JOURNAL OF THE NIGERIAN INSTITUTE OF TOWN PLANNERS

Editor-in-chief
PROF EMMAN I.C. AGWU

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FOREWORD

The Journal of the Nigerian Institute of Town Planners provides a good premise for information dissemination and discussions on all issues relating to the human environment in Nigeria and beyond. Twenty volumes of the journal have been published within the forty four years of the existence of the institute. The journal has served as a good reference material for researchers in academics and professionals in the entire building industry.

Our purpose here is to direct our resources through this journal to the needs of time, to research, educate and promote the use of relevant urban planning knowledge in concert with the total knowledge of our peers in the building industry and the environment in general. We also seek to encourage the efforts of many others outside our profession who seek to share ideas with us to improve the urban and human environment.

In summary, the journal of the Nigerian Institute of Town Planners is on the verge of quantum leap in its history of ever changing and advancing pursuit of furthering urban and rural planning development in Nigeria through knowledge and professional advancement. I believe that the present edition has been rightly focused in this direction, judging by the thought provoking, stimulating and well researched articles that are packaged. I wish to appreciate the efforts of the Editor-in-chief and members of the Editorial Board, for their careful review and selection of the papers here published.

The Nigerian Institute of Town Planners is also grateful to the ETF for the support afforded us in this edition.

TPL K.M. IYARI FNITP, RTP
President, Nigerian Institute of Town Planners.
EDITORIAL

The Editorial Board of the journal of the Nigerian Institute of Town Planners expresses its profound gratitude to Educational Trust Fund (ETF) of the Federal Government of Nigeria for its support. The Board also thanks the president of NITP, Mr. K.M. Iyari, for being able to link the Board with ETF. The board congratulates NITP for the meritorious recognition of its journal among others.

The problem of the journal is the seeming lack of interest of members to submit papers for publication. Another problem is that it has not been easy to secure a national coverage of papers submitted each time for publication. Efforts made to secure articles by purposeful nomination of contributors nationwide is yet to bear fruit.

The Editorial Board is working assiduously to streamline the standard of papers submitted to meet international standard. To meet international standard the research must be empirical and must apply theories and methods in the analysis of urban and regional planning problems. The Board, therefore, calls for scholars and professionals to avail themselves of this unique opportunity to publish Papers on urban and regional entrepreneurship will be welcome. Happy reading.

Professor E.L.C. Agwu
Editor-in-Chief.
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Professor E.J.C. Adum
Editor-in-Chief
ABSTRACT

This paper explores the causes of the tragedy of open spaces and how community can improve the sustainability of open spaces. It confirms the existence of problems through a review of global and local experiences in urban and rural physical planning. The paper also identifies reasons for pressure on open spaces and addresses this problem in the specific case study of Umunwachi enclaves in Aba and Afor. The study reveals that human-induced population pressure on open spaces is a major cause of their abuse. The role of open spaces in the planning and development of the city is also highlighted. However, green spaces in primary and secondary schools are underused. They need to be restructured for a "green" use of land which is permitted.

By

Prof. Emma I.C. Agwu & Obialo Kalu
Department of Urban and Regional Planning,
Abia State University, Uturu.
ABSTRACT

This paper explores the causes of the tragedy of open spaces and how a community can improve the sustainability of open spaces. It confirms the existence of problems through review of global and local urbanisation trends and through physical survey and opinion survey of open space allocation and use in Umuahia and Aba. The causes of the tragedy are identified as population pressure for other land uses, inadequate provision, misuse of open spaces, poor management process and ignorance of the role of open spaces or green areas in the physical development of the city.

It concluded that most of the open spaces were thought to be useless or uneconomic, hence there is need for the reintroduction of games in primary and secondary schools to prepare youths as future users of open spaces.

It also recommends a democratic process before a “change of use” of land uses is permitted.
INTRODUCTION

Nigeria has had over a century of urban tradition. This claim is based not so much on the size of the urban population as on the magnitude and spread of urbanization across the country (Jorlian 2010). In the 1952 census, there were 52 cities with populations of 20,000 and above. The number rose to 183 in the 1963 census. In the 1991 census, the number was 359 while the estimate for 2004 put the number at 840 (Lagos Report 2004). In the same vein, the urban populations rose from 3.2 (10.65%) in 1953 to 10 million (19.10%), in 1963. The population rose to 31.8 million (35.7%) in 1991. In 2004, the estimate was 62.7 million (48.2%).

Culturally, Nigeria inherited much from Britain, the United States of America, France and Arab countries. Ratcliffee (1974) observed that the Egyptians expressed themselves monumentally but statically, the Greeks created a more varied and dynamic urban style which the Romans standardised in their functional manner. But searching for a local identity in our urban areas is like searching for a missing pin in a sand beach. What that means is that we cannot easily identify what is traditional in the Nigerian urban culture.

Similar to most societies, the Nigerian land use activities include housing, commercial, agricultural, forestry communication routes and public squares. Public squares have continued to change size and functions due to population pressure. The transitional nature of these land uses did not only affect their sustainability but affected their uses. For over a hundred years of Nigerian urban existence, the most abused land use, whether in the urban or rural areas, is the open space for recreational purposes. The focus of this article is to examine the causes of the tragedy of open spaces in urban areas. To assist with the latter discussion, the paper also draws upon a survey conducted in Umuahia and Aba in Abia State. To do justice to this investigation, we shall clarify the concepts of open spaces, parks, forest preserves and green areas. The issue of individual compliance is addressed in this paper being an insignificant but important one in the preservation of open spaces.

Concept Clarification
1. What is an open space?
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INTRODUCTION

An open space is a tract of land in the city or town usually containing shade trees, benches, and so on. The old Greater London plan proposals in 1944 recommended that for every 1000 population there should be 0.47 hectares of open space for playing fields, parkland, and school. Whereas, the International Planning Association (IPA) for Abuja Plan recommended 0.15 hectares for population between 4000 and 6000. Comparatively, the Greater London plan by 1944 was on the high side.

Albeit within the city, open space is used synonymously with local park. Besides designated open spaces, there are always undevelopable areas, infill plots, vulnerable areas, abandoned railway lands, and others, within the city that are regarded as open spaces.

2. What is a park as different as a nature preserve?

A park is an area set aside for use by people, whereas a nature preserve, although it may be used by people, has as its primary purpose the conservation of some resource, typically a biological one. Every park or preserve is an island of one kind of landscape surrounded by a different kind of land use (Botkin and Keller 1997).

The concepts of island biogeography are used in the design and management of parks. They observed that the emphasis of park management has become more ecological with parks established both for scientific research and to maintain examples of representative natural areas. In a park that is established for scientific research such as Serengeti National Park in Tanzania, it is allowed to allow for biological conservation. The Kruger National Park in South Africa also for viewing, and for biological conservation. The size and diversity of habitats affect the number of species that can be maintained there. Also, the farther the park is from other parks or sources of species, the fewer species are found.

What is open space?

The continuous shifting of the two terms open space and parks seems to have affected the last few years and partial space and parks seem to be able to refer to the last few years and partial space and parks seem to be able to refer to some areas of the urban landscape.
INTRODUCTION

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Provide a kind of insurance against catastrophe. E.g. if a storm struck one park and killed all individuals of one species, another could survive.

A combination of the benefits of both single large parks and several small ones, where the small ones are interconnected by migration corridors, allows coastal migration among the parks.

Again, parks, unlike nature preserves, have definite boundaries. Many parks have been developed in what are otherwise considered wild lands, useless for other purposes.

What is a green area?

Green areas are land covered with grass, growing plants, and others as seen along city avenues. They serve aesthetic objectives and as a safe haven for creatures.

The Theoretical Framework

There is need for open spaces in both traditional and modern societies. Open spaces serve useful purposes, the purpose of serving as a venue for meetings, games, leisure, play areas, for children and adults, a venue where mothers meet, and elderly generations relax. On a large scale, the district park still accessible can supply facilities such as golf, sailing, and swimming. Such parks are linked with built-up areas through footpaths.

In recent times, standards have been set for the provision of open spaces and parks for recreational purposes. For every 1,000 population, there should be 0.04 hectares for open spaces, 2.42 hectares for playground fields, 0.4 hectares for park land and 0.04 hectares dedicated to schools. By implication, as population increases, the need for open spaces increases. But based on the demand, an open space system and its role in the urban environment is also being evaluated.
Sustainability of open space land use requires some level of permanency. But it is not simply a matter of maintaining the conditions necessary for survival. It involves the ability of a community to adapt to changing internal and external conditions, to maintain its health and sense of identity, to exercise some measures of control over its own destiny, to promote democratic values, and to create a just society. For sure, sustainability is a complex, multi-faceted issue that will challenge the resourcefulness and adaptive capacity of any community. (Walter and Wilkerson, 1998)

**Urban Population**

The growth of urban population implies that more spaces or less will be devoted to recreation and children’s play in both older cities and new cities. By mid 1990, 43% (representing 2.3 billion people) of the world population lived in urban areas. Between 1970 and 1990, urban population grew at an average ranging from 3% to 8% while that of the rural areas was only 1.2%. With a growth rate of two and half times faster than that of the rural areas, the U.N. (1993) has projected that the level of global urbanisation figure will pass the 50% figure by the year 2005. And by the year 2025, more than 60% of the world’s population will be living in urban areas, although this figure ranges between 44% for least developed countries to 84% for the more developed regions. (Tables land 2).

**Table 1 Global Urban Population and Percentage living in Urban Areas by Regions 1970 - 2025**

<table>
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<th>Region</th>
<th>Urban Population (Millions)</th>
<th>Urban Share (%)</th>
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<tr>
<td>World</td>
<td>1,352</td>
<td>2,282</td>
</tr>
<tr>
<td>Less developed region</td>
<td>654</td>
<td>1,401</td>
</tr>
<tr>
<td>Least developed countries</td>
<td>38</td>
<td>103</td>
</tr>
<tr>
<td>Other countries</td>
<td>615</td>
<td>1,298</td>
</tr>
<tr>
<td>More Developed regions</td>
<td>698</td>
<td>881</td>
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Further urban population increases continue in the less developed regions.

