

The study findings revealed major threats to gated community housing in Nairobi County. It was noted that the high cost of development as a result of private sector provision, that includes developers' profits and maintenance of the communal infrastructure, is one such threat. Similar concerns are reflected in the works of Evans (2011), with the warning that it remains to be seen what happens when serious deterioration of facilities starts to occur and the cost of repairs escalates beyond affordability of Home Owners Associations (HOAs).

When the study sought to establish from the county officials about what will happen in future when serious deterioration of facilities starts and the cost of repairs escalates beyond the affordability of HOAs, the response was that the county government will come in and carry out her civic responsibilities as expected. The study also established that the NCC is well aware that a time will come when private bodies (HOAs), will demand tax reduction as compensation for the private provision of civic services, remarking that when that situation presents itself, the NCC will have to offer services or reduce the taxes. The study also established that there is the possibility of GCs paving way for the emergence of strong Home Owners' Associations (HOA) in form of private local governments. These have negative implications to urban management as they could challenge the local authority with a threat to hold

taxes like the case of Karengata neighborhood association from a Karen area, Nairobi.

CONCLUSION

In a nutshell, there are both positive and negative implications of the gated community on housing development in Nairobi. In terms of physical environmental sustainability, the study concludes that GCs present a platform for the optimum land utilization form of high-density neighborhoods, offering compact, well served, well planned and cost-effective neighborhoods.

There is an excellent opportunity for urban managers to curb the urban sprawl by encouraging densification in the inner city through redevelopments and infill developments of high-rise apartment blocks. The gated communities of compact form are economical, within the context of limited land, within the county.

To realize sustainable gated community that respects urban space, there is need for the government to provide the supportive infrastructure because developers only provide neighborhood scale infrastructure, rather than the main trunk infrastructure that demands huge sink capital. The developments should be surrounded by permeable perimeter walls that enclose the neighborhood for social integration and urban experience.

RECOMMENDATIONS

To overcome the negative implications observed in the gated communities neighbourhood, this study recommends that:

- i) The positive implications of gated communities should be incorporated with integrated housing master plan for Nairobi City County.
- ii) The developed gated communities should maintain the urban structure and landscape with balance between private and public spaces.
- iii) The poor and affluent neighbourhoods in urban setting should strive to integrate in planning of their physical and social infrastructure. This would promote sharing of commercial,

institutional, public open and entertainment zones and hence leading to sustainable urban growth. Accessibility through these public facilities make the users have a sense of ownership and democratic right over the urban space.

iv) The security measures being put in place in neighbourhoods need to be equitable without creating social division between the poor and rich. This would promote a continuous urban fabric with permeable spaces with no beginning nor end.

