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EDITORIAL

AARCHES J 6(2) publishes sixteen of the papers that the Editorial Board accepted for publication in the journal for 2007 issues. The papers were drawn from the 2006 annual conference of AARCHES, and were subjected to the usual rigorous double blind peer review process of the journal.

As in the last issue of the journal [6(1)] the papers are in three sections; namely Urbanisation and Sustainability; Education and Management; and Information and Communication Technology. This editorial focuses on the papers on Section B, which discuss education and management in Nigerian schools of architecture. The paper by Stella Zubairu presents the results of a study carried out to ascertain the condition of schools of architecture in Nigerian universities and polytechnics. It identifies problems faced by the schools and proffers recommendations on the management of the situation. Adedeji Daramola's paper discusses the globalisation process, which it affirms has considerably affected the architectural profession around the globe. It discusses the validation seminar carried out by the officials of the Commonwealth Association of Architects (CAA) and the Nigerian Institute of Architects (NIA) in Nigeria. It asserts the need for every Nigerian school of architecture to strive to meet both the CAA and the Union of International Architects (UIA) validation standards. Archibong and Diogu's paper appraises the development of architectural education in Nigeria. It examines the various areas of specialization in architecture and calls for a coordination of research efforts through the establishment of zonal centres for architectural research under the auspices of the Association of Architectural Educators in Nigeria (AARCHES) and the Nigerian Institute of Architects (NIA).

The paper by Akin Adejimi addresses the peculiar problem of architecture as a course of training, which it states is not being adaptable as distance learning because of its highly technical and practical nature. The paper discusses the generic problem of inadequate educational opportunities for Nigerian youths, and how the e-learning aspect of distance learning can be of help. It asserts that architecture can be successfully adapted as distance learning, just like any other course of training. Adedayo and Yelwa's paper examines site analysis in architectural design projects of students. It examines the present mode of site analysis presentation by students in their architectural design. Adetokunbo Ilesanmi's paper focuses on the key challenges facing architectural research and education in Nigerian universities in the 21st Century. It notes that the demands of globalization have introduced new challenges on university education in Nigeria. It discusses the challenges both at the macro-level of the University system and at the micro-level of the schools of architecture. The paper by Lawal et al. examines the need for capacity building for the training of architecture students in the Federal University of Technology, Minna. It traces the root for this need to the periodic admission policy of the university which has increased student population making facilities on ground insufficient for staff and students. Owajionyi Frank and Faustina Frank's paper takes a look at the importance of maintenance manuals for buildings and why its preparation should be an added responsibility of the building design team. It emphasizes the need for designers to consider maintenance possibilities right from the outset of the design process.

Once again the Editorial Board appreciates the contribution of the various authors to this important architectural journal and expresses its gratitude to the referees for the thoroughness in the review process.

Professor Abiodun O. Olotuah

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AARCHES J: Journal of the Association of Architectural Educators in Nigeria

NOTE TO CONTRIBUTORS

AARCHES J is a journal dedicated to the publication of articles, which are product of original research of the contributors, and which are meant to advance knowledge on the theoretical and practical aspects of the natural and the built environment. The purpose of the journal, therefore, is to provide an avenue for the dissemination of academic research findings dealing with environmental problems, planning, design and development for the purpose of advancing higher knowledge in architectural education generally, but in Nigeria, particularly. The journal also seeks to provide a forum for discourse of scholarship between teachers of architecture and researchers in related fields in the social environmental sciences.

The journal will therefore accept, for publication, articles based on original research in all aspects of both the natural and the built environment. In addition, book reviews, comments, letters, announcements and short communications on all aspects of the environment and environmental education can be accepted for publication.

Preparation of Manuscript:

Manuscripts must be in English (UK), typed double spaced on one side of A4 (210mm x 297mm) paper with a length not exceeding 6000 words (about 15 pages) inclusive of tables and figures with a 25mm margin on all sides. Three copies of the manuscript must be submitted to the Editor-in-Chief AARCHES J along with N1000 handling fee in cash, or bank draft, payable to the Financial Secretary AARCHES. Electronic submission is strongly encouraged, and should be made to aarches_2006@yahoo.com

Units, Symbols and Abbreviations:

The preferred units are the SI as defined by the ISO standard. Where it becomes necessary to employ the use of units that may not be recognized an explanatory note may be included, as a footnote, the first time such units occur. Similarly, abbreviations that are not commonly recognized must be written in full at their first mention.

Illustrations:

Illustrations in the form of maps, diagrams, graphs, charts, and drawings should be presented on transparent sheets not larger than A4 size with the same margins as the text. Such illustrations should be sequentially numbered and given brief titles written below them.

