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An Integrated Approach to Land Use Planning and Environmental Management in Growing Cities

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With emerging environmental challenges facing the global society since the 20th century, most countries of the developed world have adapted to more pragmatic land use planning and environmental management strategies for sustainable urban land use development. However, Nigeria like most other countries in Sub-Saharan Africa are tied to the out dated modernist top –bottom land use planning procedures that are counter- productive to sustainable urban development and environmental management. This paper explores the inadequacies of the existing approaches to urban land use planning in Nigeria and advocates the need for an integrated approach that is interactive and participatory for sustainable urban development and environmental management in growing cities of Nigeria and the developing world

Keywords: Land use Planning, Environmental management, Integrated Approach.

Abstract. **1.0 INTRODUCTION**

Since the dawn of the 20th century, the global society has been experiencing tremendous population explosion both in the rural and urban areas. In the towns and cities, rural - urban migration and natural increase arising from improvement in living standards and child and maternal health care culminating to a declining infant mortality rates are some of the major causes. As the surge in urban populations goes on, there has been a correspondingly high pressure in the use of land and land resources sometimes leading to their excessive exploitation, shortages and new environmental challenges.

Given this scenario the search for more effective planning approaches in land resources management started in the 1960s and 1970s. And from the 1980s, planning approaches based on participation have been increasingly adopted by many western countries to replace the modernist strict technical top – bottom planning approach. This has been in realization that land use planning according to the report of the Earth Summit in Rio-Dejaneiro (1992) plays a key role in natural resource and environmental management; and that with population explosion in cities, there are competing stakes and interests in the use of land and land resources. Consequently, only an integrated planning approach could ensure the

settlement of conflicts and conciliation among competing stakes in such a way that agreements can be reached thereby guaranteeing the sustainability of land resources (WGLUP, 1999).

Nevertheless, in this post-modernist planning era, land use planning in most cities of Sub-Saharan Africa still function on the structures of outdated and outmoded land use Planning Policies, Laws and Regulations akin to technical modernist's approach to planning. Particularly in Nigeria, Land use planning and management still relies on the land use Act of 1978 and the 1992 Urban and Regional Planning Law which in all ramifications are off shoots from the modernists planning ideas introduced into the country by the colonial administration before independence. These laws exhibits a top-down approach to land use planning decisions and are rather too prescriptive for sustainable urban development and environmental management. The Urban and Regional Planning Act of 1992 that was meant to improve planning activity in Nigeria did not contain any provision to promote and enhance public participation in planning decision (Aribigbola, 2008). Rather it relies on the master plan approach which given the environmental challenges facing most communities in the 21st century is too prescriptive and rigid for sustainable urban development and environmental management. Consequently, sustainable urban

development and environmental management in most towns and cities in Nigeria has been illusive due to various factors including government's inadequacies and the peoples's negative perception and attitude towards government's policies concerning land use management and development.

This paper attempts to explore the benefits of an integrated approach to land use planning and environmental management as an alternative to the existing trends. It is expected that with a properly formulated and well articulated integrated approach, growing cities and towns in Nigeria and much of Sub-Saharan Africa would achieve more sustainable development and environmental management.

2.0 LITERATURE REVIEW

2.1 Land Use Planning

Land use planning according to Chapin et al (1995) is the art and science of organizing the use of land and the character and siting of buildings, services and communication routes so as to secure the maximum practical degree of harmony and economy of space, orderliness, health and beauty. In order words it is the spatial arrangement of use activities on land for the purpose of achieving an environment that is healthy, aesthetically pleasing and functionally efficient for working, living and recreation (Di Gregorio and Jansen, 1998).

However, this fundamental concept in space organization has been perceived and approached differently by the society at different times. This has been due in part to the dynamic nature of human population agglomerations and its attendant economic development activities over the years. Whereas at one point decision on how land and land related resources should be organized in a defined region was idealized through directives from the top to bottom, at another point people promoted the process of organization and learning or a bottom - up approach (Working Group on Integrated Land Use Planning WGLUP, 1999). These views constitute the dominant models to land use planning.

The first view point reflects the technical approach or the first model of land use planning—“the planner as leader” (Pocock and Hudson 1978). This approach followed the sense of a rational model of planning whereby it is assumed that the optimization of the set of planning tools in connection with rationalization of the planning organization will result in the best possible solution to the problem to be solved (WGLUP 1999). Any social conflicts are disregarded in the process. The planner as leader model was the modernist approach to planning in the UK around the early part of the 20th century as exemplified in the New Town planning schemes of which

Thomas and Cresswell 1973 observed that “... *it is the planners conception of reality which holds sway at least as a blue print, and their clients who may all along have wanted something else that have to fit in as best as they can*”.