Table 2. Global Urban Population and Percentage in the Less Developed Regions (1970 - 2025)

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<tr>
<th>Region</th>
<th>Urban Population Millions</th>
<th>Urban Share (%)</th>
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<tbody>
<tr>
<td>Africa</td>
<td>83</td>
<td>25</td>
</tr>
<tr>
<td>Asia (excluding Japan)</td>
<td>206</td>
<td>34</td>
</tr>
<tr>
<td>Latin America</td>
<td>857</td>
<td>25</td>
</tr>
<tr>
<td>Oceania (excluding Australia - New Zealand)</td>
<td>592</td>
<td>72</td>
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Generally, high level of urbanisation characterises each of the regions, but it is higher in the developed regions of the world. The demand for open spaces will ever be made where land is available or existing ones will be reduced.

Case studies

The recent surveys (2010) at Umuahia and Aba, both cities in Abia State, illustrated very well the fate of open spaces in Nigeria. The need to provide homes, offices, industries and so on became a major policy of the government when Umuahia became a state capital in 1991. The absence of a comprehensive plan for the new functions at Umuahia complicated the problem of space and land use allocation. Comprehensiveness in city planning, according to Friedmann (1965), refers primarily to an awareness that the city is a system of interrelated social and economic variables extending over space. The first tragedy of open space in Umuahia and, to some extent, Aba was omission of such uses as open spaces in the land use distribution.
The population of urban centres are growing by about 3.5% growth rate but the land area is static. By 2007, the population of both cities were 220,660 and 530,340 for Umuahia and Aba respectively. (Federal Government Gazette, Lagos Vol. 94 B 179). In 2010, the estimated populations were 222,207 and 534,058.9 for Umuahia and Aba respectively. The implication is that the sizes of the open spaces cannot be increased proportionally as populations of urban centre, increase.

The misuse of Open Spaces

The Ministry of Lands, Survey and Urban Development, by 1974, designated 29 units of open spaces to serve the urban community of Umuahia. In 1982, a new master plan was prepared which allocated additional 24 open spaces to the northern part of Umuahia.

By the beginning of 2010, the survey revealed that:

1. The forest reserve opposite the former Okpara Avenue (now Bank Road) had been seriously tampered with and exposed to serious environmental degradation. Some of the lands had been converted to market stalls and hotels.

2. The Okpara Avenue GRA had six units of open spaces in 1997 but by 2010 banks had taken over the open spaces. The argument was that the banks needed to locate near the State House for security purposes.

3. The entire land formally known as the Government Primary School and its playing ground had been taken over by the temporary government house.

4. The majority of the public open spaces had been encroached upon. For example, the police and the railway lands in Umuahia have been converted to markets and stores.

5. The erosion-prone areas strictly reserved as green areas and the forest reserves have been occupied by squatter settlements. The degree of erosion at the place is becoming uncontrollable.

6. Private open spaces have been rented out for mechanic workshops and iron workshops. Strictly speaking, it is
difficult to identify such places as open spaces.

7. The environmental risk zones reserved for green areas at Aba along the Aba River have been occupied by squatters and other human activities such as farming and trading.

8. The open spaces at Okeleoro, Ogbor Hill and Umuobaa known for their annual flooding and malaria infestation constitute the worst squatter settlements in Abia State. They houses over 5,000 persons, including criminals.

9. The recreation park at Aba has been seriously encroached upon by even the Local Government Council which had built market stalls around the park. It is difficult to differentiate market area from the recreation park.

10. It was difficult to determine the sizes of these open spaces in both cities because of mutations. However, most of them are small and were not adequately distributed.

**Poor Management**

From the survey, three types of open spaces were identified. First were open spaces owned by private individuals and agencies. These include infill plots, gardens, hotel areas, club areas and railway lands. The second type were those under public ownership. These include stadia, parks, nature reserves, forest reserves and road verges. The third type are the institutional open spaces. It includes open spaces attached to churches, schools, educational institutions and hospitals.

From the foregoing discussion, we noted the serious problems with open spaces owned by the private and public sectors. Changes that take place in these two are quite frequent and uncontrollable. Institutional open spaces and lands are guarded tenaciously. Where there was need for an institution to forgo its land, it would insist on exchange or compensation.

Comparatively, the public open space is less vulnerable to change than the private ones. Private sector open spaces do not resist change if there were a means of making more money from the change. There was no over-all agreement as to whether the state of the environment at Umuahia and Aba had improved or become worse among individuals interviewed using a range of indicators relating to personal experience. Whilst 30% of respondents thought the state of the environment has improved
after open spaces had been used for other purposes, 15% said it had remained about the same and 55% felt that it had become worst. At Aba where residents complained against government doing nothing to improve the lot of people there, the people's reaction to our questions about the loss of open spaces was disappointing.

For private owners of property, they did not see anything wrong in the "change of use," from open spaces to housing, or to industries as long as it served the immediate financial need. In further discussion about shortage of open spaces and given the type of questions they asked, for example, "What does grass planting offer a community whose youths are unemployed?", it dawned on us that people do not actually understand the role of open spaces and green areas in cities. They were more concerned with what provided them with ready cash. When we wanted to know if those who changed the "purpose clause" of their plots were sanctioned, 35% of the target group said no punishment was given to them; 50% said with a temporary permit people could change the 'purpose clause' of their plots; whereas 15% agreed that illegal change of "purpose clause" attracts punishment. On further enquiry, it was confirmed that the Local Planning Authority could grant a temporary permit which could turn into a permanent one in future. There seemed to be no strong legislation on the wrong use of open spaces.

Discussion
This section provides some answers to the questions about open spaces that needed to be raised. They are the following.

Are open spaces important for the functioning of the city?
Besides the planning roles of open spaces as providing a play area for children, a meeting place for adults and aesthetic function to the city, they share a common function with forested areas such as providing habitat for wild life, serving as a carbon sink and release of oxygen for the city dwellers.

A city that lacks green areas is stiff and dry and does not provide ingredients for healthy living. The tree community provides shade for the people and makes activities outside the homes congenial, especially in the tropical climate.

How can individuals contribute to the sustenance of open spaces?
Private open spaces have been found to be worst off in the
survey conducted at Umuahia and Aba. But there is the argument that individuals tamper with their private plots not designated ones. It is further argued that designated open spaces which are managed by private persons survive well. It seems clear that when an open space is taken over by the government and the use is changed, people hardly think they were losing something essential. People feel they have lost something when something else is associated with the loss.

For example, when a play area for children, or a football field or golf course is lost for housing or industry and no substitute is found, people will begin to feel the loss depending on their perception of the loss.

There was the question of how open spaces can be sustained; to save open spaces from the wanton attack of public/private sectors and squatters. There may be the need for further survey in our urban areas to determine the demand and supply for open spaces. Sustainability of land use including open spaces, depends on the value people place on it. The value of open spaces can be infused on the people through education and information dissemination. The reintroduction of variety of games in primary and secondary schools such as football, basket ball, volley ball, tennis, bawling and cricket ball games can provide one of the means of inculcating love for open spaces. However, this requires the cooperation of planners, city managers, ministries of education and sports.

**Finally, what is the planning implication of the loss of open spaces?**

First, a loss of an open place in a planning programme is a loss of a planning goal. Planning should be geared towards sustainability. As we all know, sustainability is not against change; it involves the ability of a community to adapt to changing conditions to maintain its health and sense of identity, to exercise some measures of control over its own destiny, to promote democratic values, and to create a just society. (Walter and Wilkerson 1998).

A loss and sustainability of open spaces seem contradictory. What actually we mean is that our actions should be democratic. For example, if a planning authority desires the change of use, the removal or alteration of an existing designated open space of existing authorised but non-conforming land use, the authority must serve a Discontinuance Order under Section 48 subsection 3(c)NURP Law Decree No. 88 1992 which again requires confirmation by the Minister or Commissioner incharge of planning and attracts full compensation for any loss and
disturbance caused by the service of the Order.

A second way of sustaining open spaces in the face of increasing urban population is for planners and other scientists to re-evaluate the potential of our countryside to locate parks for games and sports.

A third way we can help reduce resource unbalance is either to prevent them from occurring in the first place or to alleviate them.

CONCLUSION

There is a large weight of evidence supporting the fact that open spaces in urban areas are faced with tragedy. This article has presented the nature and fate of open spaces in urban centres in both developed and developing countries. It has considered a number of problems open spaces face, including non-provision of open spaces in traditional towns, inadequate provision in some urban centres, usurpation of open spaces for housing, office development or industrial development, and illegal occupation by squatters and conversion of open spaces for dumping of solid wastes.

The survey revealed that open spaces fell into three categories: the public, private and institutional open spaces. The private sector open spaces undergo radical transformation followed by open spaces owned by the government. Changes that take place in these two sectors open spaces are encouraged by the local planning authorities which grant planning permissions for "change of use."

With the rate things are going and as long as population pressure continues to mount, open spaces will continue to lose land to other uses. To sustain open spaces in the midst of changing circumstances, this paper recommends the reintroduction of games in primary and secondary schools which will prepare youths for effective utilization of open spaces in the urban areas and the use of a democratic process before change of use is permitted.
REFERENCES


ANALYSIS OF HOUSING SATISFACTION FACTORS IN URBANIZED VILLAGES OF UYO, AKWA IBOM STATE, NIGERIA

Dr. E.E. Ikurekong
Department of Urban & Regional Planning
Faculty of Environmental Studies
University of Uyo.
ABSTRACT

The investment potentials of the urbanised villages in Uyo are perceived differently, mostly by investors in the housing sector. The low quality of housing, the unplanned physical setting and crowding result in social instability within the villages. Since these urbanised villages are primarily residential, there is the need to assess the quality of housing environment for investment. The main aim of this study, therefore is to analyse the housing satisfaction factors in Uyo City. Twenty of such villages were considered in this study through a ten per cent systematic random sample for structured questionnaire interview.