Tables:

Tables, like illustrations, if large enough to be presented on separate sheets are also to be presented as prescribed for illustrations. They shall be numbered consecutively throughout the paper (with Arabic numerals) referring to them in the text as Table 1,2,3 etc. Tables should not duplicate results presented in graphs.

References:

References shall be presented at the end of the paper using the American Psychological Association (APA) format, also known as Harvard style, or the Author/year style. The format is usually as follows:

Journal Articles:

Takem, T.A. (1998): "Roofing Sheets in Tropical Climates and the Protection against moisture" Journal of Tropical Architecture, 2(4), 25-31.

Books:

Meekyaa, U.J., Gyuse, T.T. & Uji, Z.A. (1990): Rural Urban Migration in the Third World. Yola: Paraclette Publishers.

Chapters in Books:

Alabi, T.Y. & Yobe, J.K. (1999): "Housing Without Houses" in, Koma, F.E. & Dakum, M.F. (Eds.) Urban Housing and The Urban Poor of the Third World. Jos: LECAPS Publishers (2nd edn.), 60-78

Final Submission:

All articles will undergo a double-blind peer review process. Contributors will receive copies of their refereed manuscripts for amendments (if any) as recommended by the referees. Final submissions will then be required to be made in two hard copies of the articles plus 3.5 floppy diskette or CD ROM, accompanied by a publishing fee of ten thousand naira (N10,000.00) only in cash or bank draft made payable to the Financial Secretary AARCHES. This fee is subject to review by the Editorial Board from time to time as circumstances may so dictate. Revised papers can also be submitted electronically to aarches_2006@yahoo.com

Off Prints and Reprints:

Each author will receive a copy of the journal for each published paper along with some offprints and/or reprints.

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ARCHITECTS' ROLE TOWARDS ACHIEVING EFFECTIVE ENVIRONMENTAL SANITATION IN URBAN CITIES OF NIGERIA

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ABSTRACT: *The Millennium Declaration, adopted in September 2000, is a global development agenda that comprises a set of mutually reinforcing development goals, targets and indicator, known as the Millennium Development Goals (MDGs). The Millennium Development Goals represent a renewed global effort around ; eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality and empower women, reducing child mortality, improving maternal health, combating HIV/AIDs, Malaria and other diseases, ensuring environmental sustainability on access to safe drinking water and environmental sanitation, and finally developing a global partnership for development. Millennium Development Goal 7(MDG7) focuses on environmental priorities related to sustainable development on access to safe drinking water and environmental sanitation, This paper therefore discusses the role an architect plays in shaping and subsequently improving the quality of the urban environment towards achieving an effective sanitation in Nigerian urban cites. It also looks at the challenges and workable institutional framework architectural educators have in the impartation of ideas, information and knowledge on how to enhance the built environment and sustain the ecosystem for human survival towards achieving the Millennium Development Goals (MDGs) in sanitation sector by 2015.*

Key words: *challenges, environment, millennium development goals, sanitation, sustainability.*

INTRODUCTION

At the close of the last millennium, United Nations were baffled with high rate of poverty, the impact of civil wars in many developing countries, the prevalence of natural disasters, civil strives and the ravaging of malaria and other related diseases, that constituted a source of concern for the United Nations (United Nations, 2004). The Millennium Development Goals were then derived from the United Nations Millennium Declaration, adopted by 189 nations in 2004. Most of the goals and targets were set to be achieved by the year 2015. It was during that decade that a number of global conferences took place and the main objectives of the development agenda had been defined. These goals relate to people located in urban cities of the developing nations. Despite growing awareness of the progress in the global urban transition and

the accompanying disproportionate growth of the proportion of urban residents, relatively little research attention has been paid to sanitation. Quite often urban development policies and investments do not explicitly include sanitation areas. This has posed a lot of challenges to the architects and allied professionals. Architects are supposed to have leading roles to play in the application of their knowledge and experiences to design, technologies, materials and processes to support sustainable urban cities. It is therefore, the position of this paper to discuss the roles architects are to play in achieving the millennium development goals in sanitation sector by the year 2015.