One implication of this technical approach or ‘planner as leader model’ is that, people must be educated or re-educated to accept a particular, and perhaps, different set of values and aspirations; a different desirable environmental condition and to reconstruct reality in the same way as the planner (Porteous, 1971). This modernist approach is predicated on the assumption of the planners as the value neutral, apolitical technical expert acting for ‘the good’ of the community or ‘national interest’; and one that is closely associated with the cult of the expert and the depoliticisation of planning. It however bears clear dangers of professional imperialism which become manifest in the imposition of alien values and views of the world on unwilling recipient, often via advocating technical solutions to social problems (Iorliam, 2008).

The later model of land use planning –the participatory approach or bottom –top approach is targeted at creating a social platform for solving problems and settling conflicts. Land use planning is hereby described as a political process in which the constellation of forces is crucial to the result. In this type of planning process, the stakes of

differing groups with different power potentials and different influence meet one another. In this way, the mechanisms of conflict resolution and forming of consensus are the major political factors. Thus, land use planning is seen as an interactive and co-operative process of analyzing, planning and decision-making in which all relevant groups and organizations—stake holders take part. In other words it is a process which according to GTZ/Rauch (1993) “allows all participants to formulate their interests and objectives in a dialogue that leads to decisions and activities in harmony with each other, whereby the aims and interests of other participating groups are taken into account as far as possible”.

2.3. Approaches to Land use planning in Nigeria.

A review of land use planning and management in Nigeria from colonial administration to date by Onokheroraye and Omuta (1986) suggests three major approaches that have been adopted: development control, planning schemes and the master plan preparations.

Development control is the earliest form of land use planning in Nigeria. And in fact until recently, urban land use planning in most cities of the country was confined to development control. It is concerned with regulating the development of a town in a planned and orderly manner by stipulating adequate standards for all aspects of planning. Private and public buildings whether in

residential, commercial, industrial or administrative areas must comply with those prescribed basic standards.

Development control became important as a form of physical planning in Nigerian towns after the enactment of the Township ordinance of 1917 by the British colonial administration. The Township ordinance provided different guidelines with respect to the development of what was then called the Native Residence Areas, European Reservation and non-European reservation areas. Over the years planners in different parts of the country have modified the guidelines to reflect the prevailing circumstances.

The second strategy to land use planning in Nigeria relates to the preparation of schemes for sections of the towns that are first of all declared planning areas. It was after the Second World War that planning scheme preparation was introduced in Nigeria by the British colonial administration, and it was applied to sections of towns that were acquired by government for specific purposes. The approach essentially is an offshoot of the earlier phase of British town planning in which attention was focused on physical design of the urban environment and solutions are sought to pressing problems as they arise on piecemeal basis. It is incremental in nature as solutions to urban problems are proffered as they arise; for instance as in the development of new residential

estates to solve problems of overcrowding or housing shortages; or in the construction of flyovers, overhead bridges and intra-city dual carriage ways to solve the problems of traffic jams and traffic congestion. Many Nigerian cities particularly the traditional cities such as Benin, Ibadan, Kano and even Lagos have experienced various forms of planning schemes. Each of such schemes contains provisions that are necessary for regulating the development and use of land in the area to which the scheme applies.

The third approach to land use planning in Nigeria is the master plan preparation. The master planning strategy reflects the early form of planning when Town planning profession was dominated by architects and civil engineers. The planner's image in this approach presumes that of the leader who has complete control of the urban environment in such a way that it is capable of being manipulated to attain desired objectives. In such a scheme, the planner serves as an executive architect establishing certain general ideas and standards to which subsequent architecture and public works are expected to conform (Onokheroraye et al, 1986). One major emphasis of the strategy is the general allocation of the city's space to major land uses based on careful study of the interrelationships and implications of one use to others. In this way the strategy is a positive, long-term land-use development

planning that provides a general policy guide for the development of the city to both public and private developers. It is perhaps the most popular form of land use planning among policy makers in Nigeria in recent times as most major cities have master plans to guide their physical development.