They were required to assign percentage scores of the level of satisfaction for twenty-three variables that relate to housing and the living environment. These twenty-three variables were subjected to principle component analysis which produced six major factors of satisfaction in Uyo. My findings show that Afaha Offot is ranked highest followed in the second place by Uyo village, Itiam Etoi and Afaha Oku. The fourth and last group in the ranking are the Aka Offot and Ndutong Oku for the purpose of decision making.
INTRODUCTION

The phenomenal growth of urban populations in less-developed countries (LDCs) has resulted in rapid spatial expansion of the cities. This expansion is predicated by the need for the provision of facilities such as roads, residential quarters, schools, hospitals and playgrounds. In the process of urban spatial expansion, many villages which were hitherto in the periphery, have been taken over.

The focus of this assessment survey was to uncover the patterns of social relations that exist within the localities and examine the levels of stability in them. Stability within residential neighbourhoods is related to the rate of mobility (Okpala, 1982). In Uyo town, an earlier study found out the residential mobility rates among the sub-sectors in Uyo urban which forms the defined localities in this study. Residential mobility is very significant, and relates to environmental quality elements. Apart from economic factors (such as rent increase) and individual family requirement (such as need for a larger or smaller accommodation), the primary reason for residential mobility is the need for housing satisfaction (Ikurekong and Ntamark, 2006) which is accounted for by the six factors or determinants discussed in this study.

To achieve stability in residential neighbourhoods, it has been suggested that public agencies be involved in housing delivery in order that acceptable housing environments be created. Currently, there is an invitation to the private sector to take over the mass production of residential buildings for consumption by the needy citizenry in Nigeria. To facilitate the work by the private sector, the government has recognized the Real Estate Development Association of Nigeria (REDAN) as a body through which loans could be disbursed for construction of houses to be sold to the public.

The aim of this study, is therefore, to assess the residential localities of Uyo based on the six major determinants of housing satisfaction (Ikurekong, 2006) for development of mass housing projects. The objectives include

1. to evaluate the relative acceptability of the localities by the residents and
2. to investigate the potentials of the localities for investment in housing projects.
LITERATURE REVIEW

Several authors have listed factors of housing satisfaction as preconditions for residential stability in many urban centres. According to Agunbiade (1983), good housing implies a structurally good shelter as well as the availability of adequate living space, a secured environment with access to essential social services and amenities. A satisfactory housing must include, among others, a toilet, a bathroom with adequate drainage and access to portable water (Jagun, 1981). Deterioration in residential neighbourhoods of most urban centres in developing countries, leading to the development of overcrowding and slums, have been as a result of poor and inadequate housing facilities. (Fapounla et al, 1977). In an earlier study in Uyo (Ikurekong and Ntark, 2007), among the various reasons for population census (NPC 2007), the structure of urbanization in Uyo was superimposed on the indigenous dispersed settlement pattern which was already cohesively built up. These built up communities, therefore, became the various neighbourhoods within Uyo urban. These local neighbourhoods have also become the core of political wards in Uyo urban Area. Twenty of such neighbourhoods were sampled for this study. They include: Aka Offot, Effiat Offot, Itiam Etoi, Ikot Akpan Oku, Obio Etoi, Use Ikot Ebia, Afaha Offot, Atan Offot, Abua Obio Offot, Eniog Offot, Anua Offot, Use Offot, Ibiaku Offot, Nsukara Offot, Iko Udoro Oku, Ikot Oku, Nduetong Oku, Iba Oku, Afaha Oku and Uyo consists of Iko Ntuen Oku, Ikot Ebido Oku, Iboko Offot and Ewet Offot. (Table 1).

METHODOLOGY

Twenty of such resident localities (urbanized villages) were selected from a list of seventy-five through a random sampling procedure using the table of random numbers. An evaluative survey by questionnaire was carried out in the twenty residential localities of Uyo chosen for the study. A total of 1,200 households were selected for the survey based on a ten per cent systematic random sample. Households sampled were randomly selected along systematically arranged groupings in the localities. The survey focused on satisfaction with housing and environmental conditions, which were expressed in twenty-three variables. All the heads of households were required to estimate the percentage of acceptability of the items of housing satisfaction of the entire housing area. Data collected were subjected to a factor analytic technique.
Fig. 1: Uyo Capital City Showing "Urbanized Villages" Selected for the Study
Change of residence, the quest for better housing environment ranked highest with 15% compared to personal home ownership with 12% and influence of high rents with 9 per cent. In an assessment of low-cost housing in Malaysia, Saleh (2008) found out that residents were generally satisfied with housing service while low levels of satisfaction were due to neighbourhood factors such as poor public transportation, lack of children playgrounds, community halls, car park and security. Muoghalu (1984) found out that the masses were dissatisfied with the types of housing units provided in the housing estates at Enugu. He opined that successful public housing programmes needed to combine objective criteria with subjective indicators of housing satisfaction.

THE STUDY AREA

The study area (Uyo Capital City) is originally made up of more than seventy villages in Five Local Government Areas. (Figure 1). Historically, the communities that made up the urban area were independently administered. The small independent villages were brought together as one administrative unit when Uyo District was created in 1903 (Ema, 1989). Uyo became the district headquarters and was listed as Third Class Township in 1919. The territory then became an urban planning area under section 59-61 of the Township Ordinance of 1917.

The town became a Local Government Headquarters in 1976 and the administrative capital of Akwa Ibom State in 1987. The town is located within the south eastern rain forest area of Nigeria. The population of the town was 309,573 by the 2006 census.

Table 1 shows the raw scores of the (x-independent and y-depenent variables as they were measured in each of the communities of study. The scores of the x-variables represent the average percentage performance of each of the variables in the localities while the y-values represent a summarizing performance for the quality of housing in the local community. The locations of all the local communities within Uyo urban are shown on Figure 1, which is the map of the study area.
Table 2: Factor Analysis of Determinants of Housing Satisfaction in Residential Localities of Uyo Urban, Akwa Ibom State, Nigeria.

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigen value</td>
<td>7.9</td>
<td>3.3</td>
<td>2.33</td>
<td>1.94</td>
<td>1.63</td>
<td>1.16</td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>34.36</td>
<td>14.35</td>
<td>10.14</td>
<td>8.47</td>
<td>7.10</td>
<td>5.06</td>
</tr>
<tr>
<td>Cumulative percentage of total</td>
<td>34.36</td>
<td>48.72</td>
<td>58.86</td>
<td>67.34</td>
<td>74.44</td>
<td>79.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building types</td>
<td>.522</td>
<td>.488</td>
</tr>
<tr>
<td>Toilet facilities</td>
<td>.164</td>
<td>.793</td>
</tr>
<tr>
<td>Bathing facilities</td>
<td>.110</td>
<td>.713</td>
</tr>
<tr>
<td>Refuse disposal</td>
<td>.454</td>
<td>.718</td>
</tr>
<tr>
<td>Water supply</td>
<td>.574</td>
<td>.20</td>
</tr>
<tr>
<td>Crowding index</td>
<td>.437</td>
<td>.573</td>
</tr>
<tr>
<td>Nearness to work</td>
<td>9.359 E-02</td>
<td>.252</td>
</tr>
<tr>
<td>Nearness to clinic</td>
<td>.302</td>
<td>.502</td>
</tr>
<tr>
<td>Nearness to market</td>
<td>5.108 E-02</td>
<td>-.114</td>
</tr>
<tr>
<td>Playgrounds</td>
<td>4.820 E-02</td>
<td>.2563 E-02</td>
</tr>
<tr>
<td>Availability of goods</td>
<td>2.79</td>
<td>-.9729 E-02</td>
</tr>
<tr>
<td>Ventilation in flits</td>
<td>4.988 E-02</td>
<td>-.111</td>
</tr>
<tr>
<td>Bus/Taxi service</td>
<td>.874</td>
<td>-.2559 E-02</td>
</tr>
<tr>
<td>Recreation</td>
<td>.866</td>
<td>-.107</td>
</tr>
<tr>
<td>Security service</td>
<td>.156</td>
<td>-.559</td>
</tr>
<tr>
<td>Near Sec. Sch.</td>
<td>.798</td>
<td>-.160</td>
</tr>
<tr>
<td>Near Pri. Sch.</td>
<td>.810</td>
<td>-.134</td>
</tr>
<tr>
<td>Personal security</td>
<td>.919</td>
<td>-.230</td>
</tr>
<tr>
<td>Source of energy</td>
<td>.859</td>
<td>-.334</td>
</tr>
<tr>
<td>Amt of noise</td>
<td>.789</td>
<td>-.301</td>
</tr>
<tr>
<td>Public security</td>
<td>.843</td>
<td>.4359 E-02</td>
</tr>
<tr>
<td>Rent</td>
<td>.661</td>
<td>.1753 E-02</td>
</tr>
<tr>
<td>Gen cleanliness</td>
<td>.705</td>
<td>-.247</td>
</tr>
</tbody>
</table>

Source: Statistical analysis by the author.
1. Eigen values and un-rotated matrix of factor loadings.

2. The correlation matrix is factored into basic dimensions.

3. Number of factors extracted depends on the number of interpretable eigen values extracted.

4. Eigen values are the sum of the squared factor loadings.

5. Factor loadings are interpreted as correlations between the original data set and the first, second, third, etc factors extracted.

6. Factor loadings are obtained by multiplying each factor by the square root of the corresponding eigen value.

The distribution of the factor scores among the twenty residential localities surveyed portrays the quality of the neighbourhoods and indicates their acceptable levels. The positive loadings and the concentration of the factors in the localities indicate the potentials of such localities for residential stability. Table 5 shows the distribution of the factor scores. In the table, factor scores shows the performance of the residential localities on each of the four factors. These performance levels highlight the potentials of the residential localities for possible investments in housing projects.

a. Rotation converged in 13 liberations

1. Factor rotation helps to eliminate medium loadings by maximizing the number of high and low loadings. Interpretation of un-orthogonal factors extracted yield inaccurate results.

