

Environmental  
Technology & Science  
Journal

Vol. 8 No. 2

December 2017

## Aim and Scope

The Environmental Technology and Science Journal (ETSJ) is devoted to the publication of papers which advance knowledge of practical and theoretical issues that daily plague our society. The aim of the journal is to provide an avenue for the dissemination of academic research findings from various disciplines of the environment, engineering, pure and applied sciences, arts and social science which have materials that emphasize on environmental issues.

## ETSJ Policy

ETSJ prohibits an author from submitting the same manuscript for concurrent consideration in two or more publications. The author must ensure that when a manuscript is submitted to ETSJ, the manuscript must be an original work. The Author should check the manuscript for any possible plagiarism using any program such as TURNITIN or any other software before submitting the manuscripts to ETSJ. Authors are not permitted to add or remove any names from the authorship provided at the time of initial submission without the consent of the Journal's Editor-in-Chief.

## Guide for Authors

Please read the guidelines and follow the instructions carefully; doing so will ensure that the publication of your manuscript is as rapid and efficient as possible. The Editorial Board reserves the right to return manuscripts without review that are not prepared in accordance with these guidelines.

1. Manuscripts should not be more than 15 pages of A4 paper size (including abstracts, tables, figures, references and appendices) typed in double spacing, times new roman and font size 12. Additional fee of two thousand (₦2000) Naira will be charged for every additional page in excess of 15 pages.
2. Each paper must be compiled in one column; all text should be left and right justified. The page settings to be 25cm (1 inch) each for the top, bottom, left and right margins of an A4 paper. Decimal numbering of all sections of the article is recommended (with the exception of the reference and acknowledgement sections).
3. To ensure anonymity in the peer reviewing process, articles must be structured in such a way that the title of the paper, authors' names, address, and affiliation are written on the first page, followed by abstract and the body of the paper in that order.
4. Each article should contain an abstract of not more than 300 words.
5. Each article should contain between 5 and 7 key words (avoid use of phrases).
6. Use the SI (*Systeme Internationale*) units and symbols, while Unusual Characters and symbols should be explained in a list of nomenclatures.
7. The journal's referencing style is the APA format.
8. Figures, Tables and Graphs are to be placed at the appropriate places in the paper and not at the end of the paper.
9. Acknowledgement is optional, except for researches being funded through research grant awards.
10. Authors should avoid using headers, footers and special page breaks within the manuscripts.
11. The manuscript is to be sent via electronic means to: **etsj@futminna.edu.ng** for a blind peer review, which under normal circumstance will not exceed 4 weeks, after which the status of the article will be communicated to the Author(s).

12. Author(s) with positive review will be asked to effect corrections or revisions after which the camera-ready manuscript is to be emailed to [etsj@futminna.edu.ng](mailto:etsj@futminna.edu.ng) and to be accompanied by evidence of payment of publication fee.
13. The Editorial board is not responsible for the information or views expressed by the author(s).

## Frequency of Publication

The journal is published twice a year in June and December

## Subscription Details

The 2017 subscription rates for hardcopies of the journal including postage are:

Individual within Nigeria: N2,000 per copy and N1,000 for postage

Individual outside Nigeria including postage \$ 100

Institution within Nigeria: N5,000 per copy and N1,000 for postage

Institution outside Nigeria including postage: \$ 150

## Correspondence

All correspondence should be addressed to

The Managing Editor

Environmental Technology & Science Journal

School of Environmental Technology,

Federal University of Technology, Minna-Nigeria

Email: [etsj@futminna.edu.ng](mailto:etsj@futminna.edu.ng)

Phone: 08051703663, 08036534507

## Published By

School of Environmental Technology, Federal University of Technology,  
Minna-Nigeria

## Editor- In- Chief

**Prof. O. O. Morenikeji**  
Department of Urban & Regional Planning,  
Federal University of Technology,  
Minna, Nigeria

