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URBANISATION AND URBAN ENVIRONMENT.

The implication of urbanisation on the sustainability of environmental quality in Nigerian cities

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ABSTRACT: The rate at which people move into cities from towns and villages in search of gainful employment, educational opportunities and higher standard of living is greatly alarming and of high consequential effect on the quality of urban environment. The unprecedented demand on the environment from the expanding human population and from advancing technology are causing a continuing and accelerating decline in the quality of the environment and its ability to sustain life. This paper discusses the implication of urbanisation on sustainability of environmental quality in Nigerian cities, with emphasis on housing shortages and environmental quality, environmental pollution and waste management, urban and environmental planning, and post-occupancy evaluation. Finally, useful recommendations were proffered towards achieving sustainable environmental quality in Nigerian cities.

Key words: cities, implication, quality, sustainability, urbanisation.

INTRODUCTION

The concentration of people, with attendant built and natural elements in an area usually leads to the removal of the rural character of the settlement. This process by which large numbers of people become predominantly concentrated in relatively small areas, forming cities, where opportunities such as employment, education and higher standard of living are available is known as urbanisation. Thus, urbanisation accompanies social and economic development in association with urban infrastructural inadequacies, urban waste generation and pollution.

Man is a living and active organism that can select, modify and react to his own surroundings (Akande & Olagunju, 2005). The effect of humanity on nature and the humanity's role in nature in cities or urban areas is thus a great challenge necessary to be adequately tackled in the issue of cities in Nigeria and its ability to sustain life. Therefore, environmental problems resulting from human actions on the sustainability of cities is a challenge to all the professional discipline in the field of

built environment, especially architects. Architects are well known in the building industry in areas of art and science of designing the total built environment, from site planning, building and structures design, landscape design and even to the micro level of creating furniture, all for human satisfaction and comfort. The paper therefore focused on the implication of urbanisation on the sustainability of environmental quality in Nigerian cities.

THE IMPLICATION OF URBANISATION AND RURAL-URBAN MIGRATION

Urban migration reflects many things, search for gainful employment, educational opportunities, higher standard of living, and refuge from conflict and environmentally damage areas. Africa, where the relation between economic development and urbanisation is weaker than in other regions, is currently the least urbanized major region in the world. Nevertheless, it is also the most rapidly urbanising region. In sub-Saharan Africa much of the rapid growth in the urban population reflects a combination of flight

from rural poverty and high fertility rates in urban areas. In Latin America, in contrast, urban growth has been driven more by the pull of industrialization and economic opportunity. Hence, urban growth has slowed in Mexico City, São Paulo and Buenos Aires during the past decade of economic recession (Brennan, 1999).

In Nigeria today, urban population is steadily increasing without adequate provisions of infrastructural amenities to meet up with the concentrated population in the cities. Invariably, this often leads to steady decline in the quality of the urban environment and its ability to sustain life. The following are some of the consequential effects of urbanisation and rural urban migration on the sustainability of environmental quality in Nigerian cities, which may:

- (i) lead to increase in population density,
- (ii) lead to rise in room occupancy rate/ overcrowding,
- (iii) put pressure on all aspects of social institutional and physical infrastructure,
- (iv) reduce the overall level of living and increase in abandonment of new construction and maintenance of buildings,
- (v) encourage formation of squatter settlements,
- (vi) increase demand for housing and lead to shortage of housing, (Obinna & Emeruem, 2003),
- (vii) leads to huge waste generation and environmental pollution problems.

ENVIRONMENTAL CHALLENGES WITHIN URBAN AREAS

The demands of the urban resident activities on the urban environment are enormous and of great challenge to all professionals concerned with urban environment, especially the architects. Within the context of issues of urban development, architectural profession takes the centre stage as the enabler or problem solver. This is partly due to the fact that architectural profession deals primarily with the design of the built environment.

The activities of design of building and its

surroundings rest mainly on architects whose responsibility is to adapt society to its environment. Every building activity becomes a responsibility for the architect and consequently, they are willing to re-define their professional role to adapt to changing circumstance (Abdulkarim, 2005). The Architect is undoubtedly a major actor in the design and shaping of the fabric of the urban centres and also a major stakeholder in its effective management (Onolaja, 2004).

The diversity of problems in urban centres as a result of human activities on urban environment called for architect's urgent attention. In recognition of these needs, it is pertinent to work towards an enduring solution(s) whereby the new generation Architects and current practitioners will need to be trained and be re-trained in line with the 21st century challenges. In addition to the traditional Architectural curricular, consideration needs to be given to housing shortages and environmental quality, environmental pollution and waste management, urban and environmental planning, and post-occupancy evaluation.

Housing Shortages and Environmental Quality Shelter as a necessity for human abode became scarce in cities in the face of ever high rate of population increase as against very low rate housing provision. Thus, there is much demand on housing than the available houses. Invariably, this leads to overcrowding. According to CIA the World Fact Book (2006), the population below poverty line in Nigeria is 60%. Overcrowding phenomena coupled with poverty, the need for shelter for the cities inhabitants leads to urban slums. According to Atilola (2004) urban slums development is usually as a result of squatters' activities, and contraventions of planning laws such as erection of structures on roads setbacks, open spaces meant for recreation and parks and drainage. Thus, the rapid urban population growth in Nigeria needs to be accompanied by corresponding increase in urban infrastructure development. In addition, the steadily increasing volume of vehicles in urban centres with lack of maintenance of existing roads and ever construction of new ones often leads to

heavy traffic congestion in the cities. Health facilities, drainage system and road maintenance are poorly planned and uncoordinated, while supply of portable water and electricity are highly inadequate. The peculiar housing shortage problem and inadequacy of infrastructural developments greatly contribute to the sharp decline in environmental quality of cities in Nigeria, and currently constitute a great challenge in urban areas. It is therefore necessary for the government, private sectors and individuals to be fully involved in the provision of good quality housing. Government and private sectors also need to encourage research and production of building materials that are environmental friendly. In addition, architects need to be vast in design to the need of their client(s) with adequate consideration for human activities, life-style, socio-cultural, and socio-economic characteristics, towards adaptation of the society to its environment.

