MANTECH Publications

Journal of Ceramics and Concrete Technology
Volume 4 Issue 2
ISSN: 2457-0826 (Online)

Impact of Noise Pollution in Kota City

Prof. Trapti Sharma

H.O. D

Department of Humanities and Social Sciences

Maharishi Arvind International Institute of Technology (MAIIT), Kota

Corresponding author's email id: *dr.traptisharma@gmail.com **

Abstract

Noise pollution or noise interruption is the troubling or avoidable noise that may destruction the activity or equilibrium of human or animal life. The reason of most outside noise is mainly cause by machines and transportation system like motor vehicles, airplane, and trains. Noise pollution affects both health and behaviour of human beings. Unwanted sound (noise) can have psychological effect. Noise pollution can basined on hypertension, high stress levels, hearing loss, sleep disturbances. The ear has the extraordinary ability to handle an enormous range of sound levels. The decibel (abbreviated dB) is the unit of sound which is used to calculate the intensity of sound. The decibel scale is a slightly abnormal because the human ear is very sensitive. Some people with very good hearing can hear sounds down to minus15 dB. If a sound reaches 85 dB or stronger then it can cause permanent damage to hearing. In Kota city noise pollution is becoming a problem. After survey of different parts of Kota we found that Maximum noise pollution at 8pm 88 dB in Vivekanand circle & 66dB in MBS circle. Minimum at 6am 38dB in Gumanpura choraha.

Keywords: *Decibel, Noise, Sound level, Noise Pollution*

INTRODUCTION

The word noise is resulted from Latin word "Nausea" implying 'unnecessary sound' or unexpected' or objectionable

Noise pollution is established as a major problem for the quality of life in city all over the world. Because of the increase in the number of cars and industrialization, noise pollution has also increased. Traffic

Page 5-10 © MANTECH PUBLICATIONS 2019. All Rights Reserved

noise is one of the most instant and identifiable environmental problem related with rapid industrialization, urbanization and population growth. Rapid urbanization, industrialization, development of road network and infrastructure caused serve noise pollution trouble. Traffic noise is measured as one of the main sources of noise pollution that negatively affects human.

The rising number of vehicles, musical instruments, small scale industries, and urbanization performance are the main source of noise pollution. Noise effects may include irritation, deterioration of sleep value and stress-related ischemic heart disease. Generally high reporting to noise level may cause emotion of annoyance and irritation, damage to auditory mechanisms, number of health related effects like physiological disorders, psychological disorders, disturbance of daily activities and performances, hypertensions and coronary heart disease (CHD) or coronary artery disease.

He most serious health hazards associated with high level of noise exposure is deafness which initially causes temporary hearing problem or deafness while prolonged exposure to high noise level causes permanent deafness hearing damage. It causes significant health effects, such as cardiovascular problems, increased levels of diabetes, change in social behavior and quality of life (WHO.1980, 2001). Currently a day, noise pollution is measured as one of the main trouble of urban community which has many hazardous effects on urban environment and may result in a great contract of expenses on the society and traffic can be considered as the main source of noise pollution in Kota.

METHODOLOGY

In this study an effort is made to compare the noise level in some main areas of Kota city during the morning, day and evening hour traffic using sound level meter. The readings were taken during early hours of the day (6:00 AM, 10:00 AM), during day (2:00 PM), and during evening rush hours (6:00 PM, 8:00 PM) and with those readings comparison of noise level are done.

The Comparison of noise data is plotted in the form of column chart, three graphs contain nine different area of city so that it makes convenient to differentiate the noise, Last graph contain average values of noise of nine areas of city. In each area for each a minute readings were taken almost for 15 minutes. Noise measurements were

Page 5-10 © MANTECH PUBLICATIONS 2019. All Rights Reserved

done at circles (choraha) of that place, area. Sound level meter type SL-4001 with the capacity of measuring noise from 30 dB to 130 dB was used for proportions. This study conducted repeatedly and the average value is taken for the results analysis. This study is done to identify the amount of noise generated at different time and different place during morning, day and evening hours so that we can identify how much the city is affected by noise pollution.

