

Environmental Technology & Science Journal

Vol. 13 Number 1

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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 sciences, which have materials that emphasize on environmental issues.

ETSJ Policy

Environmental Technology and Science Journal is a multidisciplinary Journal that is devoted to the publication of scholarly articles with the sole aim of becoming a flagship in built environment research internationally. Based on this, the editorial policy/implementation plan of the Editorial Committee Members is provided below as the basis for editorial decisions in order to improve the quality and visibility of the Journal.

1. The focus 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 sciences which have materials that emphasize on environmental issues. To this end, all published papers in ETSJ are expected to be aligned with the focus of the Journal.
2. Previously published articles shall not be accepted. Manuscripts should not be under consideration elsewhere, hence, they shall be original. The Author/s should check the manuscript for any possible plagiarism using any software such as TurnItIn or any other software before submitting the manuscripts to ETSJ.
3. Any manuscript submitted to ETSJ after initial editorial review (for scope, contents and subjecting it to Turnitin software) shall be blind peer reviewed by two reviewers who in the opinion of the Editorial Secretary and Managing Editor are experts in the area of the manuscript submitted. In the event of a tie, a third reviewer shall be sought.
4. Both empirical and desktop manuscripts shall be accepted for review as long as they reflect the focus of ETSJ. Desktop manuscripts are expected to be well synthesised and arguments are to be presented logically.
5. The reports of the reviewed manuscripts are checked by the Editorial Secretary in order to ensure the relevance and quality of the reviews before sending them to the contributors.
6. The Managing Editor and the Editorial Secretary are to ensure that reviewers' comments are substantially complied with by the contributors when final accepted manuscripts are submitted. Contributors are to state in the prescribed form, how the corrections pointed out are addressed. Where a contributor disagrees with any of the reviewers, rebuttal is allowed which shall be reviewed by the Managing Editor and the Editorial Secretary.
7. The Editorial Secretary shall be duly informed of the addition or removal of contributor/s when any manuscript has been accepted for publication. Reason/s must be given to justify the addition or removal.
8. The Editorial Board shall meet twice in a year, that is, before the publication of each issue in June and December. Meetings shall also be called at other times.
9. Efforts shall be made to review manuscripts within four (4) weeks, however, the review process may take longer than four (4) weeks as there may be the need to re-assign the manuscripts to other reviewers.
10. ETSJ is open access that publishes both hard copy and online versions (<https://etsj.futminna.edu.ng> and <https://www.ajol.info/index.php/etsj>) in June and December of every year.

11. Where the number of articles accepted is more than what could be published in any edition (in June or December), the accepted articles will be split into two (2) as issues 1 and 2 of that particular edition.
12. Where the number of articles accepted is not up to the required number of articles to be published, only the online version shall be published and this shall be updated until the required number is obtained when the hard copy version shall be published.
13. The School of Environmental Technology, Federal University of Technology, Minna is the owner of ETSJ and therefore, determines the tenure of each Board Member.
14. Apart from African Journals Online (AJOL) that has indexed and abstracted the journal, by 2022, efforts shall be made to have the journal indexed and abstracted in databases such as CrossRef and Microsoft Academic.

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 line spacing and font size 12 points Times New Roman style. However, abstract, tables, figures and reference list are to be typed in single line spacing. Additional fee of two thousand (N2000) 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 section).
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. The abstract should be in the following format: Introduction; purpose of the study; method/s/methodology; major results; general conclusion; recommendation and implication of findings to practice.
5. Each article should contain between 5 to 7 key words (avoid use of phrases)
6. The body of the manuscript should be interrogated along the following format:
Introduction: It is expected that the following three (3) issues shall be brought to bear in this section. One, putting the study in context in terms of background; two, stating in clear terms the problem/s identified and three, highlighting the research gap in the subject area.
Literature Review: This has to do with synthesising the current and related studies in line with the extent of work carried out in that area of study.
Methodology/materials and methods: This should be explicit in order to make replication easier.
Results and Discussion: Apart from interpreting the results, robust discussion in relation to relevant literature has to be done in order to bring to the fore areas of convergence or divergence.
Conclusion and Recommendations: It is expected that based on the results obtained, inference has to be drawn which will form the basis for the recommendations/suggestions/way forward that will be espoused.
Reference list: The acceptable referencing style is the American Psychological Association (APA). The in-text citations should be as shown:

Parentetical citations

One author (Jimoh, 2012)
Two authors (Ogunbode & Jimoh, 2020)
Three or more authors (Jimoh *et al.*, 2017)

Narrative citations

Jimoh (2012)
Ogunbode and Jimoh (2020)
Jimoh *et al.* (2017)

In a related development, the reference list should be as shown below:

Ogunbode, E.B, Makun, C.S, Ango, J.A, Hassan, I.O, Lawal, A.T. & Ibrahim S.M. (2021). Chloride Ingress Resistance of Rice Husk Ash Based Green Concrete Composites Containing Steel Fibres. *Environmental Technology & Science Journal*, 12(1), 65-73, <https://dx.doi.org/10.4314/etsj.v12i1.9>

