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Uncontrolled urban growth around Dorayi area of Kano Metropolis: The planning and infrastructural development implications

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Abstract:

This study examines the planning and infrastructural implication of uncontrolled urban growth around Dorayi area of Kano metropolis. This growth led to the emergence of unplanned urban environment with absolute or virtual absence of basic infrastructural facilities and amenities. A total of 84 respondents were selected via a combination of purposive and snowballing sampling techniques. The major finding of the study is there is the dearth of basic infrastructure in the study area and where they exist (though inadequate) are provided through individual and collective efforts of community members. The study concludes by recommending ways to ensure orderly development of the study area in order to sustain and improve its serviceability and liveability

Introduction

Major cities in the developing world confront a myriad of common problems such as finance, housing, sanitation, transportation, land utilization and regulation, water sources and conservation, public health, law enforcement, energy supplies, social welfare, personnel, recreational facilities and so on. People's problem including unemployment, educational disparities, migrant assimilation with the concomitant concerns such as communication, cultural and social isolation and political responsiveness are also acute challenges for urban administrators (David and Woong Kim, 2003).

Presently over half of the world's population are crowded into 3% of the earth's land mass. This trend towards urbanization is divided unequally with 17 out of the 20 largest cities in the world being located in developing countries (David and Woong

Kim, 2003). Many of these countries face phenomenal growth of small and medium-sized municipalities. Under present conditions and levels of technology, the continued expansion of large urban centres creates risks of physical, economic and social breakdowns with the most serious political consequences. In both developing and developed countries, urban growth has been accompanied by severe social and economic problems, some of which appear likely to worsen as overall population growth is accompanied by the trend toward greater urban growth (Beauregard, 2001).

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In developed countries, problems of environmental deterioration (especially air and water pollution), traffic congestion, and other disamenities are encountered. In the developing countries, it is difficult to provide the minimum social services such as housing, water supply, sanitation, education, and medical facilities in the rapidly growing urban areas, or to absorb an ever expanding labour force into struggling urban economies. This results in a deterioration of environmental quality. In some countries, the growth of the cities is reducing land available for food production. In an average city there is no clearly recognizable structure or satisfactory layout. Most cities are built haphazardly resulting in a random character that confuses the identity of city communities, creates chaos in the pattern of land use, wastes resources and prohibits coherent patterns of any kind. Cities are not capable of providing neither intense activity in high density areas, nor intense quiet in low density areas.

The problems of the large cities of the developing countries are due largely to the fact that they have materialized ahead of any systematic movement towards modernization. Many of these cities formed transmission points from which raw materials and food were sent to the metropolises of Europe and North America, and to which manufactured goods returned. Lacking is the human and technical resources necessary to deal with the full range of urban developmental needs, also hampered by the dense “forest” of vertical and horizontal separations within often unmanageable national bureaucracies. Rapid population growth has increased the tendency of cities in developing countries to outgrow the resources of the economies they are supposed to nourish and support. The traditional range of public services, utilities and welfare services taken for granted in the cities of developed countries are not generally available to the inhabitants of most of the cities of developing countries; even less so in the rural areas. Lack of finance, infrastructure and skills at all levels contribute to this situation.

The suitability and sustainability of any human settlement (urban or rural) for economic development is strongly linked to the level of serviceability and liveability. Serviceability connotes the quality of being able to provide good services and the extent to which these services are adequately available in an area. While liveability, in this context, refers to overcoming poverty, providing basic public

services, maintaining minimum level of environmental standards, adequate housing, security and safe environment, access to amenity and learning institutions. The issue of settlement serviceability and liveability is infrastructure-based, where water services function, as a basic amenity. Water is the world’s most important resource and a necessity of life. Adequate access to social welfare services, such as medical services, education, potable water supply, roads, electricity, employment opportunities etc, are strong indices of development (Adeyemo, 1989).