2. Factors are named using the rotated factor matrix. Variables with highest loadings are used to name the factors while the ones with low loadings are ignored.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Name</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>VAR00001</td>
<td>Building types</td>
<td>.223</td>
<td>.005</td>
<td>.401</td>
<td>.394</td>
<td>.507</td>
<td>.091</td>
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<tr>
<td>VAR00002</td>
<td>Toilet facilities</td>
<td>-.145</td>
<td>-.193</td>
<td>.664</td>
<td>.298</td>
<td>.418</td>
<td>.148</td>
</tr>
<tr>
<td>VAR00003</td>
<td>Bathing facilities</td>
<td>-.060</td>
<td>-.286</td>
<td>.443</td>
<td>.727</td>
<td>-.259</td>
<td>-.134</td>
</tr>
<tr>
<td>VAR00004</td>
<td>Refuse disposal methods</td>
<td>.201</td>
<td>.003</td>
<td>.785</td>
<td>.300</td>
<td>.058</td>
<td>.003</td>
</tr>
<tr>
<td>VAR00005</td>
<td>Sources of water</td>
<td>.077</td>
<td>.379</td>
<td>.109</td>
<td>.758</td>
<td>.100</td>
<td>.031</td>
</tr>
<tr>
<td>VAR00006</td>
<td>Crowding index</td>
<td>.173</td>
<td>.139</td>
<td>.751</td>
<td>.111</td>
<td>.038</td>
<td>.119</td>
</tr>
<tr>
<td>VAR00007</td>
<td>Nearness to place of work</td>
<td>-.029</td>
<td>-.174</td>
<td>-.034</td>
<td>-.400</td>
<td>.575</td>
<td>-.277</td>
</tr>
<tr>
<td>VAR00008</td>
<td>Nearness to health clinic</td>
<td>.051</td>
<td>.097</td>
<td>.682</td>
<td>.036</td>
<td>.033</td>
<td>.419</td>
</tr>
<tr>
<td>VAR00009</td>
<td>Nearness to market &amp; shops</td>
<td>.125</td>
<td>-.004</td>
<td>.222</td>
<td>-.043</td>
<td>.727</td>
<td>.268</td>
</tr>
<tr>
<td>VAR00010</td>
<td>playgrounds for children</td>
<td>-.124</td>
<td>.054</td>
<td>.108</td>
<td>.445</td>
<td>-.078</td>
<td>.833</td>
</tr>
<tr>
<td>VAR00011</td>
<td>Availability of goods</td>
<td>.017</td>
<td>.301</td>
<td>-.081</td>
<td>-.403</td>
<td>.861</td>
<td>.158</td>
</tr>
<tr>
<td>VAR00012</td>
<td>Ventilation in flat</td>
<td>-.558</td>
<td>.683</td>
<td>-.036</td>
<td>.021</td>
<td>.307</td>
<td>.144</td>
</tr>
<tr>
<td>VAR00013</td>
<td>Bus/taxi services</td>
<td>.633</td>
<td>.465</td>
<td>.238</td>
<td>.168</td>
<td>.235</td>
<td>.240</td>
</tr>
<tr>
<td>VAR00014</td>
<td>Nearness to recreation</td>
<td>.832</td>
<td>.353</td>
<td>.170</td>
<td>.129</td>
<td>.134</td>
<td>.077</td>
</tr>
<tr>
<td>VAR00015</td>
<td>Nearness to security service</td>
<td>.208</td>
<td>.654</td>
<td>-.668</td>
<td>.226</td>
<td>.003</td>
<td>.485</td>
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<tr>
<td>VAR00016</td>
<td>Nearness to sec. school</td>
<td>.771</td>
<td>.279</td>
<td>.031</td>
<td>.275</td>
<td>-.033</td>
<td>.122</td>
</tr>
<tr>
<td>VAR00017</td>
<td>Nearness to primary school</td>
<td>.933</td>
<td>.127</td>
<td>.072</td>
<td>.148</td>
<td>.133</td>
<td>.008</td>
</tr>
<tr>
<td>VAR00018</td>
<td>Personal safety</td>
<td>.822</td>
<td>.431</td>
<td>.038</td>
<td>.193</td>
<td>.136</td>
<td>.141</td>
</tr>
<tr>
<td>VAR00019</td>
<td>Sources of energy</td>
<td>.605</td>
<td>.739</td>
<td>.016</td>
<td>.089</td>
<td>.134</td>
<td>-.102</td>
</tr>
<tr>
<td>VAR00020</td>
<td>Amount of noise</td>
<td>.461</td>
<td>.725</td>
<td>-.005</td>
<td>.126</td>
<td>-.100</td>
<td>.211</td>
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<tr>
<td>VAR00021</td>
<td>Public security</td>
<td>.614</td>
<td>.473</td>
<td>.293</td>
<td>.272</td>
<td>.072</td>
<td>-.105</td>
</tr>
<tr>
<td>VAR00022</td>
<td>Rent</td>
<td>.314</td>
<td>.339</td>
<td>-.036</td>
<td>.683</td>
<td>.050</td>
<td>.149</td>
</tr>
<tr>
<td>VAR00023</td>
<td>General cleanliness</td>
<td>.218</td>
<td>.798</td>
<td>.018</td>
<td>.188</td>
<td>.104</td>
<td>.306</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis
Rotation Method: Equamax with Normalization
The factors were named using the rotated component matrix on table 3.

The four determinants include: social and community facilities, power supply and conveniences, health facilities and sanitation and rent/water supply. The factor number, eigen values and the cumulative percentage of total variance for each of them are shown on table 3. Factors 5 and 6 on table 4 have been ignored on the basis that they do not have up to 3 variables contributing to them and loading up to 0.6 (Velicey and Fava, 1998).

### Table 4: Dimensions of factor performances (factor scores) in the twenty ‘Urbanized Villages’ in Uyo

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.19570</td>
<td>-2.49564</td>
<td>-2.08714</td>
</tr>
<tr>
<td>2</td>
<td>-0.6939</td>
<td>0.72527</td>
<td>1.61824</td>
</tr>
<tr>
<td>3</td>
<td>0.65968</td>
<td>0.65968</td>
<td>0.78167</td>
</tr>
<tr>
<td>4</td>
<td>-0.0917</td>
<td>-0.0917</td>
<td>0.13227</td>
</tr>
<tr>
<td>5</td>
<td>-0.43647</td>
<td>-0.43647</td>
<td>-0.38675</td>
</tr>
<tr>
<td>6</td>
<td>0.28715</td>
<td>0.28715</td>
<td>-0.32277</td>
</tr>
<tr>
<td>7</td>
<td>-0.48837</td>
<td>0.48837</td>
<td>0.38675</td>
</tr>
<tr>
<td>8</td>
<td>0.48837</td>
<td>0.48837</td>
<td>0.38675</td>
</tr>
<tr>
<td>9</td>
<td>-0.43647</td>
<td>-0.43647</td>
<td>-0.38675</td>
</tr>
<tr>
<td>10</td>
<td>0.28715</td>
<td>0.28715</td>
<td>-0.32277</td>
</tr>
<tr>
<td>11</td>
<td>-0.48837</td>
<td>0.48837</td>
<td>0.38675</td>
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<td>0.48837</td>
<td>0.48837</td>
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<td>-0.43647</td>
<td>-0.43647</td>
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<td>14</td>
<td>0.28715</td>
<td>0.28715</td>
<td>-0.32277</td>
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<td>-0.48837</td>
<td>0.48837</td>
<td>0.38675</td>
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<td>16</td>
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<td>0.48837</td>
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<tr>
<td>17</td>
<td>-0.43647</td>
<td>-0.43647</td>
<td>-0.38675</td>
</tr>
<tr>
<td>18</td>
<td>0.28715</td>
<td>0.28715</td>
<td>-0.32277</td>
</tr>
<tr>
<td>19</td>
<td>-0.48837</td>
<td>0.48837</td>
<td>0.38675</td>
</tr>
<tr>
<td>20</td>
<td>0.48837</td>
<td>0.48837</td>
<td>0.38675</td>
</tr>
</tbody>
</table>

Source: Author’s Data Analysis

24
1,2,3........20 represent localities

1. Factor scores show the relationship between the observations and the factors extracted.

2. Factor scores are obtained by multiplying the original data matrix by the matrix of factor loadings.

Table 4 shows the loadings on the rotated factor matrix. The rotation of the factor matrix facilitates the understanding of the performance of the variables in each of the factors. Hence, factors 5 and 6 have been ignored since less than three variables have contributed significantly to their loadings. (Velicer and Fava, 1998). All the factors were named based on the loadings of the variables as shown on this table.

Table 5: Analysis of distribution and performance of the four factors among the 'urbanized villages' in Uyo Metropolis

<table>
<thead>
<tr>
<th>Social and community facilities</th>
<th>Power supply and convenience</th>
<th>Health facilities</th>
<th>Rent/water supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uyo</td>
<td>Uyo</td>
<td>Anua Offot</td>
<td>Use Ikot Etio</td>
</tr>
<tr>
<td>Ikot Udora Oku</td>
<td>Effiat Offot</td>
<td>Anua Obio Offot</td>
<td>Ikot Akpan Oku</td>
</tr>
<tr>
<td>Eniong Offot</td>
<td>Afaha Offot</td>
<td>Ibialu Offot</td>
<td>Iba Oku</td>
</tr>
<tr>
<td>Ikot Oku</td>
<td>Nsukara Offot</td>
<td>Use Offot</td>
<td>Obio Eti</td>
</tr>
<tr>
<td>Afaha Oku</td>
<td>Itiam Eti</td>
<td>Nsukara Offot</td>
<td>Afaha Oku</td>
</tr>
<tr>
<td>Afaha Offot</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author's Analysis

1. Four significant factors extracted.
2. The performance of "urbanized villages" in relation to the four factors.
3. This also shows dimensions of housing satisfaction in the "urbanized villages".

Table 5 indicates the performance of each of the four significant factors in each of the communities chosen for study. It is from this table that the significance or otherwise of the factor is established at any of the communities.
The presence of significance of any factor at any of the communities (table 6) and the quality of any of the communities determined by the number of factors available (table 7) are all derived from (table 5).

It is possible to assess the level of acceptability of each residential locality based on the factors of housing satisfaction available at such locations. For a factor to be significantly present at a location, a loading of +0.6 and above with at least 3 or 4 variables (Velicer and Fava, 1998) on the table of factor scores (table 5) was accepted. This is about 50% of the least eigen value of the factor. This table also demonstrates the comparative advantages that exist between and among the 'urbanized villages'. Estate developers may rely on this analysis to choose prospective units of the urban sphere of influence to locate the housing projects. Secondly, for the effective management of the metropolis, this analysis provides guideline for the provision of which facility at specified locations within the urban area are required for housing satisfaction.