CITED REFERENCES

- Ajibola, M.O, Oloke, O.C. and Ogungbemi, A.O. (2011).** Impacts of gated communities on residential property values in Lagos Nigeria. *Journal of Sustainable Development*. 4-12.
- Atkinson, R. and Blandy, S. (2005).** Introduction: International perspectives on the new enclavism and rise of gated communities. *Journal of Urban Studies*. 20(2), pp 177-186. Abingdon, UK: Taylor & Francis Group.
- Blandy, S., Lister, D., Atkinson, R. and Flint, J. (2004).** *Gated communities in England: Final report of the gated communities in England 'New Horizons' Project*. Retrieved August 28, 2013 from http://www.communities.gov.uk/pub/514/C050GatedCommunitiesinEngland_id1161514.pdf.
- Borsdorf, A. and Hidalgo, R. (2009).** Fragmented city changing patterns in Latin American cities. The right to the city: The entitled and the excluded. *The Urban Reinventors, Special issue, November 2009*. Retrieved from <http://www.springer.com/978-90-481-3738-1>.
- Bowers B.S. and Manzi, T. (2006).** Communities as club goods: Segregation or social cohesion? In Atkinson, R. and Blandy, S. (eds), *Gated Communities*, pp.152-166. Abingdon: Routledge.
- Calthorpe, P. (1993).** The next American metropolis: Ecology, community and the American dream. *Journal of Architecture*. 175 New York, NY: Princeton Architectural Press.
- Csizmady, A. (2011, July).** *Conflicts around Gated Communities, Enhr Conference*. Eötvös Loránd University, Centre for Urban and Regional Research, Hungarian Academy of Sciences, Institute of Sociology, Budapest, Hungary.
- Daly, H. (1990).** Commentary: Toward some operational principles of sustainable development. *Ecological Economics*. 2(1990): 1-6.
- Davis, M. (1992).** Fortress Los Angeles: The militarization of urban space. In M. Sorkin (ed.), *Variations on a Theme Park: Scenes from the New American City and the End of Public Space* (pp. 154-180). New York: Hill and Wang.
- Evans, N. (2011).** Lost in translation? : The Bristol Accord and the sustainable communities agenda, Refereed article No.44, December 2011. *European Journal of Spatial Development*. Retrieved from [http://www.nordregio.se/Global/EJSD/Refereed articles/refereed44.pdf](http://www.nordregio.se/Global/EJSD/Refereed%20articles/refereed44.pdf).
- Ghonimi, I., El Zamly, H., Khairy, M. and Soilman, M. (2010).** *Understanding and formulating gated communities inside Greater Cairo new towns urban fabric*. 46th ISOCARP Congress, 2010.
- Gichuru, R.W. (2011).** *Challenges of insecurity on neighborhood form and function* (unpublished thesis). University of Nairobi, Nairobi.
- Goix, R.L. (2005).** Gated communities: Sprawl and social segregation in Southern California. *Housing Studies*. 20(2), pp. 323-343.
- Hassanali, F.M. (2009).** *Understanding Reduced Private – Sector Participation in Low Income Housing Delivery in Nairobi*. Nairobi: Strathmore University.
- Ilesanmi, A.O. (2010).** Post-occupancy evaluation and residents' satisfaction with public housing in Lagos, Nigeria. *Journal of Building Appraisal*. 6, 153–169. doi:10.1057/jba.2010.20.

- Islam, T. (2004).** *The march toward isolation. ARCU 4400 Section a professor Bruce Firestone.* Retrieved November 22, 2013 from <http://old.dramatispersonae.org/EnterpriceOfTheCity/HomePage/StudentEssayGatedCommunities.html>.
- Jacobs, J. (1961).** *The Death and Life of Great American Cities.* New York: Vintage Books.
- Landman, K. and Schoiteich, M. (2002).** Urban fortresses: Gated communities as a reaction to crime. *African Security Review.* 11(4), pp. 71-84.
- Lynch, K. (1981).** *Theory of Good City Form.* Cambridge: MIT Press.
- Mc Kenzie, E. (1994).** *Privatopia: Homeowner Associations and the Rise of Residential Private Government.* New Haven, London: Yale University Press.
- McKenzie, E. (2005).** Constructing the Pomerium in Las Vegas: A case studies of emerging trends in American gated communities. *Housing Studies.* 20(2), pp.187-203
- Mugenda, O.M. & Mugenda, A.G. (2003).** *Research Methods. Quantitative & Qualitative Approaches.* Nairobi: Press African Centre for Technology Studies (ACTS).
- Muiga, J.G. (2009).** *Provision of Recreational Facilities within Kasarani Neighborhood- Nairobi.* (unpublished thesis). University of Nairobi, Nairobi.
- Ozkan, E. and Kozoman, S. (2006).** *Gated communities: As an efficient force in the fragmentation process of Istanbul.* 42nd ISOCARP Congress 2006.
- Rukwaro, R.W. and Olima, W.H.A. (2002).** Developers profit undermines residents satisfaction in Nairobi's residential neighborhood: Implication for local government in Kenya. *Habitat International.* 27(2003), pp. 143-157. Nairobi: Elsevier Science Ltd.
- Senkantuka, I. (2009).** *Management with the people: An enabling approach to neighborhood road infrastructure management in Kampala City.* Stockholm: University Service.
- The Bristol Accord. (2005).** *Conclusions of Ministerial Informal on Sustainable Communities in Europe.* UK Presidency, Office of the Deputy Prime Minister (Creating Sustainable Communities).
- United Nations. (2005).** *Population Challenges and Development Goals.* Sales No. E.05.XIII.8.
- Webster, C. (2005).** *Territory, control and enclosure.* Keynote paper on the International Symposium of Territory, Control and Enclosure – The Ecology of Urban Fragmentation, South Africa.
- Xavier, G. (2008, May).** *Gated and Guarded Communities: Security Concerns or Elitist Practice?* Paper presented at Asian Law Institute Conference, Singapore.