Jimoh, R.A. & Adama, S.M. (2014). Assessment of preliminaries in relation to the total cost of renovation work in public schools in Abuja, Nigeria. *Proceedings of ICEC 2014-IX World Congress conference, Total Cost Management in Difficult Times*, organised by the Italian Association for Total Cost Management in Milan, 20th-22nd October 1-9

Jimoh, R.A (2014). Contribution of Co-operatives to Housing Provision: The Road Less Travelled in the Last 100 Years. In Y.A Sanusi, A.M Junaid, O.O Morenikeji, S.N. Zubairu, R.A. Jimoh & O.F. Adedayo (Eds.), *100 Years of Urbanisation in Nigeria* (pp. 219 – 236). School of Environmental Technology, Federal University of Technology, Minna

Oyewobi, L.O. (2014). *Modelling performance differentials in large construction organisations in South Africa*. Unpublished PhD thesis, University of Cape Town, Cape Town.

Kabir, B. (2021). *Construction management in a developing economy* (3rd ed.). Ahmadu Bello University Press

7. Use the SI (*Système Internationale*) units and symbols, while Unusual Characters and symbols should be explained in a list of nomenclatures
8. In cases where equations are part of the manuscript, Equation Editor should be used.
9. No indentation but paragraphs should be separated by a blank line. United Kingdom (UK) English should be used in the manuscript.
10. Figures, Tables and Graphs are to be placed at the appropriate place in the manuscript and not at the end of the paper
11. Acknowledgement is optional, except for researches being funded through research grant awards.
12. Author should avoid using header, footer and special page break within the manuscript.
13. The manuscript is to be sent via electronic mean to the journal email address: 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)
14. 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 and to be accompanied by evidence of payment of publication fee.
15. The Editorial board is not responsible for the information or views expressed by the Author(s)

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Institution outside Nigeria including postage: \$ 150

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Editorial

There was uniqueness in the World Environment Day that was celebrated on 5th June, 2022 and the International Co-operatives Day celebrated on 2nd July, 2022. The first one was established 50 years ago while the other celebrated 100th International Day of Co-operatives. This year's theme - Co-operatives Build a Better World; modern co-operatives as we know it today started in 1844 when a group of 28 artisans working in mills in north of England established the 1st co-operative business. This year's World Environment Day theme – OnlyOneEarth; highlights the need to recalibrate our environment regarding what and how we eat, live and move from one place to the other. There is no way we can do all these without the knowhow and they can only be achieved through research efforts. The starting point may be to leverage on the principles engendered by co-operatives societies which have made them to be able to foster economic participation, build ethical values and be resilient in times of crises. It is on this note that I present volume 13, number 1, June 2022 edition of Environmental Technology and Science Journal (ETSJ) to our expanding audience. In this edition, there are 11 articles that cut across the built environment research domain.

The 1st article by Bello and Sani stated that emotional intelligence (EI) of construction students has been found to be lower than their counterparts in other disciplines, therefore, their study using 16-item Wong and Law Emotional Intelligence Scale to assess the emotional intelligence and academic performance among quantity surveying students. This study concluded that EI of quantity surveying students gave an indication of the level of academic performance (CGPA) and therefore recommends that EI should be incorporated into academic curricula to improve the EI level of construction students.

As a result of global quest for sustainable materials to achieve a bio based economy

and low carbon foot print environment, the use of fibre to produce fibrous concrete composite has continuously received significant research attention. While several researches have been conducted on metallic and synthetic fibrous concretes, they exhibit several unavoidable drawbacks and bio fibrous concrete has proven to be a better alternative. Therefore, the effects of fibre volume fraction and fibre length on fresh properties of concrete was investigated by Ogunbode *et al.* in the 2nd article. The study observed that for fibre volume of 1% and above, the workability of concrete decreased and became very stiff with balling effect. It was seen that fresh density of PC concrete (2358 kg/m³) was higher compared to those of KBFCC (2105-2339 kg/m³), however, both values were lower than 2400 kg/m³ threshold specified by the BS code of practice. The study recommended that fibre contents lesser than 1% and 50 mm length can be used in order to have good fresh properties performance.

Sadiq *et al.* in the 3rd article evaluated the water quality of River Kaduna using the Canadian Council of Ministers of the Environment (CCME) Water Quality Index. The study concluded that the variety and level of contaminants in River Kaduna was related to the anthropogenic activities in the various parts of Kaduna Metropolis from where run-off and contaminants were received, hence, the water quality of River Kaduna is deteriorating. There is therefore the need for proper environmental education and discouragement in the use of toxic chemicals for farming so that pollution can be controlled at the source.

Assessing the variation in the level of course of study satisfaction among the undergraduate students of the Environmental Faculty/School in some selected Nigerian tertiary institutions was interrogated by Morenikeji *et al.* in the 4th article. The study recommended that courses in Environmental Faculty/School should be made more multi-disciplinary and injected with many cross-cutting subjects. Students should be regularly updated about

the latest technology in their courses and educated about other consultancy services they can render as graduates of Built Environment.

