

The Dialectics between Physical Plans and Physical Development in Contemporary Urban Nigeria: Empirical Evidence from the Kighir-Adeke Layout, Makurdi, Nigeria

Iorliam T. Sylvester

Department of Urban and Regional Planning, Benue State University
Makurdi, NIGERIA.

¹siorliam@bsum.edu.ng & williamsdesilva@yahoo.com

ABSTRACT

This paper demonstrates the conflict between a land use plan and actual physical development on ground in Kighir/Adeke, a residential neighborhood in Makurdi town, Nigeria. To accomplish this study the physical development plan of the Kighir-Adeke neighborhood was acquired from the Benue State Urban Development Board (BSUDB) and its land use activity details scrutinized. And using the layout plan as guide, a thorough inventory of physical development activities on ground in the plan area was compiled during field survey in 2010 with the aid of field assistants. This was then compared with the land use activity proposals on the plan to ascertain the level of compliance and or contraventions of physical development carried out. The Chi square statistic was then applied to test the significant level of the results. The result shows that while 40% of physical development in the area complies with physical plan, an overwhelming 60% majority of physical development contravenes the plan of the area; and that 85% of contraventions are due to conversions of undeveloped community facilities while 57% of the conversions are to residential uses. It has been recommended that government should play out its pivotal role of stimulating orderly physical development by promptly providing physical infrastructure as proposed by the plan accordingly. And that the development control agency should be overhauled and corrupt officials fished out then more personnel and machinery should be provided for the agency to be more functional.

Keywords: Physical plan, physical development, development control.

INTRODUCTION

Since the dawn of the 20th century, there has being a phenomenal increase in the proportion of the population living in towns and cities in Nigeria. According to UN report 2006, while merely about 7% of the Nigerian populace lived in urban centres in the 1930s and 10% in the 1950s, between 1970 and 2000 the increase in the proportion of the urban dwellers galloped from 20% to 40% of the national population. The current figure (2013) according to the report is 43 percent (<http://esa.un.org/unup>). This increasing urban population has given rise to high demand for housing and rapid development of urban centres in Nigeria.

Following the oil boom period of the 70s, when there was sudden population surge in the urban centres the need for re-organization of space arose to accommodate the population. Consequently master plans were prepared for many major towns and cities particularly the administrative headquarters of states and local government councils. The essence was to guide the physical development of the towns and cities so that orderliness, health and pleasurable environment could be achieved in the cities. Consequently, all housing and physical infrastructural development activities by government and the public were strictly regulated according to the physical plans of the towns by the urban development boards and

other agencies charged with the responsibility of physical plan implementation and development control.

However, from the 1980s when political instability and economic recession of the post oil boom era ravaged the country and ushered in bad governance and corruption, government's efforts towards regulating physical development in the cities to ensure compliance with their master plans have been on the decline. At certain times, government could scarcely pay workers' salaries nor play its pivotal role of providing adequately the critical urban facilities like housing, schools, roads and drainages that are in high demand by the teeming urban population. The demand for these facilities according to Badianne (2003) 'seemingly surpasses the capabilities of most city governments'. Thus urban physical development in Nigeria has been dominated by the public sector in contemporary times with little efforts by government agencies in regulating it to conform with the master plan. This is because among other things, with the high demand for housing, rapid housing development activities are simultaneously been carried out in different parts of the cities and the city governments often lack adequate manpower / equipment to effectively carry out development control so as to ensure compliance to the city plans. Consequently clandestine physical development activities by the public keep going on unchecked while the master plans are kept on the shelves gathering dust (Hwakar 1992).

Consequently while there could be order and conformity to master plan of physical developments at the more core areas (places developed during oil boom period and, or early post-colonial era when there was lesser corruption and more sanity in governance), there are often serious conflicts between the city plan and the more recent physical development activities at peripheral locations of the city. It is therefore not uncommon to observe spatial disparities in the character of physical development activities between the more core central areas and peripheral districts. Such discrepancies give rise to the spatial variations in the quality of environment of the city (Iorliam, 2008) as well as the livability of the different parts (Omuta 1986; Iorliam 2010).