This myriad of infrastructural problems in the developing societies emanates from the fact that government and planners are incapable of handling the efficient provision of basic infrastructure and amenities. Furthermore, the situation of poverty makes it difficult for the individual home owners to provide the much needed infrastructure. Because this growth is taking place against a background of low incomes, it has outstripped these countries’ abilities to provide both accommodation and services (Hwang, 1980). The result is a mushrooming of squatter settlements around the perimeters of vast cities. From 20 to 80% of the urban populations of various cities lived in these shanty towns (Blenkinsop, 2005). In most cities in developing countries, the pressure on shelter facilities and services has degraded the urban fabric. The housing used by the poor is decrepit and civic buildings are frequently in a state of disrepair and advanced decay. The same may be said of essential infrastructure services (transport, public conveniences, water supply, drainage, sewage).

Several studies have been conducted on urban growth (see Kaiser, 1972; Mamman, 1989 etc.) but most of the focus of the studies tends to be on the trend of outward growth of towns and cities rather than the nature of the built up environment that emanates from the expansion. Furthermore, planners are often incapacitated by political office holders and corrupt government officials who often disregard planning rules and regulations without any form of remorse. The general public or property owners tend to in most cases compromise quality by disregarding any form of planning advice. The overall effect of these actions culminates in an unplanned environment devoid of basic infrastructural facilities.

The nature of built up environment in Kano is so complex and unplanned thereby making it extremely difficult for urban renewal process to be conducted

smoothly. The present planning problems coupled with numerous cases of dilapidation and collapse of traditional buildings prevalent in particularly the walled city is posing serious cause for concern for the urban environment. The financial cost of the infrastructural provision and the burdens on government as the sole provider of basic facilities and amenities makes urban planning and infrastructural development a difficult task in the city. There is also a mistaken belief that provision of basic infrastructural facilities such as roads, street lights, beautification of the urban environment and property development especially, residential property provision lies within the domain of the public sector (Government) as part of her social welfare programme (Mamman, 1989). This assertion makes private participation in the provision of the aforementioned infrastructure negligible. The state alone cannot provide her citizens with infrastructure in the required quantity and quality. Thus, the current ideological outlook of the states favouring greater involvement of private capital and less public capital emanates from this belief; and this no doubt favours private –public participation.

It is on the basis of the above that this study aimed at examining the planning and infrastructural implication of uncontrolled urban growth around Dorayi area of Kano Metropolis.

The following objectives were pursued to achieve the above stated aim:-

- i. To examine the nature and pattern of urban growth in the study area
- ii. To identify the factors responsible for the nature of built up environment
- iii. To assess the level of infrastructural facilities and amenities available in the area
- iv. To identify factors responsible for lack of adherence to planning rules and regulations.
- v. To offer recommendations in the light of the findings of the study.

Study Area

Kano state lies between latitude $10^{\circ} 31' 41.14''\text{N}$ to $12^{\circ} 34' 10.57''\text{N}$ and between longitude $7^{\circ} 41' 26.40''\text{E}$ to $9^{\circ} 23' 17.50''\text{E}$. Kano metropolitan area lies between latitude $11^{\circ} 55' 23.93''\text{N}$ to $12^{\circ} 3' 53.10''\text{N}$ and longitude $8^{\circ} 27' 42.26''\text{E}$ to $8^{\circ} 36' 41.62''\text{E}$ and is 1549 feet above sea level. The estimated area of Kano metropolis increased from 122.7 square kilometers in 1962 to 154.6 square kilometers in 1981, an increase of about 25% based on the average expansion rate of two square kilometers per annum (Na'Abba, 2002 and see

Figure 1.). The study area Dorayi lies between latitude $11^{\circ} 37'\text{N}$ and between longitude $8^{\circ} 27'\text{E}$.

