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Assessment of Traffic Noise Levels at Selected Area in UiTM Shah Alam

Muhammad Daniael Muhammad Azuanizam, Zitty Sarah Ismail & Najmah P.S Hassan*

Structured Abstract

Background: Malaysia is undergoing a growing rate of noise pollution and most especially in the highly populated and urbanised sectors, whereby noise activities in the institutional zones are often above the threshold stipulated by the Department of Environment (DOE) Malaysia. Excessive exposure to traffic noise has been proven to negatively impact human health, which has led to sleep disorders, hearing disorders, stress, and other mental disorders.

Methods: The area monitoring was conducted to measure the noise level by using a sound level meter (SLM). Assessment was done for 3 days for each sampling point. The monitoring period was from 7:00 AM to 5:00 PM

Results: The measurement of the traffic noise level in the three areas chosen in the University of UiTM Shah Alam revealed that the level of the noise exposure was always high during the period of the monitoring. At the Jalan Ilmu 1/1 (around Faculty), the average equivalent continuous noise level (LAeq) was 70.9 dBA in which the highest maximum noise level (Lmax) was 91.1 dBA. Jalan Cemerlang 1/19B (around college) was found to have a mean LAeq of 69.8 dBA and the highest level of Lmax was 88.1 dBA, which shows that there are short-term peak noises. Jalan sarjana 1/2 (Roundabout) on the other hand displayed slightly lower mean LAeq of 70.4 dBA with Lmax of 89.0 dBA. All recorded mean values LAeq exceeded the Department of Environment (DOE) Malaysia' recommendations for the permissible sound levels in high-density urban residential and mixed development areas, which mandate that daytime LAeq should not exceed 65 dBA.

Conclusion: The primary factors contributing to these elevated levels include high traffic volume, continuous vehicular movement, and institutional land-use activities in immediate proximity to the monitoring sites. These results demonstrate a critical need for noise mitigation strategies such as optimized traffic flow management, restrictions on heavy vehicles during peak hours, the installation of noise barriers, and the integration of buffer zones in future campus developments, to enhance the quality of the academic and residential environment

Keywords: LAeq , Noise Pollution, UiTM Shah Alam, Traffic Noise

*Correspondence: najma902@uitm.edu.my
School of Chemistry & Environment, Faculty of Applied Sciences, Universiti Teknologi MARA, Shah Alam, Malaysia