In Makurdi the capital city of Benue state, the master plan was prepared in 1978 by Tesco-Kotzi Consulting Engineers and all urban development activities at that time covering what is now the core areas (or inner city) were strictly regulated according to the city plan. However much of subsequent physical development activities at the more peripheral locations of the city seem to be dialectical to the physical development plans (layout plans) of the respective areas.

In this treatise we seek to demonstrate the growing tension between the city plan and physical development activities in Kighir-Adeke lay out, one of the most recently developed residential districts in Makurdi town.

CONCEPTUAL FRAMEWORK

Physical Planning, Physical Plans and Physical Development Control

The word planning is widely used as suffix in such terms as economic planning, development planning, urban planning and regional planning. The rather wide usage of the word ensures that there are many definitions of the word. Nonetheless, planning as purposeful action is guided by a very limited number of abiding principles whose analysis shows that the apparent diversity of names it carry along are mainly a matter of labeling and packaging with subtle differences. Thus each planner exaggerates the subtle differences to achieve a sort of "product differentiation" which enables him to sell the particular product he has to offer (Hudson 1979). However, planning generally implies a process of human thought and action

about the present and future states of a system of interest. It consists of a set of activities and interactions in processes carried out to achieve a set of societal goals and objectives.

Consequently physical planning as a discipline is concerned with the design, growth and management of the physical environment, in accordance with predetermined and accepted policies for the achievement of harmony and parsimony of space, aesthetics and the socio-economic objectives of the society. Varying in time perspective, spatial scope and their degree of rigidity or flexibility (Black 1967), physical planning provide for and coordinate all forms of physical development activity, at the national, regional and local or city levels, by making most effective use of available human and natural resources that are welded together in producing the blue print document known as the master plan.

At the national and regional levels there are national and regional plans respectively that outline government policies on the preferred pattern of land uses regarding the national and regional territory over a period of time. At local or city level, the master plan or physical development plan is an important physical development guide for orderly and sustainable development of the city landscape. Defined by Kent (1964) as the official document of a municipal government which sets forth its major polices concerning desirable future physical development of a community, the comprehensive plan as it is often called indicates in a general way how the policy makers want the urban community to develop within a given period of time.

In Nigeria, the initial conception of physical planning emerged from the Town and Country Planning Ordinance No. 4 of 1946 that was derived from Britain's Township Ordinances of 1917 and 1932. The colonial planning policy was concerned with providing guidelines for development control in terms of the physical layout of towns and cities with emphasis on the achievement of adequate sanitary and safety conditions through an initial socio-spatial segregation "between European rulers and governed Africans" (Adeniyi 1982).

Generally, from a master plan framework local development plans known as layout plans are prepared although in some instances layouts could be prepared from an incremental plan approach. Nevertheless, layout plans are designed to show details of how land would be subdivided and used for various activities in line with the overall frame work. According to Obateru, (2003) it is also through layout plans that the general policies and broad proposals expressed in the national, regional and urban plans are detailed out to guide land development both by the public and private sector during plan implementation stage. Implementation of the physical plan is the most crucial stage in plan preparation. This involves the translation of ideal vision of the community into physical development on ground.

Physical development according to the Urban and Regional Planning decree No 88 of 1992, is the carrying out of any building, engineering, mining, and other operations, in, on over or under any land; or the making of any environmentally significant change in the use of any land or demolition of building including the felling of trees and the placing of free standing erections used for the display of advertisement on the land. In the city this simply means the act of making any physical change or improvement on land for residential housing, industrial and commercial uses as well as the provision of physical infrastructure and utilities like road development services, drainage construction, water and electricity.