**FINDINGS AND CONCLUSION**

The study employed the method of factor analysis to assess twenty 'urbanized villages' for the establishment of residential housing projects in Uyo metropolis. This was done considering the various problems that render residential neighbourhoods unsatisfactory for living and results in high rate of mobility and instability. From the table above, the 'urbanized village’ ranked highest in the performance chart is Afaha Offot. In the second group are Uyo village, Itiam Etoi, and Afaha Oku. The third group includes Ibiaku Offot, Anua Obio, Atan Offot, Use Offot, Obio Etoo, Ikot Akpan Oku, Anua Offot, Nsukara Offot, Enlong Offot, Iba Oku, Ikot Oku, Ikot Udoro Oku, Use Ikot Ebio and Effiat Offot, while the fourt in the ranking includes Aka Offot and Nuetong Oku.

This analysis of the state of the localities based on the factors can provide a guide for estate developers in property investment in Uyo metropolis.

Apart from the guide, the findings may also be useful for urban managers in the provision of facilities and location of essential services.
Table 6: Quality Ranking of Urbanized Villages in YVO Metropolises According to Levels of Housing Satisfaction

<table>
<thead>
<tr>
<th>Source: Authors Analysis</th>
<th>Total</th>
<th>Spirit</th>
<th>Rent and Water</th>
<th>Healthcare and Medical Facilities</th>
<th>Safety</th>
<th>Education</th>
<th>Community Activities</th>
<th>Social and Cultural Activities</th>
<th>Satisfaction</th>
<th>Description/Remarks</th>
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</thead>
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REFERENCES


COMPARATIVE STUDY ON THE EFFECTS OF PALM OIL EFFLUENTS AND THE PAPER MILL EFFLUENTS ON THE PHYSICO-CHEMICAL QUALITIES OF SURFACE WATER BODIES (A Case of Lolo and Imo Rivers)

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ABSTRACT

A comparative study on the effects of Paper Mill Industrial effluents and Palm Oil and Kernel effluents on the physico-chemical qualities of the Imo River at Owerrinta and the Lolo River at Obinikpa Amuro in Oyiwe LGA of Imo State was made. The aim is to compare the concentration levels of the polluting factors of the two industries on the two water bodies.

It is assumed that since the two industries make use of different raw materials in their production operations, their pollution levels will be different also. Sample of water were collected for two seasons (mean values calculated) at four different points along the affected areas of the two rivers as follows: Upstream (UPS), Discharge point (DP) and Downstream I and II (DS). However, the mean results of the samples were compared with FEPA/WHO/NIS permissible limits to ascertain their degree of damage to the affected rivers. Also, the results of the two areas were compared in order to ascertain the degree of concentration of pollutants in each of the rivers. The quantitative examinations revealed that the polluting effects (concentration levels) of the elemental and chemical pollutants were higher on the Imo River as discharged by the paper mill. While the effects of the palm oil effluents depleted the level of dissolved oxygen (DO) more than the paper mill effluents. This implies that the lives of the aquatic animals and plants are affected more on the Lolo River than in the Imo River. Moreso, the polluting effects (concentration levels) of the Palm Oil effluents were higher on the physical pollutants (temperature, TDS and TSS).

Therefore, the authorities in charge of our inland water ways should guard against the approval of extreme polluting industries on the river banks no matter the amount of incentives they promise to give as well as soliciting for more government intervention for the sustainability of our inland waterways.

Key words: Imo River, Lolo River, physico-chemical, pollution, industrial effluents.
INTRODUCTION

In Nigeria, over 3000 industrial establishments exist and they vary in process technology, size, nature of raw materials used in production, nature of products produced, characteristics of wastes discharged as well as the receiving environment. (Helmer and Hespanhol, 1997).

Most of the industries that are water based in Nigeria normally find the banks of the rivers/non-seasonal streams ready-made sites for their location and as such use the surface water as immediate and convenient dump sites for their effluent wastes (Nwafor, 2010).

However, both pulp and paper mills and palm oil extraction industries are among the ten categories of industries listed in the directory of the Federal Ministry of Industries in Nigeria. These two industries use extensive water in their production process and as such they tend to locate easily near or basically on the banks of surface water bodies to minimize costs. The wastes generated by these industries are mostly discharged untreated into the surface water bodies where they are located. Ijioma and Ogwegbui (1999), stated that abatement is an option to Nigerian industries as it is regarded as involving costly treatment works and operating costs, while discharging involves little or none. Producers have plenty of financial incentives to economize on abatement.

However, in Nigeria, as in many other countries of the world, rivers that traverse through urban and rural environment witness serious pollution problems that emanate from deliberate dumping of wastes, industrial effluents, waste discharges and improper channelization of drainage discharges. These sources of pollution might result from agricultural (and its allied) activities, industrial, domestic construction or mining activities, etc.

Meanwhile, water which is one of the greatest gifts nature has provided the human environment is very important for life. It is one of the most abundant and widely distributed substances in nature (Hhamidu et al, 2010). Though water is never pure in a chemical sense, as it contains impurities of various kinds, these impurities are in both dissolved and suspended forms. The dissolved gases include H₂S, CO₂, NH₃, as well as N₂; there are dissolved minerals such as Ca, Mg and Na salts, while suspended matter include clay, silt, sand and even microbes. Bhatia (2005) stated that these impurities are natural and are derived from the atmosphere, catchment areas and soil, but they are in very low quantity and do
not pollute the water. However, these industrial effluents, when they are discharged into the water body, enrich the existing impurities and as such change the physical and chemical characteristics of the water which make it polluted water.

The paper mill industry is in the group of chemical processing industries which use raw materials as rice straw, wheat straw, bagasse, gunny, jute cutting, kenaf (Hibiscus canabinus), sarkanda grass and other crops and grasses as well as chemicals (sodium hydroxide, lime, chlorine, hypochlorite and sulphites) in the production of paper. The palm oil industry, on the other hand, is in the group of extraction industries which use the palm fruits (fruits pulp) in the extraction of edible oil known as palm oil. This oil is used in the manufacture of soap, liniment, ointments and for cooking while the oil from its kernel is used in the manufacture of margarine.

However, paper mill industrial effluents contain - (a) Lignin and its compounds (b) Low molecular weight organic (c) high molecular weight organic (d) alkali (e) fibres (f) colouring colloidal matter (g) sizing chemicals, etc (Bhatia, 2005 and Jankunaite, 2010).

The aim of this study is to compare the polluting effects of these two industries on surface water bodies. This is done by comparing the concentration levels of the polluting factors in the two rivers as generated and discharged by the two industries.

To achieve the above aim, the following objectives are to be followed:
- To identify the type of pollutants generated by the two industries since they make use of different raw materials in their production process.
- To ascertain the concentration levels of similar pollutants in water from the effluent wastes of the two industries.
- To discover among the two industrial effluents which has more polluting effects in water than the other.

Areas of study

The study areas involved were the Imo and Lolo Rivers found in the South East of Nigeria. The portion of the Imo River under study is located between longitude 7° 17'E; latitude 5° 19'N and longitude 7° 17'E; latitude 5° 18'N. It covers a distance of 3.7km (2.3miles) along the water course. It is the part of the Imo River that bye-passed Owerrinta area in Abia State. It forms the border line between Abia State and Imo State in the south east of Nigeria.

Lolo River, on the other hand, is one of the sixteen non-
seasonal tributaries of the Imo River. It traverses rural agrarian settlements of Ndiekwuru and Obinikpa communities in Amuro, Okigwe LGA of Imo State and empties into the Imo River at Okwuezi community. The most prominent human activity here is the establishment of large extensive palm tree plantations that subsequently gave rise to the location of a palm oil mill on the bank of the river. The industry is accessible through Okigwe-Owerri highway.
METHODOLOGY

The effluents being discharged into the two rivers by the industries concerned are through point sources. Since the study involves flowing rivers, the water samples studied were collected from four (4) different points along the rivers as follows: The first sampled point was at the unpolluted upstream area, at a considerable distance (between 500-1000m) before the effluents, discharge point. The second sampled point was the industrial outfall point where the effluents discharged came in contact with the water of the rivers. The third and fourth sampled points were the downstream I and II located at considerable intervals (1,200m and 1,700m from the discharge point respectively). The downstream sampled points were designed to ascertain the effects of the polluted water (concentration levels of pollutants) at the downstream area outside the discharged point, since the flowing river normally cut across jurisdictional boundaries and what happens upstream will normally affect those that use the water at the downstream area. Each water sample was collected with a 10 litre new plastic container that has been washed with hot water and detergent solution, rinsed with water and finally dried in the sun. The plastic container was immersed into the river to be filled and allowed to remain immersed for 5 minutes so as to allow the flowing river to remove and carry away any dirt on the container that is not part of the water content. The container was then lifted up and its cap replaced.

Sample Preparation

Each sample from the two rivers was first filtered using white filter paper No 110mm to remove any suspended particles. However, the filtrates were used for the laboratory analysis of selected heavy metals and other physical properties such as BOD, TDS and TSS, etc.

EXPERIMENTS AND ANALYSIS OF METALS AND OTHER PHYSICAL PROPERTIES

Metals and chemical properties of the samples were analyzed using the Flame Atomic Spectrometer (AAS) and the modified Winkler’s method (APHA/AWWA, 1985) respectively. Physical observation and the 2540c standard methods in water technology manual (1999) were used in determining some of the physical properties of the rivers. Iron (Fe) contents were determined using
the Hach iron test kit comparator with 3500 Fe standard method. While pH values were determined with 4500H + B standard method using portable digital pH meter (Hanna), the temperature of the sampled spots were determined using methods contained in the carbonated Beverage manual (2001).