Environmental Pollution and Waste Management

Environmental pollution is simply contamination of the environment by man-made substances or energy that has adverse effects on living and non living matter (Bell, 2005). Air pollution occurs as a result of the contamination of the atmosphere through emission of sulphur dioxide and carbon monoxide from vehicles and industrial plants. In addition, the concentration of production and consumption in cities constitute a greater range and possibility for high volume of household and human waste generation. This may further leads to mountains of uncollected waste left on the streets and available open spaces (Zubairu, 2004), which may later generate considerable unpleasant smell that contributes to the degradation of the air quality. On the other hand, waste management on its own is both capital and economic intensive, which means huge capital outlay is required as well as large expanse of land in suitable location. Besides, adequate water supply is required to ensure the effective waste management. Thus sewage disposal in cities where there is no effective sanitation system and enough

fund for it proper management may constitute great environmental hazards to the inhabitants thereby putting their lives and health at continuous risk. In the past, waste management was an appendage under the government setting. The government used to manage waste. Now there is a gradual shift from government funding with management being transferred into private hands. Thus, the need for effective management of all forms of waste in our urban centres by all the stakeholders, local government, immediate community, landlord-tenant association, private sector and the professionals is inevitable due to the great challenges it poses on environmental quality of cities in Nigeria. The urban dwellers also need to be educated on the effects of environmental pollution and indiscriminate waste disposal system, as well as the need for proper waste management.

Urban and Environmental Planning

The architect is undoubtedly a major actor in the design and shaping of the fabric of the urban centres, and also a major stakeholder in its effective management (Onolaja 2004). Architects need to have a good understanding of the causes and effects of urban decay and the ways to regenerate the urban centres. It is also essential to note that Architects need to know how to design with nature and proper town/urban planning. The aforementioned, makes it needful for all categories of architects to be vast in environmental planning, town/urban planning and landscaping. Urban and environmental planning is a great challenge that can easily be met through proper training of the new generation architects and retraining of the practicing architects. Besides, proper legislation and enforcement of urban planning and development control law by government and her agent respectively will be of added advantage towards achievement of a sustainable environmental quality in Nigerian cities.

Post Occupancy Evaluation

Post occupancy evaluation (POE) is very important as a source of feedback for immediate problem solving. It is also a source of documentation of failures or and

successes in building performance which may lead to re-modelling of existing buildings (Zubairu, 2002). Documentation of failures or successes in building performance is of a great necessity in view of model development for effective urban environmental quality designs, for the present that can favourably stand the test of future. Thus, the encouragement of design feedback system will go a long way to assist architects; especially it will afford them the opportunity to embrace new technology and management that can assist in sustainable design for urban environment quality.

RECOMMENDATIONS

The following are some of the fast tracks towards achieving a resourceful and sustainable environmental quality in Nigerian cities:

(i) Material research is a necessity for any meaningful built environment development. It is pertinent that research centres and educational institutions be encouraged by both government and private organisations through proper funding. This will enhance different discoveries and availability of various new local materials that will allow for choice of environmental friendly and sustainable developments. In addition, research into building performance and environmental issues should equally be encouraged.

(ii) Development and commercialization of local building materials' research findings should be ensured by the government and private organizations so as to encourage mass production and usage of environmental friendly materials for construction of a sustainable built environment.

(iii) National Universities Commission (NUC), The Nigerian Institute of Architects (NIA) and Architects Registration Council of Nigeria (ARCON) [stakeholders] needs to ensure that regular conferences and workshops are organised for the purpose of retraining the practicing architects, most especially on the principles of new urbanism. Good knowledge of these will be of help to architects to be able to offer a good and acceptable service to the urban populace.

(iv) The legislative arm of government should equally ensure proper legislation for effective urban planning and environmental protection. This will curtail activities of environmental offenders and further discourage slums development in cities.

(v) Government and the media should educate the public on the issues of environmental pollution, waste disposal, waste management and environmental quality in general as well as compliance with environmental laws.

(v) National Universities Commission (NUC), Nigerian Institute of Architects (NIA), Architects Registration Council of Nigeria (ARCON) and other stakeholders should organise for workshops on the review of architectural education curriculum with emphasis on man's relationship with his environment, most especially on the diversity of urban environment so as to aid sustainability of urban areas in Nigeria.

(vi) National Universities Commission (NUC), Nigerian Institute of Architects (NIA), and Architects Registration Council of Nigeria (ARCON) should adequately educate the new generation architects and the public on the effects of environmental pollution and waste generation.

CONCLUSION

The natural environment has metamorphosed into man-made environment due to numerous activities carried out by man in his quest for shelter, food and other industrial needs (Sada et al, 2004). The dynamism and diversity of problems in urban areas becomes a serious threat to urban environment quality vis-à-vis the sustainability of urban environment. The paper draws the attention of the stakeholders and the major actors in the design and re-shaping of the fabric of the urban centres to the housing shortages and environmental quality, environmental pollution and waste management, urban and environmental planning, and post-occupancy evaluation. In this new millennium, the scope of architectural education has to be widened in order to embrace new technology and management techniques. The modern architect has to be versatile so that he or she

can undertake tasks of different kind (Adeyemi, 2000; Zubairu, 2002). The paper therefore concludes that it is imperative for both the new generation architects and practicing architects to undergo regular training and retraining exercise on how to improve urban environment quality to aid sustainability in Nigerian urban cities.

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