THE TREND OF GROWTH OF URBAN CITIES IN NIGERIA

In Nigeria the rate of urbanisation in the country amounts to about 3 million

people yearly, to the urban areas. Diogu (2005) states that 'the phenomenon of urbanisation is the consequence of population increase and migration from rural to urban areas and growth-centres'. The urban growth rate in Nigeria today is put at 5.8% per annum. The growth rate of urban cities in Nigeria ranks among the highest in the world. This is reflected in the rapid physical expansion of many cities. The drive to provide accommodation and services for the various activities of these urban dwellers in most cases has resulted in congestion and intense pressure upon the urban land to accommodate more buildings than is comfortable. Most of these houses also lack basic facilities such as refuse and sewage disposals. The problem of uncontrolled urbanisation in Nigeria is already with us in all our cities. Millions of Nigerians live in sub-standard and sub-human environment; this has caused slum, squalor and grossly inadequate social amenities. The result is manifested in growing overcrowding in homes and increasing pressure on infrastructure facilities and rapid deteriorating environment. Urban analysts have over the years been concerned with the implication of continued urban growth on the quality of life of inhabitants of the urban dwellers.

In 1952, 10% of the population lived in urban centres with population of 20,000 people and above. This increased to 20% and 38% in 1970 and 1993 respectively. By the year 2010, it is estimated that 60% of the population will live cities (United Nations, 2004). Subsequently this high and rapidly growing level of urbanisation has created a situation whereby the solid waste produced each day per person is on the increase making the removal or treatment of solid waste generated by households not possible. The Nigerian Environmental Study/Action Team estimated that 20kg of solid waste is generated per capita per annum in Nigerian urban cities. This amounts to 2.2million tons/year making it very difficult to maintain even a minimum standard of environmental quality. This is especially critical and for many observers the condition of solid waste disposal is the first impression of an unacceptable living

condition. The implications on sanitation include:

- The clogging of waterways when refuse is dumped indiscriminately along the watercourses and riverbanks, leading to flash floods with destructive consequences.
- The production of noxious and offensive odours as a result of ammonia, hydrogen sulphide, and ammonia when organic wastes decompose aerobically.
- The proliferation of rats and rodents, which can transmit typhoid fever, rabies and other infectious diseases.
- The obstruction of the free-flow of urban traffic when refuse is disposed onto motor ways.

This source of concern for urban cities has posed a lot of challenges to the architects and allied professionals. It is therefore imperative to consider Nigeria urban cities to have access to improved sanitation towards achieving the Millennium Development Goals (MDGs) in sanitation sector by 2015.

GLOBAL EFFORTS TOWARD SANITATION

In September 2003, Nigeria hosted the 29th water and engineering development Centre (WEDC) U.K International conference. The theme of the conference was towards Millennium Development Goals' action for water, and environmental sanitation. Since then, many other conferences, both local and international have followed towards achieving an effective sanitation in developing countries. It is worrisome that the Nigerian situation seems to be more of words than actions. Again, the Federal Republic of Nigeria is one of the 178 Governments who adopted Agenda 21 at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3rd to 14th June 1992. Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System Government, and major groups in every area in which human impacts on the

environment. The commission on sustainable development (CSD) was then created in December 1992 to ensure effective follow-up of (UNCED), to monitor and report on implementation of the agreement at the local, national, regional and international levels to aid human development in area of sanitation. The United Nations Conference on Environment and Development and Earth summit held in Rio de Janeiro in 1992 is already having a significant impact on the future of the cities. It has exposed the environmental crises like deteriorating cities and environmental sanitation. In their press release, after the ministers of housing and spatial planning meeting in Geneva on 19th September 2000, the United Nations Economic Commission for Europe (UNECE) adopted a declaration and a strategy in improving the quality of life in human settlements in the 21st century. Their strategy had a five-fold goal:

- To improve urban environments performance,
- To facilitate social cohesion and security,
- To improve land and real-estate markets and secure private rights in land,
- To promote market reforms in the housing sector,
- To promote a system of meaningful of democratic governance that responds to the needs of the local communities.

From the outlined goals, it is seen that the goals will achieve good quality living in urban cities; it is necessary that all sectors of the urban society be adequately provided for. This would ultimately foster social cohesion, which largely guarantees human health. The architectural education must therefore prepare students for the rapid changing environmental conditions in Nigerian urban cities.

ENVIRONMENTAL SANITATION EFFORTS AND POLICIES IN NIGERIAN URBAN CITIES

The history of environmental sanitation and waste management in Nigeria is closely tied to the history of local governments, consisting four evolutionary periods, namely the pre-colonial period, the

