**Short Communication** 

# Study of vehicular noise Level in Udgir at different locations, Maharashtra, India

#### Narkhede R.K.\* and Patwari J.M.

Department of Environmental Science, Maharashtra Udaygiri Mahavidyalaya, Udgir Dist. Latur Maharashtra, India rajunarkhede@gmail.com

#### Available online at: www.isca.in, www.isca.me

Received 4<sup>th</sup> January 2016, revised 29<sup>th</sup> December 2016, accepted 31<sup>st</sup> December 2016

#### Abstract

Noise is that which disrupts daily routine and quality of life. Noise level when more than permissible level in environment then it is called noise pollution. When sound disturbs sleeping, working and conservation becomes undesirable. As noise cannot be seen, tasted and smell. It is underrated environmental problem. One of the most common pollutants is community or environmental noise. As per WHO it is emitted from all sources except industrial workplace noise. In community noise air traffic, road, rail and construction, public work with neighborhood (WHO-1999). The study emphasize on noise levels and its impact on Udgir. The main cause of headache, dizziness and high blood pressure are due to high level of noise. In this view the investigation had been made on four sites viz.. Shivaji Chowk, Methodist School, Captain K Chowk and Nanded Naka. In this study it is found that noise levels are more than permissible standards at Shivaji Chowk Methodist school, and Captain K Chowk. The db levels at Nanded Naka is at alarming levels of 55 to 60db. All other locations are having higher db levels.

Keywords: Noise Pollution, CPCB, BIS.

#### Introduction

In Latin noise is termed as nausea means unwanted, unpleasant or unexpected. Rapid Industrialization, urbanization and population growth are the major factors to impart vehicular noise pollution. Along with this expansion of roadwork and infrastructure caused severe noise pollution reported by Alam J. B. et. al<sup>1</sup>. Human health is adversely affected by the vehicular noise it is considered as an important source Baaj M.H. et. al<sup>2</sup>. The main source of noise pollution are increasing number of vehicle, small scale industries, urbanization and musical instruments Davinder Singh, Amandeep Kaur<sup>3</sup>. Deterioration of sleep annovance and stress related ischemic heart diseases are due to effects of noise K.K. Gangwar et. al.<sup>4</sup>. Psychological disorders, disturbances in daily activities and performance with heart disease are due top exposure to high levels of noise for longer period Lercher P.<sup>5</sup>, Li B. et. al.<sup>6</sup>. The inhabitants of cities are under threat of heavy air, water and noise pollution. Unlimited increase in the vehicle in developing countries –cities deteriorated the urban environmental quality. Vehicular traffic is a major challenge to urban planners. Environmental engineers to overcome road traffic noise in cities Morell S., Tyler R., Lyle D.<sup>7</sup>. The people who are continuously under stress of high noise level can cause effect on auditory, non auditory and nervous system Murthy V. K., Khanal S.N.8, Pathak V. et. al.8. Poor condition of engine, exhaust of vehicles leads to great annoyance for exposed population Rajiv B. et. al. 10. Traffic is one of the main factors for noise in the environmental appraisal of roads. Having a threat to ecological health Williams I. D. and MCcrae I. S.11.

**Study area:** As the town is on the boundary of three states Maharashtra .Andhra And Karnatka there is huge transportation of agri products and other. This made the city to trespass the number of vehicles along with it day by day the vehicles are increasing in the city as the basic need of transport inside the city. This leads to undertake this study for Noise pollution. The four sampling sites were selected which covers all the city viz Nanded Naka, Shivaji Chowk. Captain K Chowk and Methodist School.

#### Methodology

In this investigation the decibel meter of "Milwaukee" Japan is used for the recording of the Noise level for above sampling sites. Four Sites were selected and in the Morning 7.00am and at evening 07.0 pm was the timing for recording of Noise level.

#### Results and discussion

The results obtained were highest at the Shivaji chowk in all the months and Lowest was observed at Nanded Naka. At shivaji chowk the highest level was observed in the month of june it was 70db in morning and lowest was 60db in the month of August. In Evening in Shivaji Chowk the highest level of Noise was observed 97db and lowest in the month of march it is 82db. At Methodist school in the morning the highest level was observed in the month of 58db and lowest in the month of July it is 51db. In evening at Methodist the highest level was observed in the month of June 65db and lowest in the month of march 55db. In Captain k chowk it was highest in the morning

63db in July and Lowest in the month of November 55db. In evening in Captain K Chowk it was highest in the month of July it is 79db and lowest in the month of December it is 70db. At Nanded Naka the maximum level of Noise was observed in the morning is 57db in the month of February and minimum level was observed in the month of September it is 52db. In evening at Nanded Naka the Maximum level of Noise was observed in the month of September it is 65db and Minimum level was observed in the month of May it is 51db. Similar observations were found by the researchers.

