



Environmental Information, Awareness, Capacity Building and Livelihood Programme (EIACP)

Programme Centre-Hub



Department of Environment Chandigarh (U.T.)

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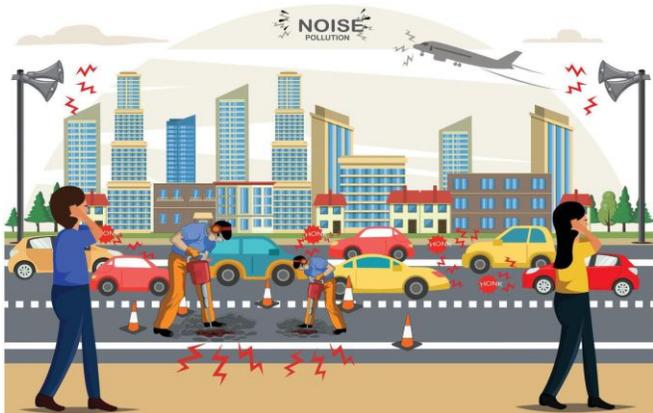
Ministry of Environment, Forest & Climate Change Government of India, New Delhi



For a Peaceful Tomorrow: Understanding and Controlling Noise Pollution



For a Peaceful Tomorrow: Understanding and Controlling Noise Pollution



Noise is regarded as a pollutant under the Prevention and Control of Pollution Act, 1981 of India (MoEF 1981 Act) and is considered as a major environmental concern. With paced urbanization and rapid population growth, the City Beautiful Chandigarh has seen a steady increase in the noise pollution levels, thus impacting the quality of life of its residents. The term "Noise" comes from the Latin word for "nausea," meaning discomfort or seasickness. In simple terms, noise is any unwanted sound that disturbs daily activities, causes irritation, or interferes with sleep. The World Health Organization defines noise pollution as any sound over 65 decibels.

Long-term exposure to high levels of noise can lead to serious health problems like high blood pressure, heart disease, and

strokes. Studies show that road traffic noise, especially at night, can disturb sleep, harm mental health, and affect cardiovascular health. Noise also disrupts communication among animals, including marine species, and can impact their behavior, such as hunting or mating.

One study by Babisch (2006) shows a direct link between road traffic noise and health problems, highlighting the importance of treating noise pollution as a public health issue. During festive seasons, noise pollution worsens due to firecrackers, which also contribute to air pollution.

Impact of Noise Pollution



- 1. Physical and Mental Health-** Chronic exposure to high noise levels is linked to hearing loss, particularly in noisy environments like factories and concerts, as well as tinnitus. Noise also raises blood pressure and increases heart attack risk. Mentally, chronic noise can elevate stress, cortisol levels, and depression, while impairing cognitive functions such as attention and memory.
- 2. Effects on Animals-** Noise disrupts animal behavior, including mating, feeding, and migration, leading to population declines. Species relying on sound for communication or hunting are most at risk. For example, birds may fail to mate, and marine mammals suffer hearing damage from ship noise and sonar. Noise can alter migration paths and disrupt ecosystems.



3. **Environmental Impact-** Noise pollution can reduce plant growth by affecting photosynthesis and nutrient absorption. Vibrations compact soil, harming organisms and soil fertility. In aquatic ecosystems, noise disrupts feeding and mating, reducing biodiversity and destabilizing ecosystems.

Key factors include:

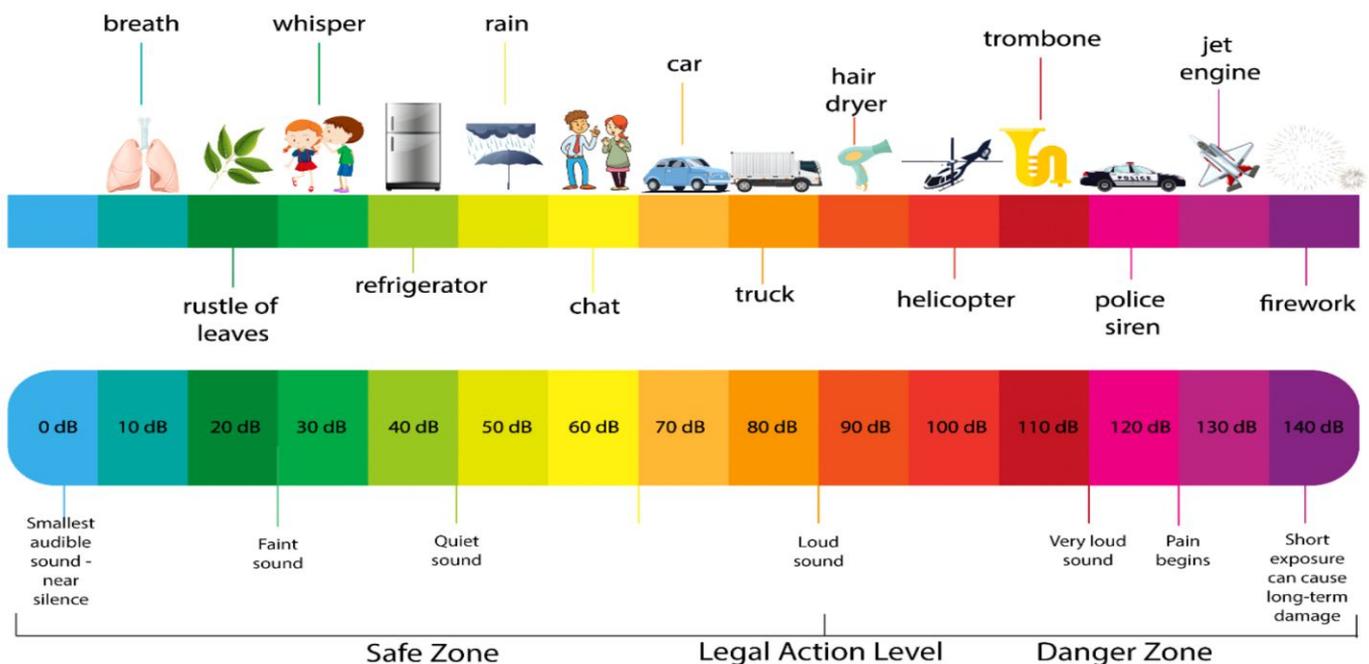
- **Population Growth:** As urban populations continue to rise globally, rapid expansion leads to increased daily activity—resulting in higher noise levels from households, public spaces, and human movement.
- **Traffic:** Road traffic is widely recognized as one of the leading sources of noise pollution in cities around the world. High vehicle density, constant engine sounds, honking, and braking significantly elevate ambient noise levels in most urban environments.
- **Industrial Growth:** Even moderate industrial development, including manufacturing units, construction activities, and engineering works—contributes

substantially to noise pollution. This impact persists despite planning measures such as designated industrial zones and buffer areas.

- **Festivals and Events:** Cultural celebrations, weddings, public gatherings, and major festivals often lead to loud music, firecrackers, and large crowds, temporarily intensifying noise levels in many regions.

Regulatory Steps to Mitigate Noise Pollution

According to the guidelines set by the Central Pollution Control Board and Rule 3(1) of the Noise Pollution (Regulation and Control) Rules, 2000, daytime is defined as the period between 6 AM and 10 PM, while nighttime is from 10 PM to 6 AM. Rule 3(2) further specifies that the relevant State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs), in collaboration with the Central Pollution Control Board (CPCB), are responsible for collecting, organizing, and publishing technical data to support effective noise pollution prevention, control, and mitigation. In this context, the Chandigarh Pollution Control Committee oversees monitoring noise levels throughout the city.