A site map of Kota city to view all areas that are chosen for sound level measurement



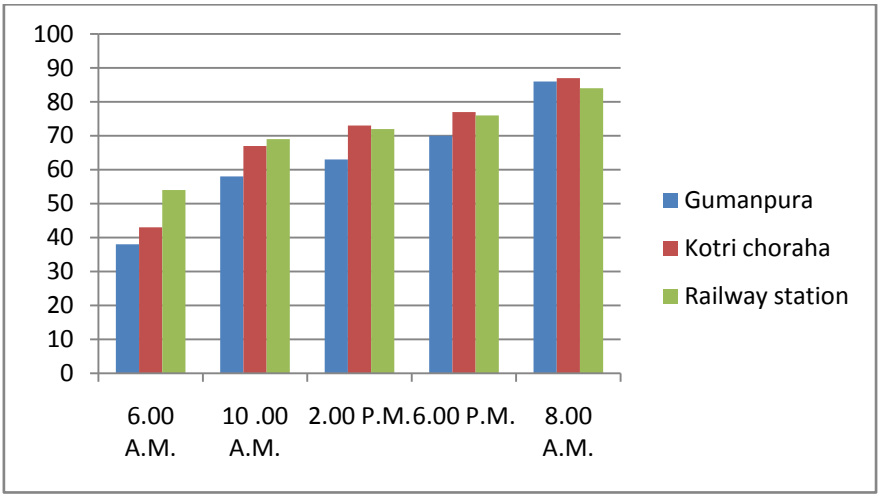
Page 5-10 © MANTECH PUBLICATIONS 2019. All Rights Reserved

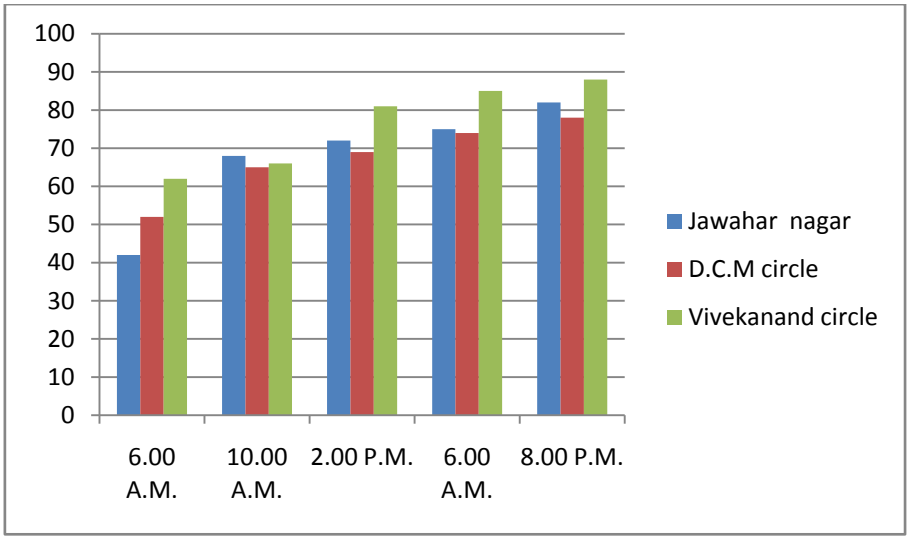
Table:-1

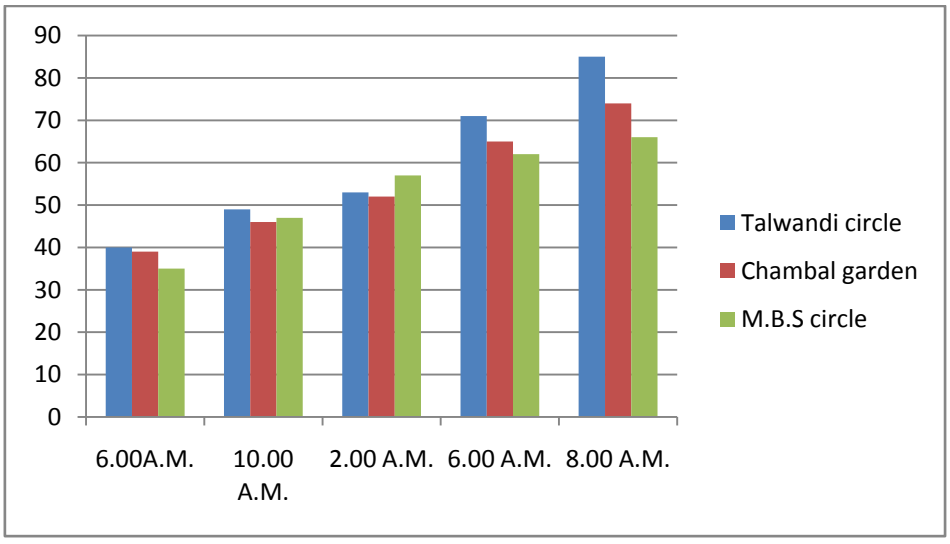
S.NO.	NAME OF CIRCLE	6 .00 A.M. (dB)	10 .00 A.M. (dB)	2.00 A.M. (dB)	6.00 P.M. (dB)	8.00 P.M. (dB)
1	**Gumanpura Choraha**	38	58	63	70	86
2	**Kotrichoraha**	43	67	73	77	87
3	**Railway station circle**	54	69	72	76	84
4	**Jawaharnagar**	42	68	72	75	82
5	**D.C.M circle**	52	65	69	74	78
6	**Vivekanand circle**	62	66	81	85	88
7	**Talwandi circle**	40	49	53	71	85
8	**Chambal garden circle**	39	46	52	65	74
9	**M.B.S circle**	35	47	57	62	66
10	**Average value of circles All**	45	61	66	73	82