## Deputy Editor-In- Chief/Managing Editor

**Dr R. A. Jimoh**  
Department of Building,  
Federal University of Technology,  
Minna, Nigeria

## Editorial Assistant

**Dr I. B. Muhammad**  
Department of Architecture,  
Federal University of Technology,  
Minna, Nigeria

## Editorial Committee

**Dr O. F. Adedayo**  
Department of Architecture,  
Federal University of Technology,  
Minna, Nigeria

**Dr A. D. Adamu**  
Department of Quantity Surveying,  
Federal University of Technology,  
Minna, Nigeria

**Dr I. C. Onuigbo**  
Department of Surveying &  
Geoinformatics,  
Federal University of Technology,  
Minna, Nigeria

**Dr O. A. Kemiki**  
Department of Estate Management and  
Valuation,  
Federal University of Technology,  
Minna, Nigeria

**Dr P. Ayuba**  
Department of Architecture,  
Federal University of Technology,  
Minna, Nigeria

**Dr J. E. Idiake**  
Department of Quantity Surveying,  
Federal University of Technology,  
Minna, Nigeria

**Dr A. Kawu**  
Department of Urban & Regional Planning,  
Federal University of Technology,  
Minna, Nigeria

## Editorial Advisers

**Prof. A. M. Junaid**  
Department of Urban & Regional Planning,  
Federal University of Technology,  
Minna, Nigeria

**Prof. Y. A. Sanusi**  
Department of Urban & Regional Planning,  
Federal University of Technology,  
Minna, Nigeria

**Prof. D. A. Muazu**  
Department of Building,  
Federal University of Technology,  
Minna, Nigeria

**Prof. (Mrs) S. N. Zubairu**  
Department of Architecture,  
Federal University of Technology,  
Minna, Nigeria

**Prof. I. O. Aje**  
Department of Quantity Surveying,  
Federal University of Technology,  
Akure, Nigeria

**Prof. B. T. Aluko**  
Dept. of Estate Management,  
Obafemi Awolowo University,  
Ile-Ife, Nigeria

**Prof. P. C. Nwilo**

Department of Surveying &  
Geoinformatics,  
University of Lagos,  
Lagos, Nigeria

**Prof. U. O. Nkwogu**

Department of Architecture,  
Imo State University,  
Owerri, Nigeria

## Editorial

In keeping fate with the confidence reposed in us by the School of Environmental Technology, volume 8, number 2, December 2017 edition of the Environmental Technology and Science Journal (ETSJ) is presented to our expanding readers while the research community continue in search of multifaceted solutions to the 21<sup>st</sup> Century challenges. The impact of human activities on the world is incalculable; Nigeria is faced with housing deficit, insurgency, farmer-herdsman clashes among other contemporary challenges. To this end, this edition presented seventeen well-researched articles ranging from residential property management services, spatial growth in urban settlement, diversification strategies of construction consultancy firms to special needs in Internally Displaced Camps, impact of land-use conflicts on herdsmen and communities, vehicular carbon emission on air quality and effects of diversification on resources. This edition is indeed a bumper harvest.

Kuma in the first article measured the levels of satisfaction of residents with their dwelling units and management service delivery. He found out that the residents' overall level of satisfaction did not influence significantly their decision to continue to stay in their residential dwellings. The study recommended the adoption of satisfaction evaluation as part of property management routine feedback as this will enable the property managers to improve the quality of service delivery. The second paper by Akinlotan *et al.* analysed the rate and trend of urban development in the last thirty years with a view to predicting the future rate and trend of development in Ile-Ife which could serve as a veritable planning tool for a sustainable development. The study concluded that with such an increase in land consumption rate and land absorption in Ile-Ife, there is the need for development control, land readjustment and appropriate regulations, in order to maintain a balance

between preventing urban sprawl and providing land for sustainable housing development, without jeopardizing the future need.

A case study of recent lease of Obasanjo Shopping Mall by Niger State Development Company, (NSDC) was undertaken by Olatunji *et al.* to demonstrate and illustrate the use of MS Excel for the valuation of freehold and leasehold interests in the third paper. The conclusion was that MS Excel is a versatile tool for accurate Valuation and investment advice and it is recommended that valuers should seek to be trained and retrained to use various versions available.

