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# ASSESSMENT OF TRAFFIC NOISE POLLUTION IN THE URBAN ENVIRONMENT IN KERALA, INDIA

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## INTRODUCTION

- Noise pollution is a serious environmental hazard, about 2/3 of total noise pollution in urban area related to traffic noise (Ashly and Anilkumar, 2016).
- As a result of urbanization, industrialisation, population growth, and technological advancements the number of vehicles is increased and thereby the severity of noise pollution is also increased (Singh et al., 2018).
- Prolonged Exposure to traffic noise causes short term and long-term health impacts such as physiological disorder, psychological disorder, feeling of annoyance and irritation, disturbances of daily activities and performances, hypertensions, heart diseases, etc (Singh et al., 2016).

## OBJECTIVE

- To assess the traffic noise pollution level in the silence zone of Malappuram Municipality, Kerala.

## STUDY AREA

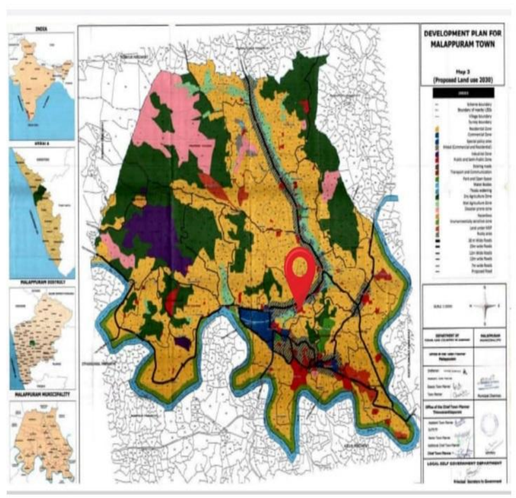


**Figure 1**



**Figure 2**

The area selected for the study is in the front of Malappuram Taluk Hospital which is in Kottapady junction (Kottapady ward No.18, **Figure 1**). The study area lies between 11°02'49'' North Latitude and 76°04'23'' East Longitude. There is a National Highway 966 passing on the front of Taluk Hospital (silence zone).

## CONCLUSION

The major factors governing the traffic noise pollution are the air horns of heavy vehicles such as trucks, buses, and ambulances moving through the city. The study recommends regular noise monitoring, strict traffic rule enforcement, public awareness, and roadside vegetation to reduce noise pollution in the study area.

## METHOD

- Noise level monitoring by portable digital sound level meter (Model Meco 970 P, **Figure 2**) and vehicle count by direct visual count method.
- Data were collected over one week, from 28th (Friday) July to 3rd (Thursday) August 2023, during three time periods: morning (8:00–9:00 am), afternoon (1:00–2:00 pm), and evening (5:00–6:00 pm).
- Continuous measurements were recorded for one hour in each session at 5-minute intervals.
- The total number of vehicles passing in unit time (one hour period) from each session were counted and recorded.
- The average maximum (Lmax) and minimum (Lmin) noise levels were calculated and expressed in decibels (dB).

## RESULTS & DISCUSSION

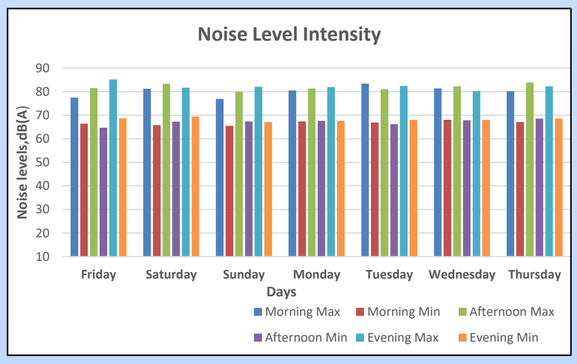


**Figure 3**

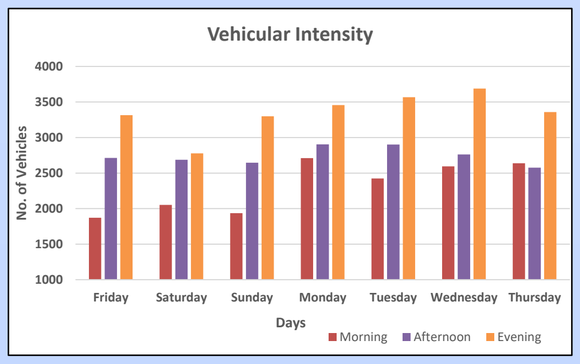


**Figure 4**

- The highest average noise level (85.2 dB) was observed on Friday evening, whereas the lowest average level (76.9 dB) was recorded on Sunday morning (**Figure 3**).
- Both values exceed the permissible daytime limit of 50 dB for silence zone prescribed by Central Pollution Control Board's (CPCB) Noise requirements for ambient noise levels, notified in the Noise Pollution (Regulation and Control) Rules, 2000 in India.
- The highest number of vehicles (3689) passed through the study area on Wednesday evening, and the lowest number of vehicles (1871) passed on Friday morning (**Figure 4**).
- The findings revealed that noise levels rising as the number of vehicles increases.

## REFERNCES

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