For many centuries, Kano has been the largest and most influential commercial town in the Sudan zone. The settlement is probably over one thousand years old and was first situated on the vicinity of Dala Hill, the source of iron, which the inhabitants smelted and fabricated (Urquhart. 1977). The Kano chronicle records the first king of Kano as Bagauda whose ascension was stated to be in the year 999 AD. The 19.2 square kilometer of the city walls were completed by the twelfth century.

According to Marafa (1991) cited in Na'abba (2002) *'By the time colonial masters came in early 20th century, what constitute Kano and virtually encompassed by the wall was contained within 17.5sq kilometres. Today metropolitan Kano (made up of the declared urban area in accordance with the Land Use and Allocation Committee) is contained within 60 sq.km., while the built-up metropolitan Kano is contained within 40 sq. km.'*

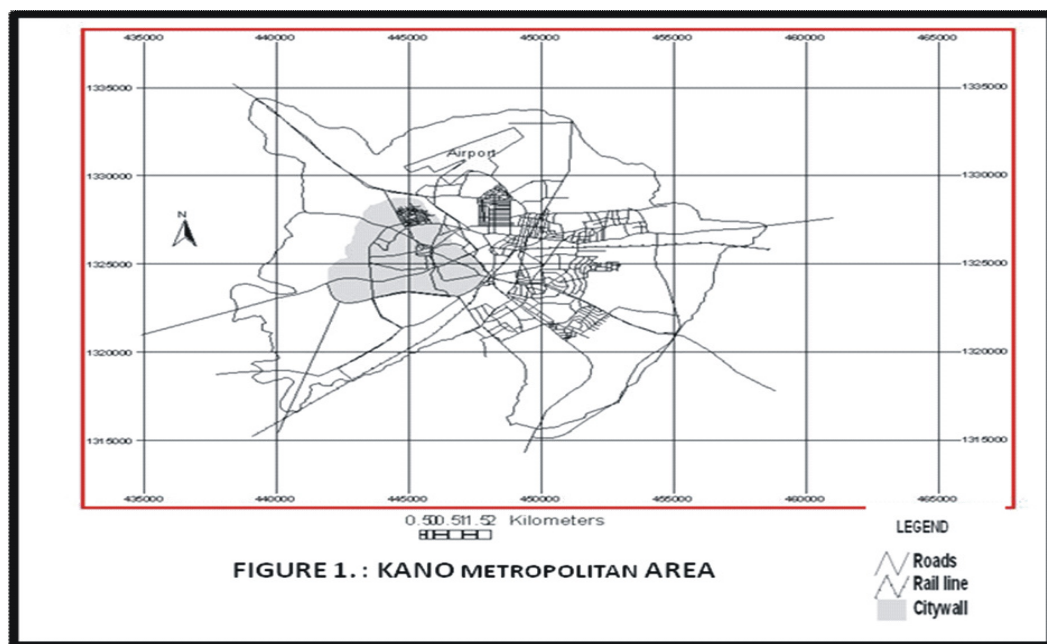
Morphologically, Kano has ceased to be confined to its wall. The original city became a unit by itself and Fagge, Nasarawa, Sabon Gari, Gwagwarwa, Tudun Wada, Tarauni, Na'ibawa, Hausawa, Gyadi-Gyadi and Kurnar Asabe all grew in to distinct morphological unit.

This phenomenal growth (both real and anticipated) is the influence of the preparation of the Trevallion plan in 1963 with a view to setting a statutory framework that could guide, influence and control the development of metropolitan Kano. However, the desired goal could not be achieved due to lack of proper and effective implementation of the plan.

Presently, there is a lot of infilling going on as well as outward expansion into adjoining villages. Metropolitan Kano has been redefined vide Edict No. 15 of 1990. By the edict, Kano metropolitan area consists of all land within the radius of 32 km from Kurmi market. Thus, the metropolitan area includes;

- i. The Dala. Municipal, Nasarawa, Fagge, Tarauni, Gwale, Kumbotso and Ungogo Local Government Areas.
- ii. Parts of Dawakin Tofa, Gezawa, Kura and Rimin Gado Local Government Areas.