The fourth paper by Abdulrazaq *et al.* compared the diversification strategies of the construction consultancy firms (CCFs) in Abuja, Kaduna and Kano. The study recommended that internal expansion of business should be a major motivation for diversification of consultancy firms. In a related development, Gandu *et al.* in the fifth paper assessed e-procurement in the construction industry. The paper concluded that aggressive enlightenment programmes to be directed at stakeholders on the benefits of adopting e-procurement in the construction industry. Sustainability has increasingly become an important aspect of consideration by planners and urban managers since the publication of Brundtland report of 1987 and the Rio Earth Summit of 1992. To this end, Usman *et al.* interrogated the application of infill development strategy as a tool for sustainable urban development in Nigeria in the sixth paper. The study concluded that for a city to achieve sustainability, its urban neighbourhoods, the component parts of the city must be sustainable.

Edem-Nse *et al.* postulated in the seventh paper that due to the rise in terrorism since 2012 in Nigeria, there has been a dire need of shelter provision for internally displaced persons (IDP), with the focus of the institutions being mostly on the decision for the shelter to either be temporary or

permanent. The study thus qualitatively understudied the perception of internally displaced persons about their shelter in Abuja. The authors stated that the findings have implications in the planning of refugee camps, especially the accommodative facilities for the campers which align more to the communal system of living as opposed to individualistic spaces that are generally obtainable in IDP camps. The eighth paper by Adebayo and Ojo assessed the socio-economic and psychological effects of land use conflicts amongst Fulani herdsmen and farmers in Kogi State. In order to forestall the resultant hardships, the paper recommended that both herdsmen and community farmers be properly educated and sensitized on living together in harmony for peace to reign. In addition, policy makers should create ranches where the herdsmen could feed their cattle without moving to community farmlands. In the ninth paper, Sule examined the residential property rental values and demographic trends of Abaji in order to uncover the housing market dynamics in Abaji Area Council. The paper recommended among others that the local planning authority of the Abaji Area Council should be more proactive about development control so as to curb urban sprawl as the area is a potential destination for real estate investors and developers.

The attributes of mixed-use buildings in Ikeja Model City Plan (MCP) through focused observation in order to determine the emerging pattern of mixed-use for the area and its implications in the tenth paper was interrogated by Salami *et al.* The paper concluded that unless there are special platforms the government could use to ease implementation, the specified maximum heights by the MCP for mixed-use corridors in Ikeja is yet to be achieved due to income level of inhabitants of the area. Bello *et al.* used K-function method to determine the spatial heterogeneity of cholera epidemic in five local government areas of Kaduna State in the eleventh paper. Results revealed that the overall

spatial pattern of cholera epidemic in the study area is clustered, and the overall cholera disease risk was more concentrated in Igabi and Kaduna North LGA. The twelfth paper by Shehu *et al.* explored construction workers' perceptions of the effectiveness of safety training practices of construction firms based on two objective outcomes in Abuja. The paper recommended that construction firms and practising professionals should pay special attention to the key components of safety training design and delivery that yield better safety outcomes in terms of learning of safety knowledge, skills, and attitudes by workers.

The thirteenth paper by Iweka and Adebayo assessed the differing degrees of crowding experienced in households headed by men and households headed by women in multifamily apartments owned and operated by the Lagos State Development and Property Corporation (LSDPC) in Lagos. The paper recommended that planning, design and policy inclination towards crowding in LSDPC's multifamily apartments should be based on gender neutrality. The use of Students Industrial Work Experience Scheme (SIWES) towards enhancing skill acquisition techniques for architectural training and practice was assessed by Ryal-Net *et al.* in the fourteenth paper. The paper concluded that enhancing skill acquisition techniques for architectural training and practice using SIWES in Kaduna Polytechnic is significant and quite relevant to employability and real life of work in architecture. The fifteenth paper by Emmanuel *et al.* determined the influence of vehicular carbon emission on ambient air quality in Minna town, with a view to ascertaining the level of carbon emission, and the variation of various emissions from different vehicular classes. The carbon emission values are above the limit set by bodies such as WHO therefore, the paper recommended enforcement of relevant regulations on pollution control as it relates to vehicular carbon emission.