### Table 1: Presentation of Results

<table>
<thead>
<tr>
<th>Physical</th>
<th>Chemical</th>
<th>Biophysical</th>
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<tr>
<td>Parameter</td>
<td>Content</td>
<td>Properties</td>
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<tr>
<td>pH</td>
<td>7.4</td>
<td>74</td>
</tr>
<tr>
<td>DO</td>
<td>10.1</td>
<td>64</td>
</tr>
<tr>
<td>BOD</td>
<td>4.3</td>
<td>54</td>
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<tr>
<td>Nitrate</td>
<td>20.3</td>
<td>34</td>
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<tr>
<td>Magnesium</td>
<td>0.6</td>
<td>4.3</td>
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<tr>
<td>Potassium</td>
<td>1.0</td>
<td>7.4</td>
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<tr>
<td>Calcium</td>
<td>0.8</td>
<td>6.9</td>
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<tr>
<td>Sodium</td>
<td>1.3</td>
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Note: NS = No specification, UPS = Upper permissible, DS = Danger level.
DISCUSSION OF FINDINGS:

The results of the polluting factors as presented in the above table revealed that the concentration level of the various elemental contents is higher in the effluents discharged from pulp and paper mill industries than the palm oil effluent waste discharges, though, the table showed that all the elemental contents for both industries fell below set permissible limits of the controlling agencies. The pH levels for both rivers showed alkaline, apart from the upstream sampled point of Lolo River which is at neutral level. The discharged wastes of the two industries turned the water to alkaline as the concentration levels increased from the points of effluent discharges. Considering the maximum permissible limit for the paper mill industrial effluents (column 6), the point of discharge (DP) from the paper mill has reached this limit. It should be noted that high value of pH affects the taste and causes soapy feel in water, though, WHO prefers < 8.0 for effective disinfection with chlorine. However, the concentration levels on both rivers are almost at the same level with a slight higher concentration from the paper mill.

Apart from phosphate concentration that is higher at Lolo River, all other chemical characteristic pollutants have higher concentration in the Imo River than in the Lolo River. Meanwhile, effluents contents discharged by both industries affected the dissolved oxygen (DO) concentration on the rivers they are discharged as witnessed from the point of discharge (DP) of both industries that DO concentration levels were lowered. It should be recalled that dissolved oxygen is what supports the lives of aquatic animals and plants and without it life inside the water will be impossible. Also, depletion of oxygen in water leads to eutrophication in the water. Though there is no limit set for dissolved oxygen by the controlling agencies, the depletion levels on both rivers showed pollution of water by both industries with Lolo River recording higher level of depletion of 2.9 or 56.96% than Imo River with 2.59 reduction or 36.02%. BOD which determines the extent of pollution in water bodies and which shows the presence of pathogenic bacteria and as such causes toxicity to man, aquatic organisms, plants and other life forms in water has concentration level of 64.98 by the paper mill effluents far higher than the permissible limits set by the controlling agencies of 50/15mg/L. However, the effluents discharged by the palm oil industry did not affect the BOD in Lolo River and they are far much below the set permissible limit. The physical properties as shown in the table revealed that temperatures on both rivers seem to be on the same
level, slightly warmer in the Lolo River, while the Imo River with paper mill effluents has temperature range from 30.2 - 31.1.

The highest temperature values for both rivers were recorded at the point of discharge and they tallied at 31.1°C but higher temperature was recorded at the Lolo River. The solids (TDS and TSS) were quite high in both rivers and have all exceeded the permissible limits considered for the type of industries under study. Thus, for the paper mill industries which recorded from 310-820mg/L, all the sampled points, including the upstream area have all exceeded the maximum limit of <200mg/L set by FEPA for pulp and paper industries. On the other hand, the Lolo River recorded a low concentration of TDS (201) at the upstream area, but recorded a quantum jump of 1850 and 1500 from the point of discharge of effluents. This showed that the palm oil industry discharges large quantities of dissolved solids whose concentration was higher than WHO, FEPA and NIS permissible limits for all categories of industries in all the sampled points from point of discharge to downstream area.

The table above showed that the total suspended solids from the upstream sampled points to downstream II of both rivers exceeded the maximum permissible limit of 30/<10mg/L set by FEPA/WHO. Thus, the palm oil industrial effluents contain higher concentration of solids (TDS and TSS) than the paper mill industrial effluents.

All mean levels were calculated from three sampled points in the polluted area (from DP-DS II).

TABLE 2 showed the comparison of the mean values of the polluting factors as generated by the paper mill industries on the Imo River and Palm oil industry on the Lolo River. The table revealed that palm oil industries generate more solids (TDS, TSS) with higher temperature and phosphates values than the paper mill industries. Also, effluents discharged from palm oil industries deplete oxygen level in water more than the effluents discharged by the paper mills.

CONCLUSION

Based on this comparative analysis, it is conclusive to state that the two industries under study generated effluents that have extreme polluting effects on the inland waterways. The results obtained revealed that effluents generated by palm oil mill have higher concentration of physical properties (Temperature, TDS and TSS) than the effluents generated by paper mills. Moreover, the palm
Oil effluents deplete the dissolved oxygen contents and increase the concentration levels of phosphates are more than the paper mill effluents.

The paper mill effluents discharged into water have higher concentrations of elemental and chemical pollutants than the palm oil effluents. The study also revealed that the paper mill effluents have more polluting effects in water than the palm oil effluents. This is obvious with the concentration of BOD, a factor which determines the extent of pollution in water and is hazardous to human health. The authorities concerned are, therefore, advised through this medium to protect our inland waterways by not approving the location of extreme polluting industries on the river banks no matter the amount of incentive they promise to give. Alternatively, they should ensure that developers treat the waste water before it is discharged in the flowing water bodies.
REFERENCES


http://www.fao.org/DOCREP/005/Y4263E/y4263e0g.htm.


PLANNING PRACTICE IN NIGERIA:
CONTRADICTIONS, CROSSROADS AND
SEARCH FOR THE WAY FORWARD

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INTRODUCTION

"I find it difficult to understand the direction of planning practice in Nigeria. What is the orientation of planning practice in Nigeria? What urban development strategy are we pursuing? Is planning practice in Nigeria guided by any philosophy of urban form?"

These were the perturbing but penetrating queries of Donald Okeke (February 13, 2010. 9:38 pm) that sparked off the keen interactive debate currently taking place on the new NITP (Nigerian Institute of Town Planners) website. The commentaries in this virtual forum — to which we shall return in more details later in this discourse — dwelt on a number of vital theoretical and practical issues. The main bone of contention, however, centres on the contradictions in planning theory/practice and how its meagre translation in our local context is tilting the discipline and profession to the crossroads of irrelevance and disrepute.

In particular, this long-drawn debate under the title, 'The Focus of Planning Practice in Nigeria' (subsequently referred to as the 'Focus of Planning Practice' debate) raised several key concerns regarding: the incongruence of "post-colonial planning theories/concepts and indigenous African urbanism, and the resultant disorienting effect on planning practice (Okeke, 2010); and changes in planning practice from "authoritarian type by public officers to public-private sector participation", and the planners' collective culpability in the current decline in the country (Sani, 2010). Other points include: the weak legal and institutional framework of planning in Nigeria; general misconception of the discipline, professional ineptitude and apparent lack of 'requisite direction' (Adediran 2010; Ekoko, 2010; Yari, 2010; Zubaux, 2010).

Perhaps, what these enthusiastic participants at this virtual roundtable or their attentive audience may not realise, is that similar ideological debates and professional rumblings are raging simultaneously elsewhere in the world. Are there any linkages between various platforms? Or is this correspondence a mere coincidence? In the actual fact, the current 'doldrums' being experienced in the planning profession in Nigeria, the source of this and other numerous altercations, is neither new nor is it restricted to the planning profession or this country alone. In effect, such clamours are a universal occurrence manifesting mainly as thrusts for ideological or paradigmatic shift (see Commonwealth Association of Planners, 2006; Harrison, 2006; Lovering, 2009; Watson, 2009).
Today, when intractable challenges of rapid urbanization, global poverty, crime/terror, climate change, and natural disasters confronting the 21st century cities have combined with other things to vitiate and trivialise conventional planning theories and approaches—issues that now constitute the major talking points at various global fora. True to the incipient contentions of the "focus of Planning Practice" debate, the adequacy and appropriateness of current planning theories, concepts and approaches in tackling emerging problems in developing cities, or cities of the global South, have been called to serious question (Commonwealth Association of Planners, 2006; Harrison, 2006; Lovering, 2009; Watson, 2009). The crux of these piling altercations which rests on simultaneous and contradictory global forces and trends will be considered in the next section.

Evidently, this article is motivated by the ongoing 'Focus of Planning Practice' debate, a novel and very commendable online initiative by the Nigerian Institute of Town Planners (NITP). The article hopes to contribute to this important dialogue on the state of planning thought and practice in the country in two ways: one, to frame the discourse in both local and regional/global contexts; and two, to make practical recommendations on the way forward. The article is organised in four sequential sections. Section One, the introductory segment in progress, is followed by the literature review in Section Two which tries to situate the subject matter within the labyrinth of literature on planning theory and practice. Section Three explores in detail the 'Focus of Planning Practice' debate and the extent to which the commentaries or entries evince the current contradictions and crossroads in Nigerian planning thought and practice. Based on the foregoing, the article concludes with key recommendations in Section Four.

LITERATURE REVIEW
In most developing countries, urban planning is known to have a very chequered history. Originating mostly from colonial administration, and sustained mainly through post-colonial ideologies and influence, the planning systems in place are more or less vestiges of Western planning heritage (Mattingly, 1990; Njoh, 2003; Watson, 2009). In Africa, this diversity has given rise to an unprecedented multiplicity of urban forms — indigenous, colonial, post-colonial, apartheid and dual or hybrid variants (see Van de Merwe, 2004). Michael Mattingly (1990: 17) implicates nee-colonial indoctrination and control in the prevailing 'import-export' logic in
African urbanism with the resultant contradictions plus ineffectiveness.

The inappropriateness arises because the form and content of controls are taken from other times and countries: the legacies of British and French colonialism, nourished after independence by heavy use of the former ruling country for education of indigenous professional and for consultant services.

It is no longer news that land use control and several other planning ideas and techniques are colonial impositions, and that most of them are proving largely unworkable in other urban dispensations. It is for this same reason that Watson (2009) absolves urban planners per se from some failings attributable to the awkward planning system(s) hoisted upon them. She argues that "in most of these regions, the planning systems in place have been either inherited from previous colonial governments or have been adopted from Northern contexts to suit particular local political and ideological ends" (p. 2260).

