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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 science which have materials that emphasize on environmental issues.

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Editorial Advisers

Editorial

Two things have so far defined 2021 in giving hope to the populace; the 1st one is the Earth Day which was celebrated on 22nd April, 2021 while the 2nd one was the International Day of Co-operatives that was celebrated on 3rd July, 2021. According to the EarthDay.org President – Kathleen Rogers, "at the heart of Earth Day's 2021 theme, Restore Our Earth, is optimism, a critically needed sentiment in a world ravaged by both climate change and the pandemic". In expressing this sentiment, we have to "rebuild better together" which was the theme of this year's International Day of Co-operatives. At the centre is the environment which continues to suffer one degradation or the other. It is on this basis that I welcome our readers to Volume 12, number 1, June edition of Environmental Technology and Science Journal (ETSJ). This edition contains nine (9) articles that cut across the built environment.

The 1st article by Haruna *et al*. assessed the air quality of solid waste dumps in residential neighbourhoods of Makurdi Town. The result showed the mean concentration of carbon monoxide (CO) gas (16.0ppm), H_2S (M =10.51ppm), and CH_4 (M = 12.17ppm) recorded in Wadata, and North Bank: CO (M=12.16ppm), H_2S (M = 4.17ppm), and CH_4 (M = 4.16ppm) recorded were above the regulatory standards recommended which if not checked will portend serious public health issues for the occupants of the areas studied.

Raheem *et al*. in the 2nd article also assessed protected green space of Eleyele Dam, Ibadan. The study concluded by recommending that further granting of approval on the land be stalled, non-compatible activities that could further lead to depletion of the green space should be discouraged and there should be thorough monitoring of the activities of people within the area.

According to Markus and Duniya in the 3rd article, researches have revealed that the fully-enclosed courtyard can enhance thermal performance provided that the appropriate Window-to-Wall-Ratio (WWR) is determined. To determine the WWR, the window-area and wall-area of the architectural space are required. Therefore, their study investigated the types of Window-to-Wall-Ratios (WWR) by identifying the types of window-area and room-area in fully-enclosed courtyard buildings in Kafanchan. The results indicated five types of window-areas, three types of room-areas and five types of WWRs. WWR3 has the highest percentage (39.1%), while WWR1 has the lowest percentage of (6%). The findings suggested that the larger WWRs are being used than the smaller ones.

The compressive strength and the durability of concrete containing an agricultural waste - *Acacia Nilotica* Seed Powder (ANSP) in 0.25%, 0.50%, 0.75% and 1% addition to the concrete mix design was evaluated by Dadu et al. in the 4th article. Results indicated that the summation of the major oxides of SiO_2 (27.7%), Al_2O_3 (4.04%) and Fe_2O_3 (6.21%) was about 38% indicating a Class C pozzolan. The study therefore recommended that 0.25% of ANSP can be added in concrete production as a retarder since it delays final setting time for about 8 hours; similarly increases the compressive strength of the concrete and improved the water absorption capacity from 2.4 to 7.4%.

The 5th paper by Yusuf *et al*. established the relationship between crime incidence and residential neighbourhood attributes towards improving safety and security in Kano Municipal Local Government Area (KMLGA). Findings from the multiple regression analysis for assault crime revealed that vacant lot/building has the strongest coefficient of determination of 0.140 and for theft crime, dead-ends-street has the strongest (0.360) as unique predictors that explained assault and theft crimes when the variance explained by other predictors in the model is controlled. The study therefore recommended that there should be improvement programmes such

as the provision for street lighting, pathway expansions, efficient waste removal, routine maintenance and repair of street lighting equipment in areas of high crime.

Communication enables exchange of ideas and instruction from one person to another. In the construction industry, effective communication among project participants helps to improve the level of understanding in order to achieve project objectives. Hence, Abdullahi *et al*. in the 6th paper assessed the communication practices adopted for managing construction projects in Abuja. Key findings of the study indicated that drawings were the most used mode of communication. Language was the most frequently stated as a barrier to effective communication by all the stakeholders. Furthermore, the site operatives were the most difficult people to communicate with during project construction phase. The study exposed the need for effective communication among stakeholders in the construction for achieving project goals.

Ganiyu *et al*. in the 7th paper assessed the organisational and behavioural factors influencing the retention of knowledge in Quantity surveying firms in Abuja with a view to establishing the relationship between the behavioural and organisational factors that influence knowledge retention. The results of analysis revealed that workers' low turnover is enhanced by proper motivation, effective trainings, good working environment, improved and effective organisational culture. Therefore, the study concludes that improvement of organisation values, beliefs and standards tend to improve workers behaviour towards achieving the goals of the organisation which encourages proper retention of the knowledge of effective workers which helps to ensure continuity in the flow of knowledge in organisations. The study recommended that employees should be properly trained by knowledgeable workers approaching retirement in order to ensure the continuity of knowledge flow in the organisation.

Despite the importance of groundwater, quality assessment of groundwater has received little attention. Therefore, Mukhtar in the 8th paper assessed the physicochemical qualities of drinking water in Nguru town, Nguru LGA, Yobe State where eight (8) samples were collected from boreholes using purposive sampling technique. The result of the student t-test showed that all the parameters were within the acceptable drinking limit specified by WHO and NSDWQ with all p-values less than the t-critical of 2.14. The study concluded that the water is suitable for drinking.

Finally, Ogunbode *et al*. in the 9th paper examined the chloride resistance performance of green concrete composites containing steel fibre and 15% RHA. The result showed that incorporation of steel fibre in RHA based concrete reduced the workability of concrete owning to its nature and affinity for water due to the presence of silica it contains. It was observed that incorporation of 1.0% steel fibre and 15% RHA in concrete provide a synergetic improvement on chloride resistance (durability) and strength when compared with the control mix. The paper recommended the utilization of steel fibre along with RHA in the production of a new alternative concrete composite that can resist chloride ingress in concrete composite.

R. A. Jimoh
Managing Editor

Contents