Table-1: Noise levels in db - morning -10 am

| Table-1: Noise levels in db - morning -10 am |         |           |          |        |  |  |
|--|---------|-----------|----------|--------|--|--|
| Month  | Shivaji | Methodist | Capt. K. | Nanded |  |  |
|  | chowk   | School    | Chowk    | Naka   |  |  |
| Jan  | 62      | 55        | 57       | 55     |  |  |
| Feb  | 65      | 57        | 56       | 57     |  |  |
| March  | 64      | 52        | 59       | 53     |  |  |
| April  | 69      | 56        | 60       | 53     |  |  |
| May  | 63      | 58        | 61       | 57     |  |  |
| June   | 70      | 52        | 62       | 55     |  |  |
| July   | 65      | 51        | 63       | 57     |  |  |
| August                                       | 60      | 57        | 62       | 54     |  |  |
| Sept.  | 65      | 52        | 58       | 52     |  |  |
| Oct.   | 63      | 54        | 56       | 54     |  |  |
| Nov.   | 65      | 57        | 55       | 55     |  |  |
| Dec.   | 68      | 56        | 56       | 53     |  |  |

#### Conclusion

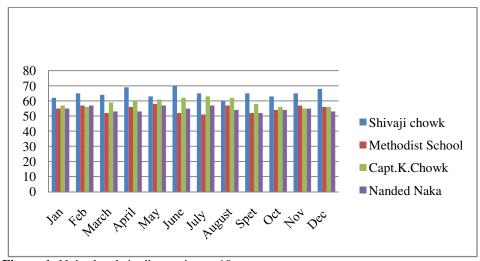
Urbanization and Industrialization is one of the most serious reasons to increase the level of Noise pollution. Increasing vehicles in the city and change in life style of people is also supporting this.

## Acknowledgement

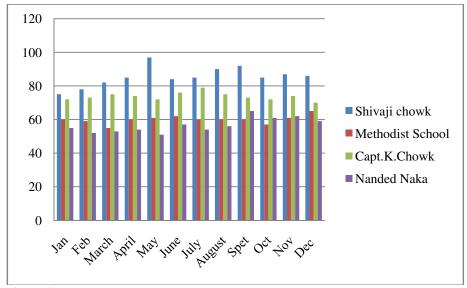
We the authors are very thankful to the Maharashtra Education Society and Principal of Maharashtra Udaygiri Mahavidyalaya, Udgir for providing laboratory support and continuous encouragement for the research.

**Table-2:** Noise levels in db - evening -07 pm

| Month-<br>2013 | Shivaji<br>chowk | Methodist<br>School | Capt. K.<br>Chowk | Nanded<br>Naka |
|----------------|------------------|---------------------|-------------------|----------------|
| Jan            | 75               | 60                  | 72                | 55             |
| Feb            | 78               | 59                  | 73                | 52             |
| March          | 82               | 55                  | 75                | 53             |
| April          | 85               | 60                  | 74                | 54             |
| May            | 97               | 61                  | 72                | 51             |
| June           | 84               | 62                  | 76                | 57             |
| July           | 85               | 60                  | 79                | 54             |
| August         | 90               | 60                  | 75                | 56             |
| September      | 92               | 60                  | 73                | 65             |
| October        | 85               | 57                  | 72                | 61             |
| November       | 87               | 61                  | 74                | 62             |
| December       | 86               | 65                  | 70                | 59             |



**Figure-1:** Noise levels in db-evening-at 10 am



**Figure-2:** Noise levels in db-evening-at 07 pm.

### References

- 1. Alam J.B., Jobair. J. Rahman M.M., Dikshit A.K. and Khan S.K. (2006). Study on traffic noise level of sylhet by multiple regression analysis associated with health hazardsl, Iran. *J. Environ. Health. Sci. Eng.*, 3(2), 71-78.
- **2.** Baaj M.H., El-Fadel. M., Shazbak S.M. and Saliby E. Odeling (2001). Modeling noise at elevated highways in urban areas: a practical application. *Journal of Urban Planning and Development*, 127(4), 169-180.
- **3.** Singh Davinder and Kaur Amandeep (2013). Study of Traffic Noise Pollution at different location in Jalandhar City, Punjab, India. *International Journal of Environmental Sciences and Research*, 2(2), 135-139.
- **4.** Gangwar K.K., Joshi B.D. and Swami A. (2006). Noise pollution at Four Selected intersection in commercial areas of Bareilly Metropolitan City, UP. *Him. J.Env & Zoology*, 20(1), 75-77.
- **5.** Lercher P. (1996). Environmental Noise and Health: an integrated research perspective. *Environmental International*, 22, 117-129.

- **6.** Li B., Taoa S., Dawsona. R.W., Caoa. J. and Lamb. K.A. (2002). GIS based road traffic noise prediction model. *Applied Acoustics*, 63, 679-691.
- 7. Morell S. Tyler R. and Lyle D. (1997). a review of health effects of Aircraft Noise. *Australian and New Zeeland Journal of Public Health*, 21, 221-236.
- **8.** VK Murthy, AK Majumder, SN Khanal (2007). Assessment of traffic noise pollution in Banepa, a semi urban town of Nepal, Kathmandu university. Journal of science, engineering and technology, 1, 1-9.
- **9.** Pathak V., Tripathi B.D. and Mishra V.K. (2008). Evaluation of traffic Noise pollution and attitudes of exposed individuals in working place. *Atmospheric environment*, 42(16), 3892-3898.
- **10.** Hunashala Rajiv B. and Patil Yogesh B. (2012). Assessment of noise pollution indices in the city of Kolhapur, India. *Procedia Social and Behavioral Sciences*, 37, 448-457.
- **11.** Williams I.D. and MCcrae I.S. (1995). Road Traffic Nuisance in residential and Commercial area. *Science Total Environment*, 169, 75-82.