



## Noise Pollution: An Annoyance to Endurance

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### ABSTRACT

*The number of people dying in urban India due to deteriorating air quality is rising every year and very little is being done to deal with pollution in Indian cities. Pollution is a noun derived from transitive verb 'pollute', which according to Random House Dictionary of English Language means: to foul, to pollute the air, etc. An important component of air pollution which is assuming importance is the Pollution from Noise. Noise is an inescapable by product of industrial environment, which is increasing very fast with the advancement in industrialization. The Industries located in the residential areas such as the printing press, agro based industries, automobiles repairing, grinding mills, etc. are the main sources of community noise affecting public continuously living in the vicinity. In this short communication, nuisance, adverse impacts and some remedial measures of noise pollution are delineated concisely.*

**Keywords:** Decibel; Psychological effect; Masking effect; Physiological effect: Heart attacks; Neurosis; Blood pressure; Fatigue; Hypertension

### INTRODUCTION

In early days before the development of Environmental jurisprudence, the Common law remedy of Nuisance was the only means to remedy, and same was wholly based on the discretion of the Judge. Nuisance need not be public nuisance and interference with a person's personal comfort is enough, though at least in general, a private nuisance presupposes possession and control of land from which nuisance proceeds. Whether noise constitutes a nuisance is a question of degree. Yet where the noise is caused maliciously, same will be taken into account. Noise pollution has, thus, two sources-industrial and non-industrial, but movement against noise pollution, has not been effective, as most people in India do not consider noise as pollution but a part of routine and modern life. In order to curb noise pollution, it is essential that people realize that dangerous consequences of noise and to take some remedial measures.

Noise by definition is unwanted sound. What is pleasant to some ears may be extremely unpleasant to other, depending on a number of psychological factors. Noise pollution can be divided into two categories viz. Natural and man-made. Natural causes of noise pollution are air, noise, volcanoes, seas, rivers, exchanging voices of living organs including man and animals. Some of the chief causes of manmade noise pollution are machines and modern equipment of various types, automobiles, trains, aero planes, use of explosive, bursting of firecracker and other things leading to noise pollution. Noise affects human life in many ways. It affects sleep, hearing, communication and mental health and physical health and finally the peace of living. It may even lead to madness in persons. However, noise, which are melodious whether natural or man-made, cannot always be considered as factors leading to pollution. Noise not only causes irritation or annoyance but it does also constrict the arteries, and increases the flow of adrenaline and forces the heart to work faster, thereby accelerating the rate of cardiac ailment, the reason being that continuous noise causes an increase in the cholesterol level resulting in permanent constriction of blood vessels, making one prone to heart attacks and strokes. Health experts are of the opinion that excessive

noise can also lead to neurosis and nervous breakdown. There has been a high incidence of emotional disaster among people living near airports.

Noise pollution is basically any form of noise which has potential to disrupt the normal functioning of any natural ecosystem or some human community. The main sources of noise pollution are coming from transportation and construction systems. Noise pollution is not only causing environmental damage but it also has negative impact on human health as it can cause conditions such as aggression, hypertension, high stress levels, hearing loss, sleep disturbances, etc. Noise pollution is especially serious issue in our seas and oceans, especially for creatures such as dolphins and whales. Noise pollution has very negative impact on hearing sense of these animals, which makes certain activities of these species such as hunting for prey and navigation very difficult. Noise pollution in our oceans is constantly increasing because of the increased ship traffic and also because of offshore oil drilling.

In United States still doesn't exist the specific body that would regulate noise pollution on federal level. Unwanted noise causes species to communicate louder which is known as Lombard effect. Noise pollution can be tackled by many different methods such as by using noise barriers, limiting vehicle speeds, alteration of roadway surface texture, limitation of heavy vehicles, using special type of tires, etc. Many people still do not regard noise pollution as serious issue that needs more attention on local, state and international level but more like some type of annoyance which isn't so serious. This is the main reason why there are many cities in the world that do not have a single law to regulate noise. World without the excessive noise pollution coming from human sources would be a much quieter and much more beautiful place to be. Noise pollution is a disturbance to the human environment that is escalating at such a high rate that it will become a major threat to the quality of human lives. Noises in all areas, especially in urban areas, have been increasing rapidly. Poor urban planning gives rise to noise pollution. The main source of noise pollution is transportation systems especially motor vehicle. The other sources are aircraft noise and rail noise. Besides transportation noise, other sources are office equipment, factory machinery, appliances, power tools, lighting and audio entertainment systems. Construction equipment also produces noise pollution. Due to heavy industrialization, exposure of high level of noise gives rise to stress factor in modern life. It may leads to many hazards. The effect of noise on health depends on both, loudness and frequency. Any source producing sound levels of more than 80 to 90 db (decibel) for more than eight hours is harmful to human ear. Frequency of sound is denoted by Hertz (Hz). Human ear can hear frequencies between 20 to 20,000 Hz. Effect of noise on human health depends on i) quality ii) duration iii) sensitivity of the individual the noise pollution produces the following three main effects:

**i) Psychological effect** :Noise leads to emotional disturbances, however, are difficult to measure. Irritating noise at work place reduces concentration efficiency and working capacity

**ii) Masking effect:** Masking noise prevents the ear from registering other important sounds and signals. These effects change the balance in predator /prey detection, by disturbing and interfering the sounds of communications especially during reproduction time period and loss of hearing

**iii) Physiological effect:**

a) Auditory

- Auditory fatigue (when level of noise ranges from 85-90 db)
- Deafness (repeated exposure to noise level > 90 db)

b) Non auditory

- Annoyance (listens dislike the noise content)
- Efficiency (noise pollution decreases efficiency of working)
- General changes in body (high blood pressure, fatigue, hypertension, tetanus)

Noise pollution is silent killer problem growing day-by-day. A definite solution to it has not been yet developed, because the health effect due to noise pollution has not paid much attention like other pollutions. It has become an unjustifiable interferences and imposition upon human health [1,2,3], comfort and qualitative of human life [4]. To meet the demand of good wealth and health services of over increasing population, that noise and traffic have become busy and hence there are always incidence of noise population in urban area. The increasing of industrialization with transportation increases the pollution problem again. The noise surveys showed conclusively that road traffic is the predominant source of problem. The total horse power which is built in

automobile vehicle exceed 20 times the horse power of all movers combined (aircraft, ship and power station) [5,6]. The mechanism of noise due to outside from vehicle has been basically different than the noise generation by the vehicle internally. Thus the noise emitted depends upon the vehicle level, characteristic and interaction of directly radiated noise from the system. The other important noise generating system is transmitting [7-10].

### CONTROL OF NOISE POLLUTION

Noise pollution can be controlled by reducing noise at source. Making a change in design and operation of machines, vibration control, by using sound absorbing materials, can reduce noise pollution. It can also be reduced by prescribing noise limits for vehicular traffic and planning industrial establishments, amusement areas, residential colonies and hospitals to make them noise proof. The other control methods of noise pollution are:

1. Locate the building as far as possible from noise source.
2. Trees like ashok, neem, coconut, etc. can be planted to provide some absorption of sound.
3. Government has already passed the "Noise Pollution Control Act" to meet the special Indian condition. Laws should be made for controlling noise hazards at city level.
4. People can be educated through radio, TV, street play etc. about noise pollution.

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