colonial period, the immediate pre- and post independent period and contemporary periods (post 1976). Each period recognises the crucial role of the local/municipal governments in sanitation and waste management but for a number of reasons, these tiers of government have not been able to perform the function effectively, therefore, federal and state governments have, from time to time intervened. Institution exists at all tiers of government (Federal, State and local governments) for sanitation and waste management. The most important at the federal level is the federal environmental protection agency (FEPA) which came into being in 1988, and whose role was largely regulatory with specific reference to solid waste management. At state level, it consisted of three main types, namely permanent, temporary and quasi-permanent institutions. The most notable of the permanent institutions is the State Environmental Protection Agency (SEPA), which have undergone many modifications in nomenclature and scope of operations overtime in some states. At the local level, the sanitation and waste management is placed in the department of health. The sanitation and waste management agencies, which assumed their present forms on the heels of the establishment of FEPA, are now playing the leading roles in waste management in states. The local governments have, therefore, been reduced in playing minor supportive roles, with low to non-existence of participation of the private sector and to general public. These state agencies have been hampered in their operations by many problems particularly those relating to financial and manpower constraints. The access to improved sanitation coverage in Nigeria urban cities is on the decline. The decline may be as a result of the rapid population growth rate, a peculiar problem in most urban cities. In Nigeria and many other developing countries, inadequate infrastructure amenity provision as regards sanitation in the face of rapid population growth constitutes a great environmental problem. Thus, the access to improved sanitation coverage in Nigerian urban cities continues to decrease and will continue to be

decreasing if proper attention is not given.

STRATEGIES FOR AN EFFECTIVE SANITATION IN URBAN CITIES OF NIGERIA

Policy Formulation

Nigerian government should implement the approved national environmental sanitation policy, which tends to give major environmental responsibilities to state and local governments. The policy has three components: the main policy itself, guidelines for its implementation; and action plan for implementation. Targets of the policy include:

- Seeking to increase access to toilet facilities in public places and in households,
- Increasing management of sewage and excreta,
- Seeking to institute school sanitation programme, and
- Provide adequate and basic infrastructure to improve quality of urban environmental sanitation. This can be done by implementing the articulated policy that will ensure the structures for sanitation are provided adequately for urban dwellers. This lack of a comprehensive implementation of urban infrastructural policy has made squatter settlements and informal sector activities like kiosks, hawkers, road side vulcanizers continued to mushroom along major streets, littering every nooks and cranny of the cities. The existing planning regulations, make little or no provisions for the urban decay, but rather place much emphasis on the detailed layouts and zoning of land use for residential, industrial and commercial activities. The residential layouts mapped out are at times unplanned, resulting in squalid settlements, characterized by poor sanitation and poor drainage. As a result, refuse are dumped indiscriminately.

Architect's Role

In keeping in line with the philosophy of architecture, and social evolution, Okpeochi (2005) states that 'it is the duty of the architect to proffer practical

solutions to the expressive requirements of his society, which in this case, is the provision of proper infrastructural development for sanitation. It is where the social relevance of our architecture is put to test, she said. Architectural profession must aim at shaping the environment for the progress of humanity. Architecture must make provision for and accommodate the changes and advancements in the human society. One of the major contributors to poor visual quality of most urban centres in Nigeria is poor in physical planning, and inadequate control by the various development and regulatory authorities. One of the goals of physical planning is the creation of an effective and attractive environment. This is achieved through stipulating building standards and regulating spatial characteristics of the various land use activities.

RECOMMENDATIONS

In achieving an effective sanitation in urban cities of Nigeria, the following are recommended:

- i. Architects should integrate adequate waste management from the design stages of the structures designed. Particularly commercial and public buildings as some designs are approved without adequate facilities for human waste disposal, such as refuse shut.
- ii. The training of architects should be geared towards an understanding of the philosophy of the social and cultural relevance of architecture to the society toward improving the quality of urban environment through design.
- iii. The architects and planners should fully understand the behavioural consequences of the design. Architects should always be given an upper hand to lead the government and society in matters concerning the built environment by responding promptly to policies and programmes so as not to remain as followers.
- iv. The Association of Architectural Educators in Nigeria and Nigerian Institute of Architects should have a properly planned enlightenment programme to make

the public more aware of the services provided by the architect, especially with reference to the built environment.

v. There should be an encouragement of other specializations to enhance the quality of the built environment.

CONCLUSION

It is important that architects understand their role in shaping the physical environment, because the quality of the urban environment has a profound influence on the quality of life of its inhabitants. Architects have a vital role to play in shaping and subsequently improving the quality of the urban environment through designs that particularly target the urban sanitation in Nigeria. Architects have the responsibility for the protecting and enhancing the beauty of the environment. It is believed that architects must be able to incorporate such consideration in all relevant aspects of the design of environment. Architects hold a distinctive and potentially influential position amongst

those who influence the form and operating characteristics of the built environment. It is a challenge therefore to architectural educators in Nigeria to workout institutional framework in the impartation of ideas, information and knowledge on how to enhance the built environment and sustain the ecosystem for human survival towards achieving the Millennium Development Goals (MDGs) in sanitation sector by 2015.

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