

## Assessment of Traffic Noise at Kolar Gold Fields, India

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Traffic noise produces environmental problems on surroundings. At Kolar Gold Fields (KGF), traffic load at different locations can cause noise pollution. Therefore, a detailed study was carried out at KGF in commercial, residential and silence zone. Different monitoring locations were identified in these zones and A-weighted equivalent sound pressure levels ( $L_{eq}$ ) were measured. The study was conducted on different weekdays and weekend for different periods of the day and compared with ambient noise standards. Since many variables were noted during noise monitoring, therefore, a multiple regression analysis was also carried out to develop a regression model for prediction of  $L_{eq}$ . Stepwise regression procedure was followed for the selection of most influencing variables. Model adequacy was checked using normal distribution with zero mean and constant variance, difference between F-observed and F-critical, and correlation between measured and predicted noise levels.

**Key words:** *Traffic noise, weekday, weekend, Kolar Gold Fields (KGF), regression analysis*

### Introduction

Transport noise originates from the road traffic, aircraft and rail traffic etc. Traffic noise creates more disturbance to people than other noise sources since the road network is usually laid through the very core of a rural or an urban habitat, while the rail network

areas, a great deal of noise pollution can be expected in these regions. Apparently, many studies have been conducted in various cities of India like Lucknow, Vishakhapatnam, Jaipur, Kolkata etc<sup>2-6</sup>. A study, carried out by the Central Pollution Control Board has shown that the noise level at most of the places exceeded the permissible limit in Delhi, Mumbai and other