Usually physical development in any city is undertaken by the two sectors of the society: the public and the private sectors (Agboola 1985). The public sector essentially refers to government and its agencies / parastatals run and financed by government while private sector on the other hand, refers to individuals, corporate or organizational bodies. To ensure

orderliness, and a healthy environment in the city, all physical development initiatives by both the public and private sectors are regulated by the government planning agencies through development control.

Development control is the regulation of the use of land, the character, appearance, arrangement of buildings and facilities to ensure economy, convenience and aesthetics Onokherhoraye and Omuta(1986). According to Rangwala et al (2013) it is the process whereby a planning authority exercises its statutory powers to regulate all land development in accordance with the provision of the physical development plan. Such powers are invoked in controlling development by granting or refusing or attaching conditions to development permissions. This implies that freedom to carry out physical development is restricted such that approval will be sought for any form of development, and such development will be regulated to conform to the approved guidelines, specifications or regulations. In essence development application can be rejected, granted or withdrawn; and even the development itself can be encouraged, stopped, modified or even pulled down depending on circumstances and degree of conformity or non-conformity (Rangwala and Rangwala 2013).

According to Ratcliffe (1968), development control is the formal voice of the planning authority regarding such matters as the permitted density, height limitations of buildings, preservation or conservation orders of one kind or another and the segregation of obnoxious activities out of the residential areas as well as the prevention of exploitation of land. In this case it involves the detailed aspect of physical development about which precise guidance cannot be given in the master plan or the subdivision layout plan (Keeble 1968). It is to this extent that Onokheroraye and Omuta (1986) argued that it is an instrument of overall environmental quality control, to the extent that it sets standards and regulations guiding the bulk and use of structures as well as the air space around buildings.

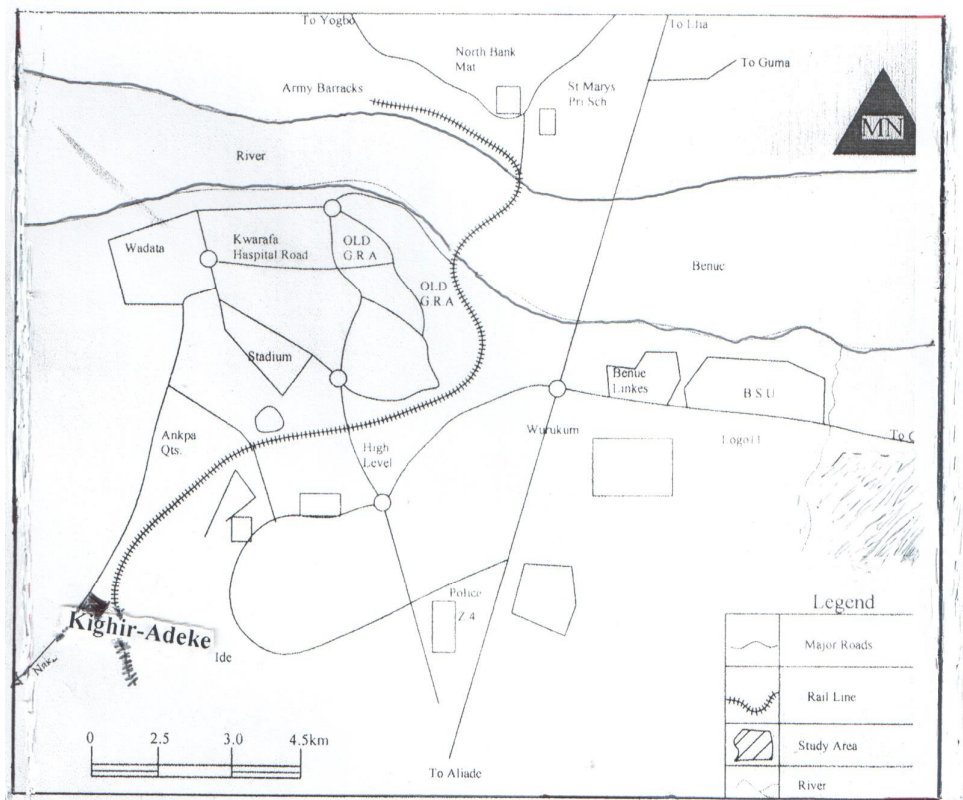
In the city, the commonest way to achieve land use development control is through zoning. In simple terms, this is the segregation of urban community into districts for the purpose of regulating the height and bulk of all structures, the area of plot that may be occupied and that which may be left open, population density, and the use of structures and land for different purposes including commerce, industry, and residences.