The edict further classifies all land within a radius of 16 kilometres from each Local Government headquarters outside Kano metropolis as urban land.

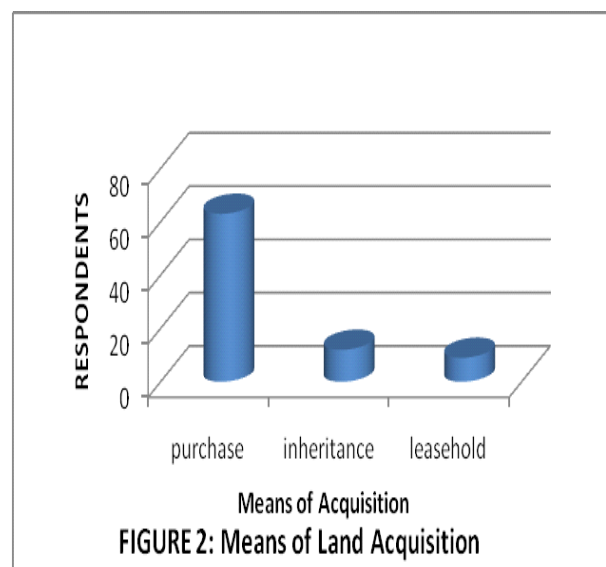


Methodology

Data for this study was sought through two major sources. Primary data were obtained through the administration of questionnaire to property and landowners in the study area. The questionnaire was designed to acquire and elicit responses on a range of issues such as the factors responsible for the development/growth of the area, relationship between the built up environment and provision of infrastructure. Secondary data were sourced from published materials, such as journals, textbooks, internet and any relevant published materials.

Respondents for this study were selected using a purposive sampling technique. Purposive sampling can be defined as a type of non-probability sampling, where the investigator merely hand-picks those cases or population considered to be typical or which are likely to possess the desired set of information or characteristic for inclusion into the sampling (Obikeze, 1986). The operation of the purposive sampling technique employed here, involves the identification of property and landowners around Dorayi. Visitations to sites as well as contact with ward heads were made in order to obtain the names of property owners to be included in the sample. Furthermore, snowballing technique was employed in order to know and detect the addresses of other property and landowners from fellow property and landowners within the area. The 'Snowball' technique

entails asking the first interviewee to name other property and landowners known to him who could be included in the sample. The same applies to subsequent interviewees. This method provides a way of introducing the researcher to other property and landowners by the interviewees themselves. This method surely enhanced the co-operation of the sampled respondents. Data was also sourced from Kano State Urban Planning and Development Authority (KNUPDA), State Ministry of Land and Survey. The data acquired from these sources provide us with an insight into the planning efforts or lack of it from these institutions/parastatals.



A total of 84 respondents were selected via the two methods stated above.

Data collected were analysed using descriptive statistics and results illustrated using pie and bar charts

Results and Discussions:

This section analyses the responses obtained from the 84 sampled respondents selected via a combination of purposive and snowball sampling technique.

Data in Figure 2 shows the method of land acquisition by the respondents. 75% of the sampled respondents acquire land through outright purchase, 14% through inheritance and 11% through leasehold. The predominance of purchase as the means of land acquisition could be attributed to the fact that land allocation by the State and Local government is very hard to come by and farm

Table 1: Nature of right of occupancy of land

Right of occupancy	Freq.	%
Customary	45	54
statutory	39	46
Total	84	100

Author's fieldwork, 2008

owners or landowners around the periphery or edges of towns and cities are often compelled to sell their lots due to the threat posed by the expanding city.