The city's noise zones are classified as follows:

- **Industrial Areas:** This includes phases I and II of the industrial area, bounded by Madhya Marg, Purv Marg, Chandigarh-Ambala Road, and Sukhna Choe.
- **Commercial Areas:** Includes City Centre (Sector 17), Sub City Centre (Sector 34), Sector 43, Motor Market (Manimajra), and shopping complexes near bus stands.
- **Residential Areas:** Covers sectors 2–5, 6, 7–11, 15, 16, 18–33, 34C and D, 35–42, 43A and B, 44–47, and parts of sectors 48–56, along with the villages within the Union Territory of Chandigarh.
- **Silence Zones:** Includes Sector 1 (Capital Complex), Sector 12, Sector 14 (Panjab University), and a 100-meter radius around hospitals, educational institutes, courts, and religious sites.

(<https://chandigarhenvi.gov.in/sites/default/files/documents/AutoritiesNoisePols.pdf>)

| Area Code | Category of Area | Limits in Day Time | dB Night Time |
|-----------|------------------|--------------------|---------------|
| A | Industrial | 75 | 70 |
| B | Commercial | 65 | 55 |
| C | Residential | 55 | 45 |
| D | Silence Zone | 50 | 40 |

(<https://cpcb.nic.in/noise-pollution/>)

Directions as per Supreme Court- The Supreme Court of India has unequivocally reinforced that the Right to Life under Article 21 of the Constitution includes the Right to Quietude and freedom from noise pollution. In landmark judgments, the Court has clarified that the use of sound-amplifying systems is not an absolute fundamental right, particularly rejecting claims that excessive noise is essential to religious or cultural expression. This legal stance upholds strict enforcement of the Noise

Pollution (Regulation and Control) Rules, 2000, especially the ban on loudspeakers between 10:00 p.m. and 6:00 a.m., safeguarding public health and ensuring citizens can enjoy a peaceful night's rest free from "aural aggression."

Directions by Hon'ble High court The Punjab & Haryana High Court (CWP No. 7639 of 1995) has issued directives allowing the confiscation of multi-toned or pressure horns. These horns will be seized during traffic violations, and their release requires a court order.

General regulations include:

1. **General Prohibition:** As per the Rule 178(3) Chandigarh Motor Vehicle Rules 1990 No driver of a motor vehicle shall blow hooter/siren in the entire area of the Union Territory, Chandigarh, while driving the vehicle except on ambulances, fire brigade vehicles and Chandigarh Police vehicles (<https://chandigarhtrafficpolice.gov.in/>)
2. **Horn Standards:** As per Rule 119(1), The Central Motor Vehicles Rules 1989- Every motor vehicle manufactured shall be fitted with an electric horn or other devices (conforming to the requirements of ISI: 1884-1992 specified by the bureau of Indian standards) for use by the driver of the vehicle and capable of giving audible and sufficient warning of the approach or position of the vehicle. (<https://chandigarhtrafficpolice.gov.in/>) No motor vehicle shall be fitted with any multi-toned horn giving a succession of different notes or with any other sound-producing device giving an unduly harsh, shrill, loud or alarming noise.





#MakeChandigarhHonkFree Campaign



The Chandigarh Administration had been tackling the rising issue of noise pollution through several initiatives, with one of the most impactful being the #MakeChandigarhHonkFree campaign, launched on January 1, 2018. This campaign aims to not only improve the city's visual appeal but also to foster a peaceful, serene environment by reducing noise levels. It encourages both residents and visitors to be mindful of their actions to create a quieter urban space. Key aspects of the campaign include:

1. **Avoiding Unnecessary Honking:** Drivers are urged to refrain from excessive honking, a major source of noise pollution in busy areas.
2. **Lane Discipline:** Following lane rules to reduce traffic congestion and unnecessary honking.
3. **Respecting Traffic Rules:** Drivers are encouraged to give pedestrians and cyclists the right way to reduce noise disruptions.
4. **Motorcycle Modifications:** Refraining from altering motorcycle silencers to produce louder noises.
5. **Speed Control:** Promoting safe, controlled driving speeds to minimize engine noise.

