ASSESSMENT AND MODELLING OF NOISE DUE TO RAILWAY ASSETS IN LUCKNOW CITY

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ABSTRACT

Railways are the second largest source of noise pollution after road traffic noise pollution and it effects the humans and the workers who travel and live in localities along the railway tracks. The various sources of railway noise which causes annoyance are warning horns, wheel-track interference noise, brake squeals, loudspeakers, trolleys on platforms etc. This study was done for Lucknow railway station which is situated in the heart of Uttar Pradesh. Lucknow railway station consists of two main sub railway stations i.e. Lucknow NR railway Station and Lucknow NE railway station which is also known as Lucknow Junction railway station. The Noise monitoring was done for outer platforms of Lucknow railway station using sound pressure level meter. The noise monitoring was done for 8 hours by considering the peak hours of Lucknow Railway station. The Modelling and mapping of railway noise was done using MAS Environmental health consultancy tool available for use for free of cost and the modelling results were validated using the on site measurements. The results revealed that the highest noise was produced in the night time for Lucknow NR railway station and in the morning time the noise was at its peak for Lucknow NE railway station. The peak noise was measured and it was found that horns are the reasons for the peak sound level in morning as well as night. The recorded peak noise for Lucknow NR railway station was 117.9 dB in the night time and for day time it was minimum i.e. 90.9 dB.

Keywords- sound pressure level (SPL),contours, sound level modelling, peak sound level