Investigation into the nature of right of occupancy (Table 1) shows that 54% of the respondents claimed that their plot has a customary right of occupancy and 46% claimed they have a Statutory Right of Occupancy. The dominance of The Customary Right of Occupancy in the study area is due to the fact that Dorayi falls within a rural setting particularly around the 1960's and early 1980's before its annexation by the expanding city (Dankani, 2008, Mortimore, 1966 and Main, 1987). Customary Right of Occupancy only exists in areas delimited as rural and it is been administered by the traditional or local governments councils.

Furthermore certain part of the study area has a statutory right of occupancy which exists only in urban setting and administered by the State Governor. The outward expansion of Kano annexed rural setting of Dorayi forcing the Government to create layouts with statutory rights.

Table 2 indicates the nature of plots owned by respondents, 43% states that their plots falls within

Table 2: Nature of the plot

Nature	Frequency	%
Layout	36	43
Not layout	48	57
Total	84	100

Author's fieldwork, 2008

Analysis of data in Table 3 reveals the plot sizes of the respondents. The size of the plots according to 38% of the respondents is 30x40 ft, 31% 50x50 ft, and 11% 20x20 ft. The implication of this finding is that the sizes of the average plot within the area is small. The genesis of this is the massive fragmentation by landowners in order to maximize income from the sale of landholdings.

Table 3: size of Lands

Size	Frequency	%
20 x 20 ft	9	11
30 x 40 ft	32	38
50 x50 ft	26	31
50 x 75 ft	8	9
57 x 100 ft	6	7
100 x 100 ft	3	3
Above 100 x 100 ft	0	-
Total	84	99

Author's fieldwork, 2008

The landowners fragment land without resorting to any planning intervention or advice. The cumulative effect of this action is the emergence of unplanned building often devoid of basic infrastructure. The nature of properties developed on such sites does not in any way conform to the building regulations of the state government. Buildings are often built without adequate ventilation, drainages, service areas, designated refuse dumps and houses are usually accessible through a very narrow alley typical of the one in the traditional cities rendering the area inaccessible in the event of fire outbreaks and other health related hazards. The reverse would have been the case if urban managers engaged in periodic measuring and forecasting as well as planning for urban growth.

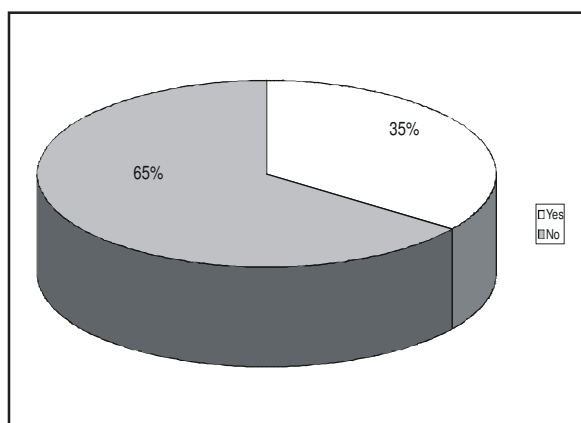


Figure 3: Whether Respondents sought Planning Consent

The major menace of uncontrolled urban growth is its non-adherence to planning rules and guidelines. 35% of the respondents claimed to have sought for planning consent from Kano State Urban Planning and Development Agency (KNUPDA) before developing their plots while the majority (65%) claimed they do not. Some of the reasons offered by the respondents for not seeking for planning consent prior to development were that procedures for application for planning consent is often tortuous, lengthy and has too much administrative bottlenecks. Furthermore, inefficient planning body and corruption are the main factors responsible for non adherence to planning rules and guidelines often forcing developers to develop property without following the due process usually with the connivance of corrupt planning officers. The respondents came up with three main reasons why planning makes development process cumbersome; these are;

First planning rules and policies are constantly changing depending on which government or politicians are in power at the time and also depending on which beaurecrats have drafted the legislation. More over development time frames are often longer than the life time of a planning policies and fashion, from the initial conceptualization to completion. Changing policies and changing rules in this respect are a big problem.