Recent advances in optical remote sensing, especially with the development of machine learning models according to Ajayi *et al.* in the 5th article have made it possible to automatically classify different crop types based on their unique spectral characteristics. To this end, a simple feed-forward artificial neural network (ANN) was implemented for the automatic classification of various crop types. The overall accuracy, including the user accuracy, proved that only a few images were incorrectly classified, which demonstrated that the errors of omission and commission were minimal.

Obaje *et al.* stated that meeting housing delivery challenges in Nigeria, there is an urgent need to develop materials and technologies that are cost effective, eco-friendly, having good user perception and showcasing cultural heritage. Hence, the 6th article evaluated the compressed earth bricks (CEB) and sandcrete blocks sustainability as building materials. The study concluded that CEB has sustainable advantage over sandcrete blocks by approximately 70%. The study therefore recommended that developers, Non-governmental organisations (NGOs), Governments housing development agencies should commence without delay the use of optimised CEB for sustainable large scale housing production in Nigeria.

The 7th article by Salawu alluded to the fact that inadequate signage systems and architectural design create physical barriers that cause uneven access to users of hospital buildings during wayfinding, which causes stress, uncertainty, and an unpleasant experience for both staff and patients. Therefore, the paper x-rayed the implications of signs on wayfinding behaviour in the design of hospitals in Nigeria using University of Ilorin Teaching Hospital, Ilorin as a reference point. The

paper advocated that the conceptual design and placement of signage and other inclusive navigation components in the hospital should be purposefully and suitably employed, simplified, useful, and appealing for inclusive access, meaning, and interpretation.

Oluwunmi and Gbarayeghe in the 8th article that research has shown that it is critical to regularly monitor academic staff performance in higher educational institutions due to the effect it has on both organisational and students' academic performance. Hence, the study assessed the influence of office layout on academic staff performance in Covenant University, Ota. The study revealed that office layout has a significant impact on performance. It was recommended, among other things, that the Management of the institution should improve on office layout in order to enhance performance. These findings imply that if the Management of the University is desirous of keeping staff performance high, it must grasp the key factors influencing their performance.

The 9th article by Olapeju and Olapeju used structural equation model to estimate the significance of effective management of toilets, interventionist measures, and punitive measures, as veritable dimensions of planning that can mitigate open defecation in Ogun state, Nigeria. The study, among all others, recommended the implementation of initiatives such as landscaping of open spaces; provision of bus terminals with adequate toilets, in the event that households members are pressed while travelling; installations of signposts warning against open defecation; connection of all residential developments to comprehensive water schemes; and enlightenment campaigns against open defecation by the authority, as planning measures that can discourage open defecation.

The deteriorating effect of acid media on cement based constructions has become a worrying problem all over the world. These

media generally occur as solutions in various branches of the industry, acid rains and mists, and acid ground-waters. A very popular form of acid attack on concrete that is usually referred to as biogenic sulphuric acid attack also occurs in both industrial and urban sewer systems. The study by Ogunbode *et al.* in the 10th article therefore explored the development of alkali-activated CPA-SHA-MK ternary blended geopolymer mortar (GPM) using sodium silicate (Na_2Si_3) and sodium hydroxide (NaOH) solutions with 9M constant concentration as alkaline activators under both the aggressive and ambient-temperature curing media. The strength losses were observed to be higher in PCM mix (12.19 N/mm^2 at 90 days) as compared to the GPMs (6.67 N/mm^2 at 90 days) while the mix incorporated 50% CPA, 33% MK and 17% RHA (C50M33R17) was observed to be better compared to other mixes in durability behaviour. The study therefore recommends C50M33R17 mix proportion for good durability performance.

Over the years, there has been a growing recognition of the challenges of aged healthcare and care preferences especially the rural aged and the need for it to be addressed. Hence, Popoola in the last paper examined the factors influencing aged preferences for healthcare services in three rural communities of Ayedaade Local Government Area of Osun State. The study revealed traditional care as the aged most preferred healthcare in the three communities and factors such as distance to the health, long waiting time and literacy level were found to be influencing their preferences. The study suggested the need to put into consideration aged preferences in planning choices connected to health care services especially those in the rural areas.

The efforts of our Reviewers are commendable! The quality of a journal is as good as the quality of the review; out of a total of 18 manuscripts received, six (6) of them (33.33%) were rejected. We are grateful to our contributors for considering and using ETSJ as a platform for disseminating their research outputs. Please, keep the manuscripts coming!

On the flip side, it is a welcome development that the Federal Government of Nigeria launched the Energy Transition Plan (ETP) on 24th August, 2022. The plan is a multipronged strategy which is developed towards achieving net-zero emissions by 2060 with regards to energy consumption in the country.

Past and current editions of the Journal can be accessed and downloaded at these web addresses:

<https://etsj.futminna.edu.ng> and
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Let us do it again, peace!

R. A. Jimoh
Managing Editor

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