The foregoing review shows that land use planning in Nigeria is inclined to the traditional top-down procedures whereby like in a controlled economy, the users are ordered to use their land based on scientific assessment of its capacity or suitability by the experts. This is a reflection of the modernists planning ideology that characterized the early phase of planning in the U.K whereby the planners' technical know-how assumed eminence, and where prescriptive elitist standards either in enforcing development control regulation, preparing planning schemes or master plans have become the rule rather than options in urban development.

2.3 Constraints of the Conventional Approach to Planning

One of the major constraints of existing approaches to land use planning in Nigeria relates to undue emphasis given to the physical component of the city to the neglect of the social, economic and political component. In all parts of the world, cities are the most important socio-cultural and economic and centres of the society.

Thus urban development planning must strive to integrate the non-physical aspects into the planning framework in order to get a comprehensive view of the urban area and its problems. The existing planning approaches lack a comprehensive framework or urban development policy there by leading to uncoordinated urban planning programs that are sometimes conflicting with stated objectives.

Secondly, in cities where master plans have been prepared, land use control has not been effectively put under control. This is because the link between the foreign experts who prepared the plan and the local policy makers who execute them is weak. Once the plans are designed these experts return to their countries and the planning process loses the dynamic touch that should be reflected in feed backs and interactions between policy design and execution of plans. Moreover, in an era of rapid urbanization, master plans are by nature too rigid to be useful. This is because; as soon as they are prepared they become obsolete due to the rapid growths of the cities. Thus although the World Health Organization (1999) has acknowledged that master plans have played a central role in the urban land use planning process, over the years it has become less effective and has been criticized as being too complex, bureaucratic, time consuming, static and elitist. Many of its policies can become outdated

before implementation, rendering the process irrelevant. It has also been criticized for not promoting public participation; community groups, target beneficiaries and non-governmental organizations are usually excluded from the process.

Another limitation of the existing approach relates to the existing institutional framework to urban development planning. Although there is role differentiation in urban development planning between the federal, state and local councils, the federal government seems to be weak in coordinating activities of the other tiers at the federal level (Adeniyi 1975). Lack of such coordination often leads to conflicts and litigation in court for the definition of jurisdictional boundaries. Besides, even at the state level there could be several agencies engaged in land use planning and environmental management of which poor coordination often leads to conflicts among the agencies.

It has also been observed that urban planning tends to be divorced from the sectoral processes responsible both for urban finance and providing urban infrastructure and services (WHO, 1999). There is a need for a more flexible, interactive and proactive type of planning.

2.2 Challenges of Land use Planning in the 21st Century and emerging need for an integrated approach.

Sudden population explosion in cities from the 20th century have garnered in an increasingly heterogeneous population with more complex demand and increasing pressure on land resources for transportation, housing, industrial production and urban infrastructure *inter alia*. This has led to the emergence of several environmental problems such as global warming and rising sea levels leading to coastal erosion, problems of waste management and environmental pollution as well as the development of slums. On the other hand the heterogeneous population ensures an increasing number of stakeholders apart from experts on decisions pertaining improvement on land resources. This duo has turned out to be the major challenges to land use and environmental planning in the first century.

Land use planning in the 21st century therefore exhibits both prospects and challenges: on the one hand it is heavily relied upon and expected to bring forth 'Sustainable Development and Livable Communities,' and on the other hand it must cope with serious conflicts in the ideals or values related to the stakeholders involved which are a manifested reflection of contemporary interests in urban planning. A successful resolution of these conflicts and a creation of settlement patterns that

are both livable and sustainable as Godschalk (2004) argued would determine the future of Land use planning (particularly in Nigeria and Sub-Saharan Africa).

Jacobs (1992) puts forward three assertions. Firstly that Land use planning as we know it is largely a modernist conceptualization, secondly that the most salient challenges to land use planning practice and doctrine are post-modern in character and thirdly that we are thus suspended between modernism and post modernism in our thinking about how to best engage in land use planning and this provides us with a unique opportunity to reframe what we do, in what is believed to be more relevant, though more ambiguous, professional practice.

According to Jacobs (1992), the Post-modernist challenge to Modernist Land use planning procedures can be summarized as the rise of "diverse populist citizens' movement" based on individual rights in Land use Planning. This movement challenges the presumption of experts' preeminent knowledge, the use of rationality and scientific method as the only means of informing Land use planning decisions and the inevitable need to centralize resource management to achieve sound resource objectives. This movement according to the author "makes it clear that Land use is a social and political resource as well as an ecological one".