As a tool for implementing land-use plans, Barnette (2004) noted that zoning regulates the types of activities that can be accommodated on a given piece of land, the amount of space devoted to those activities and the ways that buildings may be placed and shaped. The main purpose according to Andrews (1962) is to channel city growth in the proper directions with compatible land use activity mixes in order that a safe, efficient and stimulating community will result. It is within the precincts of this philosophy that municipal authorities and state planning agencies such as the Benue State Urban Development Board have created development control units to ensure effective implementation of their subdivision or layout plans.

THE STUDY AREA

The Kighir/Adeke community lies at the outskirts of Makurdi town, along Makurdi-Naka Road. It is about half a kilometer from the Modern Market Junction. To the west, it is bounded by the Makurdi-Naka Road and directly opposite the Makurdi Industrial Layout; to the east, by the Port Harcourt-Enugu-Makurdi Rail line; the Mount Carmel Secondary School is in the south while in the north it is bounded by Ankpa Quarters. The layout covers about 245.2 hectares of land.

The Kighir-Adeke layout covered parts of three existing settlements: Kighir, Adeke and Tionsha. The layout plans however do not cover the whole of Adeke. The Adeke settlement area is dissected by the Port Harcourt –Enugu-Makurdi Rail line into two parts: the western railway side and eastern railway side of the settlement. The layout plans cover only the western railway side of the settlement (Adeke). Prior to 1982 when Kighir/Adeke settlement was planned, the three major settlement points were characterized by few scattered compounds and farm lands around Adeke Railway Station. Before Makurdi became the state capital in 1976, the major attraction of people to the area was the Adeke Railway Substation. It facilitated transportation of mostly farm produce from the area to Makurdi, and other parts of the country. The siting of the Benue state Industrial Layout and the Mobile Police Barracks adjacent to the community stimulated large number of people to settle in the area. Besides since this residential district was then at the outskirts of the town, cost of land as well as housing rents were quite lower than at the city centre. These factors together with the construction of Makurdi to Naka road all contribute to the speedy development of urban community even though government has been slow in providing the requisite infrastructure adequately. Thus most parts of the Kighir-Adeke layout as it is popularly called has been fully developed with different urban activities.



Part of Makurdi showing KIGHIR-ADEKE

Source:- Ministry of Lands & Survey Makurdi 2013

Some of the major landmarks in the area include the Mobile Police Barracks, the moribund Adeke Railway Substation and some secondary schools such as The Holy Child, Royal Academy, Apostolic School and Tionsha RCM Primary School.

