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Noise level mapping in University of Jos, Nigeria

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Abstract

This study mapped the distribution of noise levels within University of Jos and determined the intensity of noise at various locations within the campus at different times and days of the week. Findings were compared with the World Health Organization standards for noise levels. Major sources of noise were identified. The noise level peak days, times and places were determined and control measures recommended. A total of seventeen monitoring locations within University of Jos were selected based on land use. Three readings were obtained using a sound level meter at interval of one hour: in the morning, at noon and in the evening for a week. Results were analyzed using Statistical Package for the Social Sciences and Microsoft Excel. ArcGIS software was used to perform IDW (Inverse Distance Weighted) interpolation of the spatial distribution of noise levels in the study area. Traffic and students constituted the major sources of noise in the study environment. High noise levels above the standard limits were recorded at all selected points except for the Staff Quarters with an average value of 53.4 dB in the morning. This value was below the standard noise limit of 55 dB for residential area but above the standard limit of 50 dB for educational area. This study recommends that in order to manage and control noise pollution, the University should reassign incompatible land uses, build sound proof walls, plant trees around and within the school campus, so that noise pollution would be minimized and not interfere with academic activities.