Another manner in which planning renders the development process more difficult is in the blanket application of all comprehensive standard rules and regulations. While it is important to know the rules before hand, planners should appreciate the uniqueness of each site. To attempt to draft all comprehensive rules and regulations which are

applicable to every situation and every site would definitely tantamount to 'short sightedness', but when exceptions are allowed abuse sets in.

Similarly, zoning also is a very important key instrument of planning, but it hinders rather than facilitates the development process. Zoning favours those who already own developable land. What this means is that the act of zoning land encourages landowners who might otherwise not become developers to carry out development themselves at some stage. However, it also makes it more difficult for professional developers who do not own already zoned land because zoned land is almost impossible to buy due to high price and unwillingness of the landowners to relinquish the land.

Table 4: Actions taken by planners in the event of development without planning consent

Actions	Frequency	%
None	41	75
Fine	11	20
Sanction	0	0
Demolition	3	5
Revoking right of occupancy	0	0
others	0	0
Total	55	100

Author's fieldwork, 2008

Information in Table 4 on the action taken by planners on the event of development without seeking planning consent shows that 75% of the sampled respondents state no action was taken by the planners or government agencies against them, 20% claimed they were fined and 5% stated that their properties were demolished.

Further analysis indicates that majority of the respondents appreciates planning in principle but are skeptical of planning in practice (day to day activities of planners in the study area). According to them, built up environment that emanate from planning is often better than that which emerges from no planning. Planning is preferable and necessary because orderliness is preferable to chaos, in the sense that, orderly development is preferable to adhoc development. Similarly, based on the responses of the respondents, one can infer that developers appreciate planning because, unregulated development endangers the existence of the

resources they share with other members of the society, namely, the quality of their environment. An individual developer gains from exploiting the environments and it is not in any one single developer's interest to be the only one to hold back or to act in a highly environmentally irresponsible manner. However, the cumulative cost of the activities of all developers is borne by all in terms of a degraded environment. It is noteworthy to state here that there are institutions and regulations established to handle this menace of uncontrolled development but at present they lack the capacity to fulfill their mandate. Similarly, lack of physical development plan (Master Plan) for most cities also contributes to the uncoordinated nature of physical development including the needed infrastructure. Most infrastructural projects are developed as a reactionary plan rather than proactive action of providing this infrastructure ahead of physical development.

Table 5: Infrastructure provided by planner/
Government

Infrastructure	Frequency	%
None	29	22
Electricity	16	12
Pipe borne water	22	17
Drainages	26	20
Fire service	0	0
Access Road	23	18
Others specify	13	10
Total	129	99

Author's fieldwork, 2008

Investigation into the types of infrastructure provided by the planner/government agencies shows that, 12 and 17% of the respondents cited electricity and pipe borne water as the infrastructure provided by the planning body respectively. 22% stated that no infrastructure was provided in their area and 10% stated that refuse dumps are the infrastructure the government provided. From the Table it is vividly clear that the government/planning agencies do not provide the much needed basic infrastructure in sufficient quantity and quality to the area. Where some of the infrastructure exists, they are usually around Government designated layouts. While in areas that were not government designated layouts bulk of the infrastructure (though rudimentary and inadequate) were provided through individual and community efforts. Figure 4 shows the respondents opinion on the availability or adequacy of infrastructure. 93% of the respondents were of the opinion that the infrastructure provided were very inadequate. It is noteworthy to state that there is the dearth of site and services plots in the state and this hampers the sustenance of planning ethics and policies in the state. The inadequacy of basic infrastructure in our societies coupled with badly managed planning policies creates many environmentally related problems such as waste disposal and a range of chronic health impact