Intervention: Demarcation of Cycle Tracks



Intervention: Segregation of Traffic at Congestion Areas.



In support of this campaign, Chandigarh police distributed over 50,000 "I will not honk" stickers and launched advertisements through newspapers, FM radio, and SMS campaigns. Taxis, including Ola and Uber drivers, have also been made aware of the campaign's goals. Additionally, prominent "No Honking" signs have been placed at key locations, including medical institutes (GMSH-16, GMCH-32, PGIMER), and the High Court complex. Additionally, the Chandigarh Administration has implemented measures to curb unnecessary honking during



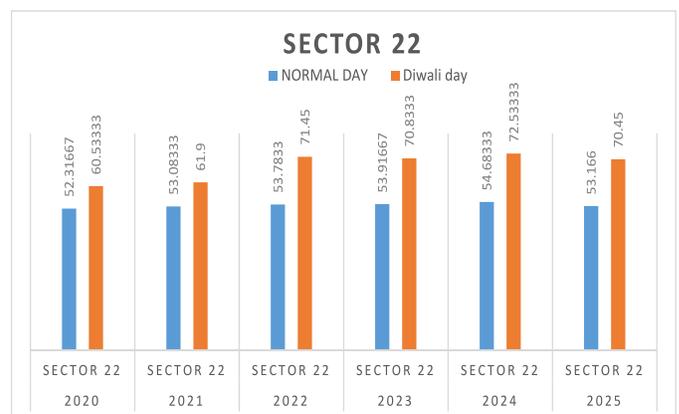
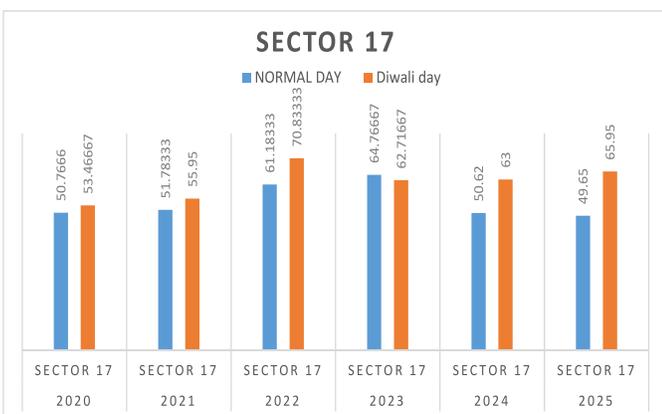
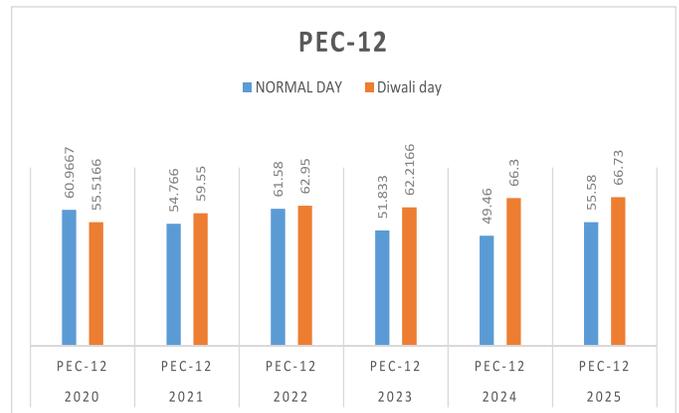
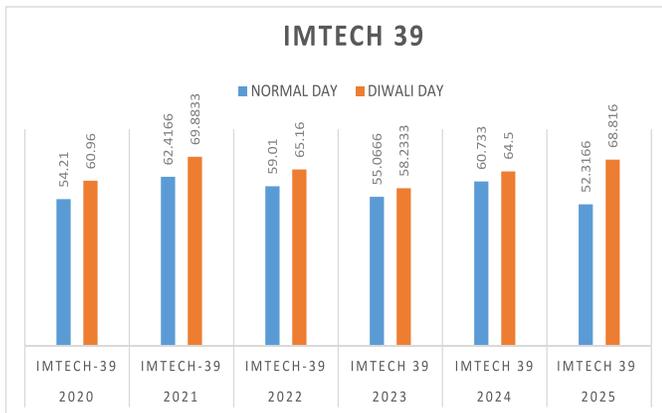
peak traffic hours by marking dedicated cycle tracks and ensuring proper lane divisions in congested areas, thereby reducing overtaking and excessive honking. Furthermore, regulations governing events require that music played at clubs and parties remain within prescribed noise limits. DJs at weddings and concerts are permitted only until 10 PM.