Page 5-10 © MANTECH PUBLICATIONS 2019. All Rights Reserved

All graph contain at Y-axis noise in dB (decibels) & in X-axis time in am, pm.

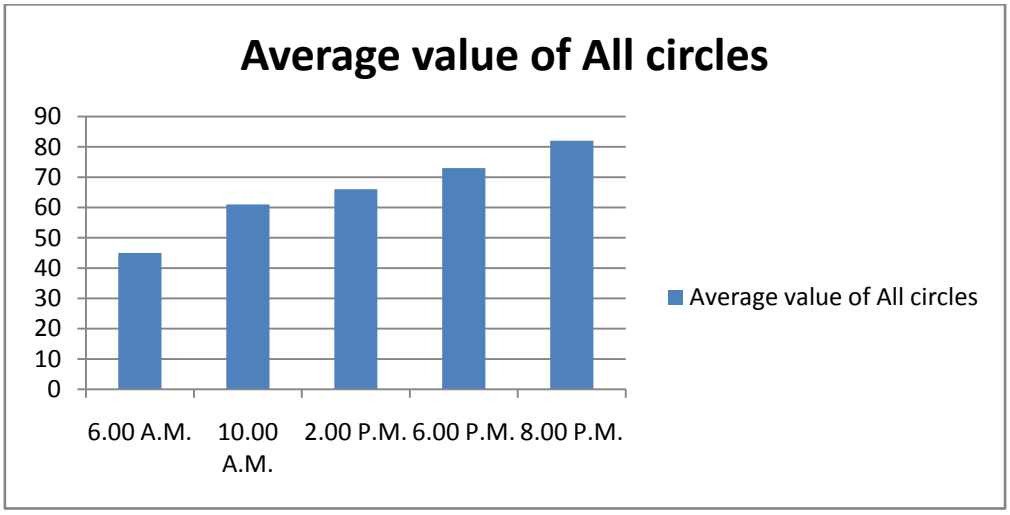






Page 5-10 © MANTECH PUBLICATIONS 2019. All Rights Reserved

This graph shows sound level of three different areas of Kota city



RESULT

It was observed that the level of Noise Pollution in Kota city was Maximum at 8pm 88dB in vivekanand circle& 66dB in MBS circle. Minimum at 6am 35 dB in M.B.S circle, 38dB in Gumanpurachoraha. Ratio obtained after examining readings at 6:00 am 1.77, 10:00 am 1.5, 2:00 pm 1.557, 6:00 pm 1.634, 8:00 pm 1.33.Average value of all reading at 6:00 am 45dB, 10:00 am 61dB, 2:00 pm 66dB, 6:00 pm 73dB, 8:00 pm 82dB.

CONCLUSION

We had a survey on noise pollution in different parts of Kota city we found maximum noise pollution in Vivekanand circle and minimum in M.B.S circle. Noise pollution can be minimized by the following ways:

Use of noise barriers, limitation of vehicle speeds, alteration of road way surface texture, limitation of heavy duty vehicles, use of traffic controls that smooth vehicle flow to reduce braking and acceleration, innovative tire design. waaz Foundation is an Indian NGO effective to control noise pollution from different sources in Mumbai through support, public interest proceedings, awareness, and educational campaigns since 2003

REFERENCES

I. en.wikipedia.org/wiki/Noise pollution
II. www.noisecontrol.com/the-common-causes-of-noise-pollution
III. en.wikipedia.org/wiki/Health effects from noise
IV. Sound level meter

Page 5-10 © MANTECH PUBLICATIONS 2019. All Rights Reserved