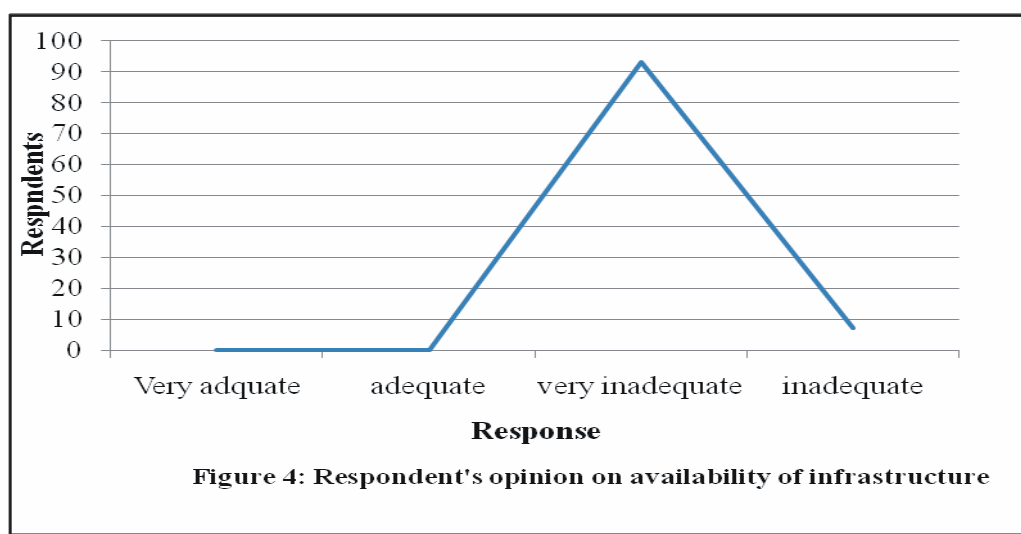


Figure 4: Respondent's opinion on availability of infrastructure

Conclusion, Implications and Recommendations

This paper examined the planning and infrastructural implication of uncontrolled urban growth in Kano metropolitan area focusing on Dorayi as the study area. The study discovers that there is the dearth of infrastructure around the study area. The genesis of which could be attributed to the fact that most plots in the area are not government designated layouts. The area initially falls within a rural setting and that makes acquisition of land easier because landowners are at liberty to sell their farm lots at an improved value or face the risk of revocation of right of occupancy by the government in the event of designating layouts to accommodate the expanding city. Consequently, this led to massive land fragmentation which ultimately led to the uncontrolled urban physical development/expansion in the area resulting in deficiencies in infrastructural provision. The study also recognizes that the dearth in infrastructure is prevalent in both government designated layouts and landowners designated plots (“*awon igiya*”). It could be further stressed that Government/planning bodies were unable to provide infrastructure in sufficient quantity and quality to meet the demand of the ever growing city. There seem to be absolute lack of measuring and forecasting landuses changes by the planners and this ultimately leads to massive pressure on the existing infrastructure often leading to their absolute collapse. Similarly, Planners are incapable of ensuring adherence to rules and guidelines first, because of its financial deficiencies and or lack of political will, secondly they view uncontrolled urban growth in certain part of the metropolis from the perspective of ‘shelter first’ planning later. The findings also illustrates that majority of the existing infrastructure (though often substandard) are provided through individual or collective efforts of the members of the area. The situation of poverty also compelled the people to develop land in areas devoid of basic infrastructure. However we need to note that the planners operate in an institutional environment that is at the centre of diverse political interests. The fact that urban planning officials are accountable to politically-elected persons, most of whom have no relevant urban planning and management expertise, restricts development of innovative ways of ensuring the orderly growth of town and cities and accompanying the growth by adequate infrastructural provision (Chaipa, 2001). Thus all

stakeholders (planners, political office holders, general public, developers and landowners) need to put all hands on deck so as to ensure orderly development of Kano metropolitan area thereby sustaining and improving its serviceability and liveability.