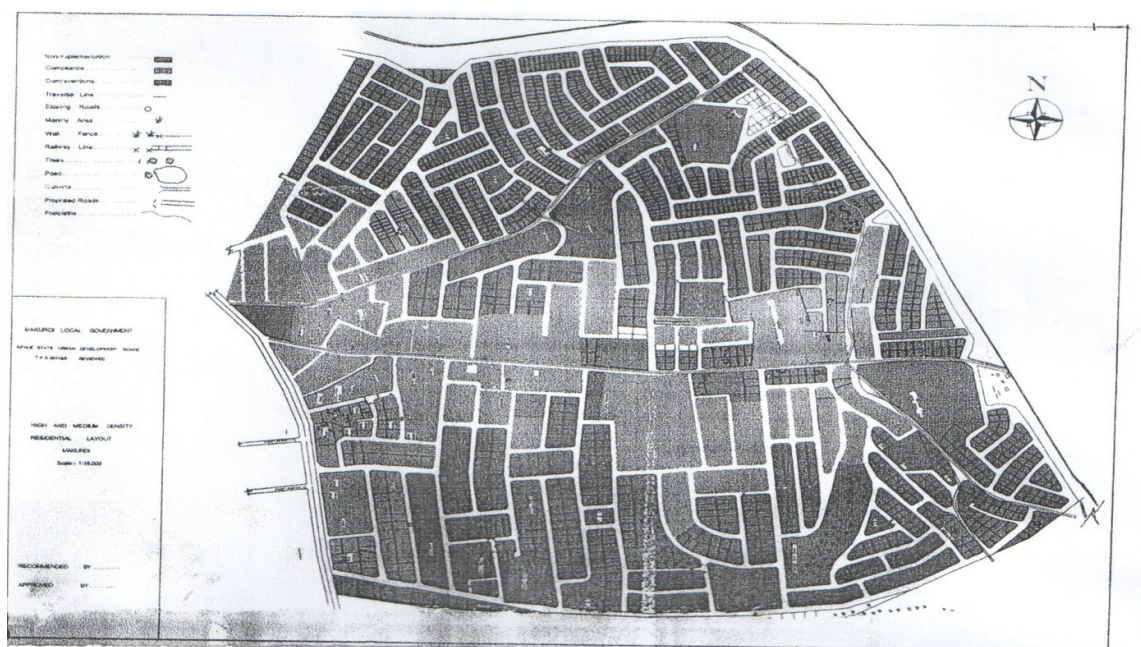


Fig.1. Land Use Plan of Kighir – Adeke Residential District, Makurdi

METHODS AND MATERIALS

To accomplish this study information was required on the land use activity plan of the Kighir/Adeke layout as well as on the actual physical development on ground. The blue print document of the layout plan of the area was therefore acquired from the Benue State Urban Development Board (BSUDB) and scrutinized for detail information on the proposed land use activities in the new settlement. And using the layout plan as base map of the area, thorough field investigation was carried out in 2010 for detailed inventory of what has been physically developed on ground and the activity uses. It is on the basis of this that a comparative analysis of the compliance of physical development carried out with physical plan of the new

been made. Finally, the Chi- square statistic was employed to test the significant level of our results.

In carrying out the chi-square (χ^2) test, the following hypotheses were proposed:

H0: there is no significant difference between what has been proposed on the land use plan and physical development on ground.

H1: physical development on ground is significantly different from the proposal on the layout plan

Decision Rule

Accept H0 if computed χ^2 is less than the table value or reject H0 if computed χ^2 is greater than the table value.

The calculated value of $\chi^2 = 223.08$ at 0.05 level of significance and degree of freedom of 12, table value of $\chi^2 = 21.026$

Since computed χ^2 (223.08) is greater than the table value (21.026), Reject H0

RESULTS AND DISCUSSIONS

1. Land use analysis in the Proposed Plan of Kighir-Adeke Layout.

The plan of Kighir-Adeke Layout shows various land use activities including residential, commercial, educational and recreational. The details of the proposed land use activities has been presented in table 1.