With the exception of a few countries like South America, Brazil, and one or two other Latin American and Middle Eastern countries, which have introduced variants of strategic planning, urban planning in the global South still largely comprises of master planning and development control. In Nigeria, for instance, pending the full implementation of the 1992 Nigerian Urban and Regional Planning Law that promises to diversify planning functions and institutional framework, the bulk of the work of planners consists of development control, which involves preparing plans, making site analysis reports and producing impact assessment reports (as required), all of which are submitted to the planning authority for approval" (Agbola, 2009: 11). For most of the other African countries, the story is more or less the same: just like Phiri (2009: 6) has noted in Zambia, deep misconception about the planning discipline itself "resulting in a deep schism or dichotomy in the planning function" as well as a planning system that is steeped in age-long land use planning, zoning and development control.

In part, the inappropriateness and ineffectiveness of these 'imported' planning arrangements stem basically from the divergent spatial, economic, and socio-cultural systems and norms at the target points (see Dike. 1979; Obudho and Saks. 1979 for African urban systems; Narumi, 1984 for the Asian equivalent). Besides such grave mismatches, there is also a sense in which these
'Imports' are outdated. This is because many of the planning approaches and laws still in operation in developing cities have either been changed many times over or have been abrogated altogether (Mabogunje, 1985: 24 for Nigeria; Watson, 2009: 2261-62 for developing countries). Another reason accounting for the inadequacy of contemporary planning systems is the sheer diversity and apparent intractability of emerging urban problems. New challenges posed by rapid urbanization, global poverty, crime/terror, climate change, and natural disasters, for instance, are instigating a new international mandate to 're-invent planning' through the adoption of "new proactive, sustainability-focused and people-centred approaches." (Commonwealth Association of Planners, 2006: 2).

What is more, the search for 'alternatives' or 'hybridised' systems that will meet both global and local-indigenous requirements have intensified (Mignolo, 2000; Gaonkar, 2001; Harmon, 2006). For Philip Harrison (2006), as we have indicated earlier in the introduction, the issue is even more compelling considering the fact that urbanisation is shifting from the global North to South, and away from the former, the quintessential domain of planning theory and practice. Harrison (2006) thinks that, barring paradigmatic reorientation, this reversal may actually constrain not just the veracity of contemporary planning theories and concepts but also their efficacy in both regions. According to him (2006:320):

This gross imbalance in the geography of knowledge production may place a major limitation on the ability of planning theory to provide substantive guidance to planning and policy-making beyond the confines of western Europe and North America, but it may also be depriving planning and policy-making in the North of ideas and insights that arise from the dynamic urban experiences of the different and diverse regions of the global South.

Hence, the idea of 'reinventing planning has become more persuasive than ever before, and many scholars and progressive planners are keying into this initiative.

Under such unsettling scenarios, the following questions seem to arise. Can there really be a dependable future for developing cities under the current situation of knowledge hegemony that largely precludes rival authentic views and argument? What should be the attitude of urban planners and scholars working in developing countries to the persisting norm of recycling moribund concepts, techniques, and regulations? Should these concerns not
rekindle our lukewarm aptitude and drive our collective zeal towards original research and authentic knowledge generation? The above queries do embody crucial issues in the crystallizing ideological drive towards fortifying planning theory and practice in Africa and the rest of the global South.

In her recent seminar paper, Watson (2009. p. 2261) has strongly advocated measures aimed at 'widening the scope of planning thought', a paradigmatic initiative envisaged to incorporate a 'view of planning from outside the global heartland where it has its origin — i.e. a view from the global South which provides a useful and necessary unsettling of taken for granted assumptions in planning, necessary for a conceptual shift in the discipline". A conceptual shift intended to neutralise the raging ideological tensions and contradictions in planning practice, which Vanessa Watson has over the years come to conceptualise as 'conflicting rationalities'. Coming at the heel of concerns over the sliding fortunes of the planning discipline, this new inventiveness targeted at improving professional acuity and effectiveness does not, however, consist in "the rejection of Occidental (Western) thought" (Harrison, 2006, p. 333) but in the attempt to turn "the concept of conflicting rationalities into a useful analytical and normative tool for planning" (Watson. 2009, p. 2273). This signifies in Harrison's (2006) view the ominous gap between 'post-colonial literature /theory' and 'post-colonial thought', a yawning void that perhaps explains prevailing ideological scuffles such as the 'Focus of Planning Practice' debate. In essence, the very bright ideas of these two erudite South African professors of urban planning boil down to a race to strengthen contemporary planning, theories and concepts in ways that will make them more amenable to many protracted urban problems such as poverty/inequality, insecurity, informality, rapid urbanization, and spatial fragmentation, to mention the major ones. Having examined the regional/global context of the subject matter, let us now come home to our own milieu.

PLANNING THOUGHT AND PRACTICE IN NIGERIA
One notable and interesting fact about the 'Focus of Planning Practice" debate is that it affords us a prismatic view of the state of planning thought and practice in the country. This is because it touches on the fundamental issues that have to do with the development (or stultification) of the planning discipline. As hinted earlier, these contradictions and crossroads are blamed on the following: the high content of colonial vestiges and the resultant
disorienting effect on planning practice: outdated curricula in the established planning schools; outmoded planning practices that are unresponsive to current trends and innovations; the weak legal and institutional framework of planning; and general professional ineptitude and apparent lack of 'requisite direction.' A situation that one of the discussants, Mustapha Zubairu (February 27, 2010), described as a self-impelled 'stale of irrelevance. This view of state of planning thought and practice in Nigeria is elaborated by Tunde Agbola (2009), who recently articulate that:

Although there is a statutory means of punishing erring planners, there has nonetheless been a lot of professional rascality which has allowed the public to cast aspersions on the profession and the professionals who practise it. Some of these poor practices arise from the inadequate conceptualization of planning, its practice in contemporary times and the inability of students and practitioners to situate the profession within the context of the rapidly changing challenges of contemporary city and regional lives. They are most often a consequence of the rigidity of academic and professional curricula, the failure of planners to take advantage of re-training and lack of exposure to innovative external ideas.

To probe further into the 'Focus of Planning Practice' debate, it is imperative to appreciate the basic structure and elements of this dialogue. This virtual roundtable commenced on February 13, 2010 at 9:38 pm, the day Donald Okeke posted his controversial queries and excerpt. At the time of study intervention, March 24, 2010 (corresponding to the date of download), there were a total of ten (10) entries or submissions by six different commentators. Whereas Donald Okeke, the instigator of the debate, made two (2) entries, Abubukar Sadiq Sani, the President, Association of Town Planning Consultants of Nigeria (ATOPCON) made three (3) entries; Kabir Yari, the NITP President had two (2) submissions; while the other discussants, Ayo Adediran, Mustapha Zubairu and Efe Ekoko made an entry each. The myriad issues raised are organised thematically for the sake of clarity, sequence, and comprehension.

**Colonial Heritage of Planning and African Urbanism**

The title of the debate or dialogue, "The Focus of Planning Practice in Nigeria" came from the subject of Donald Okeke's abridged article, presumably offered as his earnest proposal or 'recipe' for refocusing planning practice in Nigeria. The crux of his
argument rests upon his claims that "the urbanity of indigenous African cities lost its spirituality that derives from indigenous values, attitudes and institutions". This point of departure seem admissible to Kabir Yari (2010), who readily agrees that planning "has completely lost the aspects of tradition in its design but so also has the tradition, particularly most traditional crafts, lost out in modern day living". Besides this response of Yari's, most of the other comments seem to gloss over this part of Okeke's submission, concentrating entirely on his opening lead questions. This omission somehow appears to signify that, like me, most discussants most have had a hard time grappling with Okeke's 'prescription and high-sounding semantics. Although this is only an excerpt, and not the full paper, he, however, failed to clarify what he meant exactly by "sustainable urbanism" or what the so-called "task of evolving sustainable African city" entails. However, what I find even more troublesome is the unwarranted romanticism evinced in this opening of his:

This paper presents a concept of sustainable African city that relates in principle with the urban form which traditional urbanism bequeathed to Africa during the merchantile period (10th C - 15th C) ... which controlled trade on gold, ivory and precious stones with Arab merchants. Although their trade relations were not superb, their economy grew well enough to maintain fabulous towns which in contemporary times would have qualified as world cities.

Besides the semantic/ideological limitations of using the 'Sudanese desert cities' and the 'Southern forest-zone cities' as key examples of sustainable city concept in Africa, such claims are not practical and simply unverifiable.

Be it as it may, this does not in any way deny the fact that both colonial impositions and post-colonial knowledge transfers have contributed somehow in disorienting planning theory and practice in developing countries (Mabogunje, 1985; Mattingly 1990; Njoh, 2003; Harrison, 2006; Watson, 2009). Already, Mabogunje (1985; 23-24) had earlier affirmed this in Nigeria.

In consequence government enacted the Nigeria Town and Country planning ordinance (No. 4 of 1946) to provide for the re-planning, improvement and planning of towns. This ordinance was based to a
large extent on the 1932 Town and Country Planning Act of the United Kingdom. Although it has undergone considerable modification in its home country, it has remained virtually unchanged in Nigeria and constituted one of the greatest drawbacks to rational urban development in the country.

**Outdated Curricula and Planning Techniques**

Although this issue cuts across the entire debate, it was essentially Sadiq Sani, the ATOPCON President (Monday, February 15, 3:32 pm) that raised the “Collective culpability” thesis in his second entry, quoting verbatim his rather passionate and pointed opinion:

Both Town Planners in the public service, private practice and academia have responsibility for the current position of Town Planning practice in Nigeria. Most planning schools today are producing planners not by choice but because they have no other choice other than reading Town planning, hence they are not interested in Town Planning, they don’t even understand the basic principles of Town Planning and are the worst enemies of Town Planning practice, because they are within us.