Recommendations

The paper has some suggestions towards the sustainable urban growth and development in the study area and the nation at large. These include:

- The need to develop and or update the Master plan for Kano metropolis taking into cognizance the future development requirements.
- The need for a periodic measuring and forecasting changes in landuses so that its attendant infrastructural requirements can be met adequately. Such measuring and forecasting should be conducted at five year interval.
- The planners should make sure that all land delimited as urban is provided with basic infrastructure before development consent is given.
- Government should ensure that all layouts are in the form of ‘site and services’ layouts. Provision of this should be the responsibility of Governments at both State and Local levels.
- A special concession should be given to low income earners so that they can acquire plots in areas where basic services are available.
- Urban managers and planners should ensure monitoring of available infrastructure with a view of managing them sustainably.
- Government should partner with private body in the provision and management of basic infrastructure. This will surely complement the effort of the government.
- Certain amount must be set aside from the government purse to solely provide new and managed existing infrastructure. There should be strong legislation on compliance with this budgetary allocation.

- All buildings developed without planning consent and without adhering to building regulations code in the state should be demolished. This will send a clear message to the general public on the resolve of the government on orderly development.
- General public should be sensitized on the need to take care of the existing infrastructure and to comply with the planning rules and regulation in the state. This should be backed by a strong legislation and a strong will to deal with defaulters.
- An integrated urban renewal policy should be introduced by the government in order to bring sanity and orderliness in areas already developed.

References

- Adeyemo A.M (1989) 'Spatial variation in accessibility to secondary school facilities in Oyo State; Unpublished PhD thesis Geography Department, University of Ibadan Nigeria
- Beauregard, R. A. (2001) 'The Multiplicities of Planning', *Journal of planning education and research*. Vol:20: 437-439.
- Blenkinsop, J. (2005) Encyclopedia Britannica. <http://www.britannica.com/eb/article-9001800>. Retrieved on 9/7/2009.
- Chaipa, 2001. The Urban Planning Dilemma in Harare, Zimbabwe. In Urban Agriculture Magazine no.4 the Integration of Urban and Peri-urban Agriculture into Planning.
- Dankani, I.M. (2008), *Property Developer Behaviour in Metropolitan Kano*. Unpublished Ph.D Thesis. Usmanu Danfodiyo University. Sokoto Nigeria.
- David S. Bell and Bun Woong Kim (2003), *Managed Urban Development or Uncontrolled Urban sprawl?*
- The case of Seoul South Korea*. Chowong press, Seoul. South Korea.
- Hwang, M. (1980), Planning Strategies for Metropolitan Seoul (paper presented at the International Conference The Year 2000: Urban Growth and Perspectives for Seoul, Seoul, October 13-18,), p. 4.
- Kaiser, E.J. (1972) 'Towards a Model of Residential Developer Locational Behaviour'; Unpublished Ph.D. Dissertation. University of North Carolina.
- Main, H.A.C and Cline Cole R.A (1987), 'Land Related Processes in Peripheral Capitalist Societies; Metropolitan Kano's Western Peri-urban Fringes'; In M.J. Mortimore *et al.* (eds) *Perspectives on Land Administration and Development in Northern Nigeria*, Kano, Bayero University Kano. P. 161 - 180.
- Mamman, A. (1989), "The Process and Nature of Peri-urban Expansion in Nigeria" The Sokoto Case, Unpublished Ph.D. Thesis University of Birmingham.
- Mortimore, M.J.(1972) 'Landownership and Urban Growth in Bradford and its Environs in the West Reading Conurbation', *Trans, Institute Br, Geogr.* 46,99-113
- Na'Abba, I. S. (2002) 'Transformation of the Kabuga Housing Estate'. Unpublished MSc land administration dissertation, department of Geography. B.U.K.
- Obikeze, D.S. (1986), *Introductory Statistics for Social Science*, Fourth Dimension Ltd. Enugu P. 153.
- Urquhart, A.W (1977), *Planned Urban landscapes of Northern Nigeria, Zaria*; Ahmadu Bello University Press.
- I. M. Dankani & S. D. Abubakar / Ife Research Publications in Geography Vol. 10, No. 1, 2011. 44