Noise level analysis in Chandigarh: Diwali 2020-2025

This analysis focuses on noise levels in Chandigarh from 2020 to 2025, measured at four locations: IMTECH, PEC (Sector 12), Sector 17, and Sector 22. Noise levels were recorded both on normal day and on Diwali days, averaged over 6 hours i.e. 6PM to 12 PM, using the Equivalent Continuous Sound Pressure Level (Leq) to assess noise pollution.

Key Findings:

Across all locations—IMTECH-39, PEC-12, Sector 17, and Sector 22—pollution levels on normal day were generally lower compared to the levels observed on Diwali day, suggesting an increase in noise pollution due to various activities during festive season. Over the years, the measurements fluctuated, with some locations showing higher noise level on normal days values in certain years, while Diwali day levels consistently spiked, reflecting the impact of festivities on noise as well as air quality. The data highlights the ongoing variation in pollution levels during this period. (Data source- CPCC)





What efforts individual can make to reduce noise pollution

1. At the Source

- a. **Household Noise:** Use appliances selectively and add sound-absorbing materials like carpets.
- b. **Vehicle Maintenance:** Regular service reduces vehicle noise.
- c. **Vibration Control:** Use shock absorbers or rubber padding to dampen noise.
- d. **Low-Noise Equipment:** Choose quieter machinery through better design or technology.

2. In the Transmission Path

- a. **Barriers:** Physical barriers can reduce noise levels between the source and receiver.
- b. **Architectural Design:** Use soundproof materials in buildings to lower indoor noise.
- c. **Greenbelts:** Trees and shrubs can absorb sound, and regulations often require greenbelt areas around industrial sites to reduce noise pollution.

3. **Noise control at work places:** Noise control in workplaces is crucial for employers and workers in workplaces such as industries, construction sites, traffic police, and longshore operations, where exposure to high noise levels is common. It's essential to implement hearing protection measures and provide workers with the knowledge and tools to safeguard their hearing, preventing potential health issues caused by the loud environments they work in.

- a. **Planning and Management:** Set noise exposure limits, use quieter machinery, and develop Noise Management Plans that include assessments, worker training, and scheduling to reduce overlapping noisy tasks.



- b. **Monitoring and Controls:** Regularly monitor noise levels, maintain equipment, and proper servicing of machinery, rotational work scheduling.
- c. **Hearing Protection:** When noise can't be fully reduced, ensure workers use well-fitted earmuffs or earplugs.



Noise monitoring equipment:

- a. **Sound Level Meters (SLMs):** Handheld devices that measure sound pressure instantly in decibels (dB). They use A-weighting (dBA) to mimic human hearing and are classified as Class 1 (precision) or Class 2 (general purpose).
- b. **Integrating Sound Level Meters (ISLMs):** Advanced meters that measure the Equivalent Continuous Sound Pressure Level (Leq) over a period, which is the standard for environmental compliance (like the 10 p.m. rule).



- c. **Noise Dosimeters:** Small, personal devices worn by individuals to measure their cumulative noise exposure over time (e.g., during a workday) for occupational health and safety compliance.

Addressing the rising noise in Chandigarh through better urban planning, strict regulations and public awareness aligns with the SDGs particularly SDG3 (Good health and well being) and SDG 11 (sustainable cities and Communities) by creating healthier, more resilient communities while safeguarding both human and ecological well-being.



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