

# Study of the Noise Pollution for three consecutive years during Deepawali festival in Meerut City, Uttar Pradesh

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**Abstract:** The present paper deals with monitoring of Noise Pollution at different places of Meerut City on the night of Deepawali festival. During the present study the noise levels were measured with the help of sound meter. The Noise Pollution is decreasing considerably for the last three years and it is recorded minimum in 2009 as compared to 2008 & 2007. The main reason of this decrement is the growing environmental awareness in the people of Meerut City. Needless to say, Students of most of the school in Meerut City now prefer to celebrate Deepawali, festival of lights without sound and smoke. The Campaign for eco-friendly Deepawali is expected to catch on with people in Meerut City which has already demonstrated its commitment towards environment conservation. [New York Science Journal 2010; 3(6):40-]. (ISSN 1554 – 0200).

**Key words:** *Noise Pollution, Deepawali, Fire Crackers, Health Hazards*

## 1. Introduction

Noise is an unwanted sound that may cause some psychological and physical stress to the living as well as non-living objects exposed to it (Singh and Davar, 2004). The increasing number of vehicles, musical instruments, small scale industries, urbanization and human activities are the main source of noise pollution (Gangwar et.al. 2006). Deepawali is an important Hindu festival, in which a lot of crackers are used almost in every part of the country. This causes a lot of noise and air pollution. (Kudesia and Tiwari, 1994). The crackers contain dangerous chemicals including arsenic, sulphur, magnesium, iron dust, aluminium dust etc. that are harmful and cause bronchitis, asthma, eye ailment, headache and nervous system problems in human beings while birds and animals have to cope with the blasts and toxic smoke. (Kudesia, 2007). The focus is to reduce noise and sound pollution that is intense during the festival days (Pawar and Joshi, 2005).

India and all other countries are facing this environmental problem for a long period. Noise from fire cracker is one of the most important environmental problems. Mainly fire crackers are used in festive occasions in India and other countries. A large amount of fire crackers are used on Deepawali festival. We should also discourage the use of fire crackers as child labour is employed in their manufacturing. Now Deepawali is celebrated with colours flowers, sweets and rangoli in India, U.K., Nepal, France,

Pakistan, Malaysia, Canada, Sri Lanka and Germany. Besides Deepawali there are also other festivals during which Noise and Air pollution is observed. (Kudesia, 2005).

In the present paper an attempt has been made to compare the sound levels of 2009 with that of 2007 and 2008. A considerable decrease in Noise Pollution is noticed during Deepawali festival in Meerut City for three consecutive years i.e. 2009, 2008 & 2007.

## 2. Material and Methods

The level of Noise Pollution is monitored at different places of Meerut City on the night of Deepawali festival during 1800 hrs to 2400 hrs. For this purpose three zones i.e. Commercial Zone, Residential Zone and Silence Zone were selected within the city. The noise levels were monitored with the help of sound meter. The standards of noise level were compared with that of the standards prescribed in **Environmental Protection Rules, 1986** and standards of **CPCB (Tripathy, 1999)**.

## 3. Results

The noise levels were measured with the help of sound meter. It was observed that the level of Noise Pollution during Deepawali is much higher when compared with the standard limits (Deka, 2000). The sound levels recorded at different places in Meerut City which comes under the these zones are shown in the Table 1, 2 & 3 respectively.

**Table 1: Noise Level (dB) in Commercial Zone**

S.No.	Place	2009	2008	2007
1.	Begum Bridge	79	85	87
2.	Railway Road	81	84	86
3.	Thapar Nagar	83	86	88

**Table 2: Noise Level (dB) in Residential Zone**

S.No.	Place	2009	2008	2007
1.	Shastri Nagar	85	88	90
2.	Pallavpuram	80	82	88
3.	Kaisar Ganj	78	85	89

**Table 3: Noise Level (dB) in Silence Zone**

S.No.	Place	2009	2008	2007
1.	Cantt. Hospital	69	82	89
2.	Cantt. Area	74	77	78
3.	Civil Lines	70	70	74

\*(Standard sound limit in Commercial Zone is 55dB, Residential Zone is 45dB and Silence Zone is 40dB).

#### 4. Discussions

The results were surprising in some Residential areas particularly in Shastri Nagar where maximum crackers are burned. In Commercial Zone maximum sound level of 83 decibel is observed in Thapar Nagar and in Residential Zone maximum sound level of 85 decibel is observed in Shastri Nagar. In Silence Zone maximum sound level of 74 decibel is observed in Cantt. area. During 2009 less Noise Pollution is observed as compared to 2008 & 2007 (**Vidya Sagar & Nageshwar Rao, 2006**). In Shastri Nagar the sound level is reduced by 3 decibel and in Pallavpuram it is reduced by 2 decibel as compared to the last year. Maximum reduction in Noise Pollution is recorded in Cantt. Hospital area which is about 13 decibel less as compared to the last year. Same sound level is recorded in Civil Lines as in the last year i.e. 70 decibel.

#### Acknowledgements:

My sincere thanks are due to "Janhit Foundation" which is an independent, non-governmental organization, actively engaged in environmental protection since 1998.

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Dated: 29/03/2010