Table1. Land budgeting for activity uses in the Kighir - Adeke Layout plan.

s/no	Land use type	Use details	Area (ha)	percentage
1	Residential	3323 plots	199.3	81.3
2	Schools	5nos	15.4	6.22
3	Access roads	265 nos	23.6	9.62
4	Religious /worship places	2 nos	1.72	0.70
5	Recreation/ parks/gardens	5 nos	1.82	0.74
6	Health centers	1 nos	1.56	0.63
7	Corner shops	various	0.82	0.33
	Totals		245.2	100

Source: Kighir-Adeke Layout plan. Benue state Urban Development Board, Makurdi

According to the plan, out of the 245.2 hectares of land covered by the layout, 199.3ha or about 81% of the total land was budgeted for development of 3323 residential plots of various sizes for low, medium and high population densities. Similarly the plan earmarked 15.4 ha or 6.22% of the land for the development of schools in the area. Access roads of various categories in the area were to cover about 23.6 hectares or 9.6% of land while recreation centers / open spaces/ gardens were to cover 1.8hectares or 0.74%. Finally, 0.63 and 0.33 percents of land in the layout were allocated for health institutions and corner shops respectively.

It is against the framework of the land use plan of the area that the field evaluation of the level of compliance of physical development of the settlement is predicated as presented in table 2.

Level of compliance of physical development with plan

According to our findings presented in table 2, of the land allocated for residential uses, about 55 percent has been physically developed on ground. Of the physical development on ground only 14.17% complies with proposed residential activity use on the plan. On the contrary, 41.2% of the land proposed for residential purposes has been converted to other uses such as shops, churches and farmlands. Furthermore, according to the plan, roads in the new community were to cover about 23.6 hectares. However although only about 7.7 hectares of the land is developed, the area physically developed as streets in the area cover less than a hectare (0.36ha). Therefore more than 30 percent or 7 hectares of the space has been developed for other land use activities. Similarly, while about 40% of the proposed land for developments of schools has been actually used for the purpose, another 40 percent of the land has been converted into residential housing accommodation against the plan while 20% of the space is yet to be implemented. Again 5 areas covering altogether 1.82 hectares places earmarked for recreation parks / children's play grounds and, the 2 places for health centers covering 1.56 ha have been 100 percent converted and developed for agricultural and residential purposes.

Table 2. Level of implementation of the Kighir /Adeke layout plan

<i>Land use type</i>	<i>Proposed area</i>	<i>Area developed</i>	<i>Not yet developed</i>	<i>Compliant to plan</i>	<i>Contrary to plan</i>	<i>Uses converted To</i>	<i>Summary of development</i>
Residential	199.3ha	110.5ha	88.8ha	28.26ha	82.32ha	-Agricultural -Commercial -Churches -Schools -Residential	14.7% Compliance 41.28% Contraventions 44.53% Not- developed
Schools	15.4ha	12.32 ha	.36ha	6.16ha	6.16ha		40% Compliance 40% contraventions 20% Not- developed
Access Roads	23.6ha	7.7ha	15.88ha	.36ha	7.35ha	-Residential -commercial	1.5% Compliance 31.2% Contraventions 67.3% Not- developed
Religious/worship places	1.72ha	1.72ha	—	1.72ha	—	—	100% Compliance
Recreation/parks/gardens	1.82ha	1.82ha	—	—	1.82ha	- Industrial - Residential	100% Contravention
Health Centers	1.56ha	1.56ha	—	—	1.56	- Residential	100% Contravention
Corner Shops	0.82ha	0.82ha	—	0.7ha	0.12ha	- Agricultural - Residential	95.2% Compliance 4.8% Contravention

Source: Field work Aug 2010

Nevertheless, the area proposed for churches and other religious centers have been physical developed for the purposes according to plan. A summary of the conflict between the physical land use plan and actual physical development in the Kighir / Adeke new residential layout has been illustrated in table 3.

Table3. Level of Compliance or contravention of physical development to layout plan.