Other commentators like Efe Ekokobe (March 6, 2010, 10:07am) (the only acknowledged student participant) and Mustapha Zubairu (February 27, 2010, 11:20am) share a similar view with Sadiq Sani, although they had emphasized the training and curricular deficiency components. Zubairu’s insightful comment is very instructive and sounds like the real ‘recipe’ for successful recovery of beleaguered discipline:

Nobody other than Town Planners themselves can salvage the profession from the state of irrelevance it has plunged itself into. But fortunately, I have faith in the new executive of the Institute headed by Kabir Yari. I am sure he has travelled far and wide; and had observed the practices of the profession in many African countries and beyond. We need to reinvent the profession – retrain the existing practitioners; develop a more relevant training curriculum for new generation of Town Planners; mobilize support from the UN Habitat and other related institutions to help the Institute to raise awareness of government at federal and state levels in particular on the need to rely on planners in their development effort so as to make them
effective, sustainable, bottom-up and community driven. Anything short of this will be a recipe for disaster for the profession.

Elsewhere in Africa, and indeed the entire Commonwealth nations, similar retraining and curriculum revision or development have been envisaged as one sure way of strengthening the 'local relevance and contextual engagement in planning education and practice', among other things. The significance of such ingenious collaborative efforts at restructuring the planning discipline is aptly captured in Ayo Adediran's (February, 25, 2010, 5.05 pm; emphasis, mine) terse assertion: "Our knowledge of the subject is also poor. The professional body needs to review the content of the courses being taken for qualification as Planners. (...) You cannot give what you don't have."

**Professional Ineptitude and Lack of 'requisite direction'**

But what exactly is lacking in planning theory and practice in Nigeria? This question is both tense and very complex. And to be candid, no single article or even conference panel may be able to do justice to it. But what can he deciphered from the "Focus of Planning Practice" debate and Tunde Agbola's (2009: 1) earlier cited assertion certainly betray a stumpy state of planning thought and practice. In other words, the Nigerian planning system is marked by widespread professional ineptitude and lack of "requisite direction", to use Ayo Adediran's apt phrase. Professional ineptitude and lack of 'requisite direction' are basically the two interwoven strands running through all the commentaries in this online dialogue: from Okeke's queries that invokes the "Which way Nigeria?" fervour, Sani's pointer to new directions of current practice, the non-existence or and implementation of appropriate laws and reforms. To the cautious wise counsels of Mustapha Zubairu and the NITP President, Kabir Yari, the gravity of the situation is clearly depicted in Zubairu's pointed and brilliant remark that:

The truth is the profession as it is practised in the country appears to me to be growing progressively incapable of addressing the urban management problems of 21st century Nigeria. We as Town Planners have only 20th century capability to address the complex problems of the 21st century Nigeria — rapid rate of unplanned and uncontrolled urbanization, urbanization of poverty (in all its ramifications); deteriorating urban environment; ignorance, etc. The tool of our trade — Master Plan —
has long been discovered to be grossly inadequate and incapable of addressing these problems. This is because it has been found to be too technocratic, top-down, takes too long to prepare, (and) provides little or no opportunity for real consultation with stakeholders. Kabir Yari's response to that bleak picture of the Nigerian planning thought and practice painted by Zubairu was equally very clever and constitutes a befitting ending to what I consider a most spectacular and fruitful dialogue. Apparently disturbed by this poor prospects, 'President' Yari made a clarion call for planners to close ranks (my emphasis):

I will call on our members and other participants to start to find out how we can pull ourselves back from ineffectiveness and start to bring changes in the way planners are trained, plans are prepared and implemented. We want the ordinary man in the street to benefit from our profession through improved urban efficiency, urban sanitation, faster and safer urban mobility, etc. The time to start is now.

Interestingly, this hurried urgency for fundamental revisionism in planning theory and practice in the face of overwhelming urban challenges of the 21st Century is pointing us back to the fundamental or root causes of planning derailment. This same issue was the subject of Lovering's (2009) recent diatribe on the woes and failures of the planning discipline, where he decried how the pursuit of urban 'boosterism' and speculative central city redevelopment projects, have inauspiciously contributed to latest financial/property market crash. John Lovering (2009: 4; emphasis, mine) advocates a return to the basics:

For the era of opportunity-driven pseudo-planning is over. It will work no more. In the interregnum before a new model for capitalist expansion crystallizes out... planning will face unfamiliar challenges. The positive side of this is that it will bring new demand for planning to do what it has always presented itself as doing — protecting the needs of ordinary people rather than privileged minorities, the public rather than the private interest, the future rather than the present.

It is noteworthy how both John Lovering and Kabir Yari appear to re-echo the wailing lament of Shadrach Woods in his 1975 classic titled 'The Man in the Street: A Polemic on Urbanism' during
the early inception of this momentous detour of the planning discipline.

Without presuming to have answered Donald Okeke's rhetorical questions (indeed, no one actually can), permit me to conclude with another rousing question, but this time, a more practical one, having unravelled a very fundamental planning oversight: what then is the way forward for planning practice in Nigeria?

CONCLUSION AND RECOMMENDATION

If we planners cast our minds back to the elementary courses that we took in Introduction to Urban Planning and History of Urban Planning during early days in training, we may not have much difficulty realising the veracity of this view of planning shared by Shadrach Woods, John Lovering, our own Mustapha Zubairu, and all progressive urban planners alike. Somehow, it teaches us the basic lesson that the much talked about effectiveness and relevance of the planning discipline derive not so much from the pursuit of urban forms (after all, design attributes of form and function are meaningless without human orientation and scale!) but from service delivery to the 'ordinary man (and woman) in the street'. It was primarily this goal — of course, without altogether discounting the elements of form and function — that inspired pioneers and founders of modern urban planning like Ebenezer Howard and Clarence Perry (refer to Fig. 1). I do thoroughly agree with Lovering (2009: 4) that "protecting the needs of ordinary people rather than privileged minorities, the public rather than the private interest, the future rather than the present" delineates the definitive boundary between successes and failures, or if you like, between best-practices and the redundant routines that we are trying so hard to escape in urban planning. But, until now, our interpretation of these things have been quite misleading, propelling many planning practitioners and theorists to seek either speciality or solace in what I prefer to term "over-specialisation" presumably to attain more relevance and effectiveness. In the Fig. 1 The 'Vitruvian Man' by Leonardo da Vinci: if the human figure is the principal source of proportion in Ancient and Renaissance building, human comfort and welfare ought to be the fundamental consideration in urban design undertakings, in urban scheme of things. Or do these efforts amount to merely achieving professional visibility and representation?

Nonetheless, we are at a critical time in history when the
generation, as well as the dissemination of urban knowledge are at their respective peaks. I have argued elsewhere that this profusion in urban knowledge owes its flow to the pre-eminence of 'Urban studied as a cross-disciplinary field of choice in a global environment of orchestrated pro-city trends and inclinations' (Onyebueke, 2010). Yet, like we now know, the value of this plethora of knowledge to planning is contingent on the extent to which we can interpret and apply such innovations to better the physical, economic and socio-cultural conditions of the proverbial 'ordinary man in the street'. To remain alive to our responsibilities as urban planners, this age-long goal of planning is non-negotiable: It is, in
fact, mandatory!

Time and, of course, the limited spæce allotment for a journal article will not permit an elaborate expose of the diverse abuses of this foundational planning goal in Nigerian cities or how to remedy them. Even though many obvious cases are inescapable, we shall at this rate slick to the basics. Let us consider the best example as it concerns the grave infrastructure deficiency problems of Nigerian urban dwellers. Apparent indifference of many planners and planning authorities to many of these neglects or, better put, abandonments in housing, transportation, recreation, trading places (or informal business workplaces) as well as in ensuring access to public conveniences. We quickly forget that it is the advocacy component of the planner’s repertoire that personifies him or her as an arbiter and promoter of the people’s welfare and resort to government ‘bashing’ like other less-informed Nigerians. Take for instance, how is planning in the country responding to the basic physiological needs or functions of the ordinary people? More specifically, when we receive the proverbial ‘call of nature’ in unexpected places like the city market, for example, how many of us (I have our pregnant wives in mind here) would confidently use the public toilets (that is supposing there is one available in the first place)? How many petrol stations in this country (even the so-called ‘Big-8’) can boast of decent and functional public toilets that will not embarrass anyone pressed to use them (here, I am thinking of the helpless travellers and tourists)? Should we planners fold our hands while, through such negligence or oversight, unscrupulous developers leave Nigerians and our cherished visitors (tourists), for that matter, no other decent options but to resort to ‘corner solutions’?

The crucial way forward is that we start our ‘image laundering’, retooling and comeback to relevance from this basic point of enforcement. Development control does not only consist in rigid enforcement of static forms, of whatever guise and grain, but essentially in guaranteeing the basic needs, convenience, and comfort of the urban dwellers. Adopting a people-centred planning will not only give the discipline a ‘human face’ but also imply greater incorporation of community/neighbourhood consultative for a public participation in routine planning exercises. A word, they say, is enough for the wise. Otherwise, planners will equally be guilty of the same offences Nigerians hasten to level against our politicians—the gross neglect of the people.
REFERENCE


EFFICACY OF URBAN MASTER PLANNING PARADIGM FOR MANAGING RAPIDLY GROWING NEW CAPITAL CITIES: A CASE STUDY OF THE ABUJA MASTER PLAN

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ABSTRACT

The paper sets to find out whether the application of the urban master plan paradigm has been efficacious in managing the rapidly growing New Capital City of Nigeria, Abuja, within the plan's official life's span. Focus is on the implementation of the plan proposals on land uses and environmental condition. Two null hypotheses were set and validated using hard statistics through the "t" test instrument, coupled with a review of the concept of master plan, its application and suitability to rapidly growing cities in developing countries. Cost implications of not implementing plan projects on schedule have been highlighted. Findings after the official implementation period indicate that both the master plan concept (theory) and programme proposals on land uses and environmental conditions) failed. This is because although the "causal factors " (concept, proposals, etc) were set in motion, they did not lead to the desired results within the stipulated time frame. Evidence of this outcome includes the fact that although the results of the validated hypotheses indicated that there were no significant differences between the proposed land uses and environmental condition and actual situation on the ground after the plan implementation period. The very problems which the application of the concept and the proposals set to solve or forestall the problem were found to exist. This implies that the paradigm has not delivered or is not efficacious. The paper recommends a more germane urban planning paradigm and the relevant measures for effective management of fast urbanising and dynamic new (capital) cities in Nigeria.