There are present concerns to consider in establishing a positive future for land use planning especially if the resulting participatory processes, planning proposals and urban places are to satisfy the needs and desires of present and future residents. These concerns include:

1. An understanding of the nature of these conflicts,
2. Finding an effective means of guiding communities to also identify and understand them,
3. Determining whether today's planning approaches adequately uphold the values and resolve the conflicts and if not how else land use planners can go about remedying the situation.

2.4 The Integrated Approach

Integrated urban development planning is an essential prerequisite in order to face the many challenges with which today's cities all over the world are confronted with. According to WGLUP (1999) it involves spatial, temporal and factual coordination and integration of diverse policy areas and planning resources to achieve defined goals using specified (financial) instruments. It is believed that comprehensive and early involvement of all governmental, administrative and non-governmental players, the local residents

and players from the business world relevant to urban development is crucial.

While Conventional strategies have always appeared somewhat rigid, the UN (FAO/UNEP, 1999) suggests that the integrated approach presents two unique qualities; it is integrative and interactive.

It is Integrative in the sense that:

- It combines elements of both the bottom-up approach, based on grass-roots participation and traditionally top-down aspects of land resource assessment and evaluation of options
- It takes into account the complex biophysical and socio-economic variables which determine the land use system.
- It considers legal and institutional aspects which facilitate the implementation of the plan.

It is interactive in the sense that:

- It is a negotiation process, in which land users interact among themselves and with specialists
- Different levels (national, sub-national and local level) interact in the planning process.

Basically, the approach embodies an interactive partnership between government and civil society,

to address their common concerns to manage land resources sustainably for their mutual benefit. This requires commitment on the part of both government and the people. This is consistent with emerging principles of good governance now viewed as a prerequisite for sustainable development (FAO/UNEP, 1999).

2.5 Prerequisite for an Effective Integrated Approach to Land Use Planning

While the United Nations (UN) and its sub organizations such as the Food and Agricultural Organization for United Nations (FAO) and the United Nations Environment Programme (UNEP) on one hand and the World Health Organization (WHO) on the other focus on separate but specific Goals. They share a similar framework and guiding principles regarding Land Use planning.

Some of the fundamental elements of the integrated approach that would enable a significant level of success in Land Use planning are highlighted thus:

- Planning objectives and solutions should be clearly formulated and articulated
- Community participation has to be encouraged in the decision making process thereby establishing public awareness, trust, and a sense of ownership and empowerment. Clearer objectives are

usually set when a community involvement exists.

- All stakeholders (everyone whose interests are affected by urban planning processes from the initial stage to implementation and maintenance stage) must be duly recognized and be actively involved despite the possibility of conflicting objectives which also calls for the need for a platform for debate and negotiation
- There is a need for a regulatory policy which guarantees the coordination between national plans and local information interests involving conditions in which decision can be made, and the achievement of proposed objectives at all levels of action. A neighbourhood plan for instance should be formulated within the city's land use or development plan which should be supported by the objectives of the sub-national development plan. The government's land use policy establishes the general framework for land use in the country and the government takes decisions and makes regulations accordingly
- A rich knowledge base which is accessible to all stakeholders concerned is very useful to the negotiation and decision making process as a great deal of relevant information aids in meeting needs and

demands in order to achieve set goals. There should be a full awareness of financial implications of proposals including capital and maintenance costs and cost recovery mechanisms.

- Planning techniques and procedures should be explored, critically examined and adopted. While some aspects of conventional planning procedures still remain valid, other outdated aspects require development and expansion.
- Some key elements of the integrated approach such as Monitoring and Evaluation should be an essential part of the planning process

3.0 CONCLUSION AND FURTHER RESEARCH

Despite various policies put in place to ensure proper land use and environmental management in Nigeria (Yahaya & Ishiak, 2013) the poor level of management by government and planning agencies cannot be over-emphasized. This is clearly manifested in the scenario of disorganized land uses and land use activity.

A key element to ensuring the success of the integrated approach to Land use planning and management is the establishment of a better relationship with stakeholders through a deep involvement/ participation, effective (and

transparent) communication flow and feedback. This would be supported with coordinating agencies and well-rounded policies founded on strong values. If carefully considered and implemented, this would ensure sustainability and regain order to land use activity and the environmental management in Nigeria and most countries of the developing world.

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