

Causes of Sound Pollution & Its Remedial Measures

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ABSTRACT

“If we work with concentration, our achievements will be more. When the attention is disturbed because of noise, the efficiency decreases. Sound never dies, it is immortal. Therefore, it should be used thoughtfully.” The form of energy that produces the sensation of hearing is called sound. Sound is the basis of speech and is our mode of communication. But when this sound has no value, this is called ‘noise’. The word noise is derived from the Latin word ‘nauses’ means unwanted or unpleasant sound that causes discomfort. American encyclopaedia defines it as “noise by definition is unwanted sound”.

Keywords: Sound, Pollution, Effect, Loud, Control etc.

Sound is often described in terms of loudness. Loudness of sound can be measured in terms of decibel (dB). We hear ordinary conversation at 50 dB sound while a jet aeroplane produces 150 dB sound. A prolonged noise at 95 dB produces deafness, nervous tension and rise in blood pressure. Sound beyond 80 dB can be regarded as a pollutant as it harms the hearing system. The WHO has fixed about 45 dB as the safe noise level for a city. Some sound sources and their intensity level are as follows : ----

S.No.	Sources	Sound in dB	Sound Level
1.	Breathing	10	Very-very quiet
2.	Self-whisper	25	Very quiet
3.	Quiet-conversation	30	Moderately loud
4.	Loud conversation	60	Loud
5.	Traffic noise	60-90	Very loud
6.	Heavy truck traffic	100	Very loud
7.	Motorcycle	105	Uncomfortable
8.	Thunderstorm	110	Uncomfortable
9.	Beat music	120	Uncomfortable
10.	Aircraft	120	Uncomfortable
11.	Jet engine	150	Painful
12.	Rocket engine	180	Painful

Causes of noise pollution

There are several stakeholders of noise pollution. Some of them are -----

1. Due to Transport :--- It includes road traffic, aircraft, rail traffic noise mostly in the cities. Human population are subjected to high level of transport noise which gradually deafens them. Mumbai and Delhi have been characterized noisest cities in India.
2. Due to industries:--- In our country, urbanization and industrialization have become twin problems. Cities and towns have sprouted up where industries are concentrated. Lack of town planning had led to residential, commercial and industrial areas being mixed up. Houses , schools, colleges and hospitals are situated near the industries. All the boons of civilization and industrialization like motor, heavy and light machinery, electronic media, supersonic aeroplanes etc. have become disturbing and irritant.
3. Due to festivals :--- We Indians are very noisy people and every sentiment, be religious, social and family activities are manifested in a noisy way. Loudspeakers and amplifiers are used without regard to inconvenience or annoyance it may cause to a neighbour.
4. Due to construction work :--- Tractor, Scrapers, concrete mixture, concrete breaker, driller are worst from the noise generating point of view.

Noise pollution has affected both living as well as non living organism. But main harmful effect is on living organism especially man. Constant noise destroys a man physically and mentally. Some effects are listed below :----

NOISE (dB)	EFFECTS
85	Annoyance
90	Hearing damage
105	Significant change in pulse rate
110	Stimulation of reception in skin
120	Pain threshold
130	Nausea, vomiting, dizziness
140	Pain in ear
150	Prolonged exposure causing mental stress
160	Minor permanent damage in a short time

CONTROL MEASURES OF NOISE POLLUTION

1. **Control at the source** :- The noise should be controlled at the source itself by designing and fabricating silencing devices.
2. **Control along the path** :- Once sound has left a source and has become established in the surrounding medium i.e in the air, we must consider steps such as proper building layout. Path deflection, providing enclosures, sound absorption measures to reduce transmission of noise as it travel down the path.
3. **Control at receiver** :- Finally the noise should be controlled at receiver i.e people.
4. **Development of green belt** :- Development of more and more green belt should be encouraged as it helps in reducing the noise level.

5. **Enforcement of noise standards** :- Some standard should be prescribed by the central pollution control board for different pollutants of noise and it should be made enforceable with immediate effect . Violation thereafter should be made punishable.
6. **Declaration of noise free zone / silence zone** :- To protect the sensitive areas e.g schools, hospitals, colleges, government offices etc. from nuisance of noise, ‘silence zone’ should be declared. For this purpose, the head of the institution should be empowered to check the noise of loud speakers, horns etc. in official time and also to impose fine on them.
7. **Control of noise in industries** :- In order to control noise in industries, some general principles must be kept in mind :-
 - A. Impacting parts of machines should be enclosed.
 - B. All enclosures should contain sound absorbing material suitable for environment.
 - C. Workers should be protected with earplugs and ear muffs etc.
8. **Creation of public awareness** :- Finally this is the most important part. By educating people through radio, television, lectures and seminars, the menace of sound pollution can be diminished. The movement against noise pollution is very weak in India. The main reason is that most of us do not consider noise as a pollution but a part of routine life.

“We are the generation with the awareness of great danger. We are the ones with the responsibility and ability to take steps of concrete action before it is too late. We have a responsibility of life to defend it everywhere not only against our own sins but also against those of others. We are all passengers together in the same fragile and glorious world. Let us safeguard our rowboat and let us row together.”

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