Duchi and Habila in the sixteenth paper examined the effects of desertification on the rural resources (livestock, crops and vegetation) in Machina Local Government Area of Yobe State. Recommendations were made to control and reverse the process of desertification in order to increase productivity, maintain the functional base of the environment, reduce crop failure, death of livestock, loss of settlement and decrease in poverty level of the populace. The last paper by Abdulraheem *et al.* attempted to identify the category of and preference for neighbourhoods by residents in Ilorin Metropolis, Kwara State. The paper concluded that neighbourhood preference is not dependent on socio-economic status or background of individuals but on perception of the attribute of a neighbourhood. The paper recommended re-creating the kind of layouts that exist in the high income residential zones in all

other neighbourhoods within the city by stakeholders.

In retrospect, we would like to appreciate those that have supported us this far most especially the authors and reviewers that continuously donate their intellectual energies by submitting their manuscripts and in reviewing the manuscripts. A journal is as good as the quality of the manuscripts submitted and reviewing done on the manuscripts. Let us do it again in 2018 and beyond.

To the contributors, keep them coming!

To the readers, enjoy this edition!

R. A. Jimoh, PhD  
Managing Editor



# Contents

- 1-13 Residents' Satisfaction with Residential Property Management Services in Abuja, Nigeria  
*Shien S. Kuma*
- 14-22 Spatial Growth in a Traditional Urban Settlement of Ile-Ife, Nigeria: A Spatio-Temporal Approach for Sustainable Development  
*Akinlotan T., Omotosho B. O. Odegbenro F.J. & Okubena M.R.*
- 23-35 Mainstreaming Information Communication Technology (ICT) in Real Estate Practice in Nigeria: Ms Excel for Valuation and Investment Advice  
*Olatunji I.A., Udoekanem, N.B., Ojetunde, I. & Kuma, S.S.*
- 36-46 Evaluation of Diversification Strategies of Construction Consultancy Firms  
*M. Abdulrazaq, R. Maiturare & Y. M. Ibrahim*
- 47-60 Assessing the Status of E-Procurement System in Nigerian Construction Industry  
*Yusuf J.G., Haruna M., Peter C.G. & Abdu, A.A.*
- 61-74 Infill Development in Nigeria: A Sustainable Development Strategy?  
*Abubakar S.U., Muhammad A.C., Adamu H.I. & Farouk U.Y.*
- 75-86 User's Cultural Specific Spatial Needs in the Internally Displaced Persons (IDP) Camps in Abuja, Nigeria  
*Edem-Nse Y.G., Muhammad, I.B. & Sani A.M..*
- 87-102 Socio-Economic and Psychological Impacts of Land Use Conflicts on Herdsmen and Local Communities in Kogi State, Nigeria  
*Adebayo M.A. & Ojo B.*
- 103-122 Analysis of Residential Property Rental Values Trends in Abaji City, F.C.T Nigeria  
*Salami, S.F., Isah, A.D. & Zubairu, S.N.*
- 123-135 Digital Mapping of Cholera in Parts of Kaduna State, Nigeria  
*Bello Z.Y., Isah, A. & Dikko, H.G.*
- 136-150 Construction Worker's Perceptions of the Effectiveness of Health and Safety Training Practices of Construction Firms in Abuja, Nigeria  
*Shehu, I.U., Ibrahim, Y.M. & Abdulrazaq, M.*
- 151-160 Effect of Household Head's Gender on Crowding in Government-Built Multifamily Apartments in Lagos  
*Iweka, A.C.O. & Adebayo, A.K..*

- 161-174      Assessment of Skill Acquisition Techniques for Architectural Training  
Using Students Industrial Work Experience Scheme in Kaduna  
Polytechnic-Nigeria.  
*Ryal-Net M.B., Obaje J. A. & Boumann E.S.*
- 175-185      Impact of Vehicular Carbon Emission on Ambient Air Quality in Minna,  
Nigeria  
*Emmanuel M., Banki, M.B., Maikudi, M. & Santali B.A..*
- 186-206      Effects of Desertification on Rural Resources in Machina Local  
Government Area, Yobe State  
*Duchi, F.C. & Habila, S.K.*
- 186-206      Perspective of Neighbourhood Preference: A Study of Ilorin City, Nigeria  
*Abdulraheem, M.O., Olorunfemi, J.F., Ajibade, L.T. & Agava, Y.H.*