

Acoustical Comfort in Major Highway in Birnin Kebbi, Kebbi State-Nigeria

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Abstract : Noise has been recognized as a major source of pollution in many urban and semi-urban settlements. Noise pollution causes by vehicular movement in urban cities has reaches an alarming proportion due to continuous increases in vehicles and industrialization. This research aim to determine the geo-physical characteristics of the study area and to determine the level of noise generation and volume intensity in areas where noise levels are high within the metropolis and compare with NESREA and WHO standards. This study identified the various sources of noise, compared noise levels in various parts of the study area with recommended standards and determined the geo-physical characteristic of noise generated. A sound level meter Gm 1352, was used for the noise measurements. The study showed that the noise pollution levels measured in minimum noise level of 63.75 dBA and average maximum of 95.175 dBA, at some locations in Birnin Kebbi metropolis the noise level have exceeded the standard limits set by the World Health Organization (WHO), Federal Environment Protection Agency (FEPA). Results revealed that there was a considerable increase in noise pollution in First Bank roundabout and Haliru Abdu roundabout, attribute to high numbers of vehicular movement and road congestion within Birnin Kebbi. The study therefore concluded that there should be an enforcement and adherence to the regulation regarding noise pollution limit. The minimum average day noise level recorded was 67.225 dBA, and average maximum of 96.6 dBA is an indication that the noise level of Birnin Kebbi metropolis was highly unsatisfactory. Based on this, it is suggested that taking adequate measures and following the laid-down recommendations will reduce traffic noise to the barest minimum.

Keywords : decibel, noise level, pollution, sound level, traffic, highway

Conference Title : ICASSP 2024 : International Conference on Acoustics, Speech and Signal Processing

Conference Location : London, United Kingdom

Conference Dates : January 15-16, 2024