S/N	Land use type	Developed		Undeveloped
		Percentage Compliance	Percentage Contraventions	Percentage undeveloped
1	Residential	14.1	41.2	44.5
2	Schools	34.0	46.0	20.0
3	Access Roads	1.5	31.3	67.2
4	Religious/worship places	100.0	0.0	--
5	Recreation/parks/gardens	0.0	100.0	0.0
6	Health Centers	0.0	100.0	0.0
7	Corner Shops	95.2	4.8	0.0
	<i>Mean</i>	<i>=32.5 %</i>	<i>=48.6 %</i>	<i>18.8</i>

Table 3 shows that out of the 245.2ha, 199ha or 81.2 % of Kighir Adeke layout has been developed. The remaining percent is yet to be covered with physical development. Nevertheless the compliance table shows that apart from churches and other religious activity uses that are 100% developed according to plan, the rest of physical development in the area at various levels conflicts the plan. For instance the entire areas for development of community facilities such as recreational parks/gardens and hospitals have completely been developed into other non-conforming activities. Out of the physical development carried out in the area, about 60 percent (or 59.8 %) of it is quite at variance to the physical layout plan of the Area. Only about 40 percent (38.8%) of the physical developments on ground complies with the layout plan proposals. Most of the proposed land uses activities had been illegally converted into residential purposes.

To check whether the tendency observed above is significant or accidental, a Chi-Square (χ^2) test was conducted on the results in table 3.

Since the computed χ^2 (223.08) is greater than the table value (21.026), the study shows that the observed differences between the land use activity plan and the actual physical development in the new layout is quite significant.

SUMMARY AND CONCLUSIONS

This study has shown that about 81.2 percent of Kighir-Adeke layout has been developed. Out of the physically developed area of the layout, 40 percent complies with the plan while about 60 percent contravenes the plan. Also much of the contravening physical developments emanate from the conversions of undeveloped spaces for community facilities and road infrastructure proposed in the physical plan of the area. Furthermore, it has been observed that over half or 58 percent of these conversions are into residential development purposes.

The rather high level of contravention of the Kighir-Adeke local development plan by physical development activities is indicative of the weakness and failure of the Benue State Urban Development Board (BSUDB) in appropriately invoking the powers of development control to regulate the implementation of the layout plan. Lack of political will, inadequate

machinery/manpower and corruption could have been some of the most often causes for the poor implementation of physical plans to effectively guide the development of most third world cities.

Also wholesale conversion of public spaces for recreation, clinics and roads by the public without any intervention by government officials is indicative of not only the level of corruption that is embedded in urban governance but also the nonchalant attitude of city governments towards the provision of the critical infrastructure and public amenities for the welfare of urban residents.

Finally large scale conversion of different proposed activity uses to residential purpose to a large extent is also indicative of the desperateness and high demand for residential accommodation space by the burgeoning population of new immigrants in the cities and urban population expansion. Thus while the government could be ambivalent in providing urban infrastructure, the teaming urban population do not have the patience to wait. They easily cash in on any opportunity to acquire land for residential accommodation anywhere at any costs.

On the whole these findings have served to demonstrate the levity with which physical plans are considered in the course of physical development of most cities in Nigeria. The example from the kighir-Adeke layout in Makurdi is only for the purpose of specificity. It is not difficult to draw up a list of other cities where physical development is going on haphazardly while the physical plans are kept in the shelves gathering dust (Hwakar 1992). This phenomenon calls to question whether physical planning is at the cross roads in the Nigerian context. However it is to address these urban ills that the following recommendations are made:

RECOMMENDATIONS

1. In the main, there is need for governments' reawakening to its pivotal role in controlling the development of cities through the development of infrastructure and community facilities as proposed by the city plans. This will serve to illustrate its prime commitment to orderly growth of cities and hence stimulate members of the public (who constitute the dominant group in urban development) to play their role safely according to the rules of the game by seeking plan approvals and development permits before carrying out physical development within the urban landscape.
2. Furthermore, the agencies in charge of development control have to be overhauled to fish out the corrupt official members that are central to land use abuse by conniving with the public to compromise the proposals on the physical plan.

Finally adequate professional personnel have to be recruited and more machinery procured to facilitate activities of development control agencies to be more functional and effective in properly carrying out routine checks towards regulating the physical development of the cities.

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