



# Greenpeace Analysis On Economic Cost Of Air Pollution

## Why in News

According to a [Greenpeace Southeast Asia](#) (non-governmental organisation) analysis of cost to the economy due to air pollution, [PM 2.5 air pollution](#) claimed approximately 54,000 lives in Delhi in 2020.

- **PM 2.5** refers to **fine particulate matter smaller than 2.5 micrometers** in diameter. It causes **respiratory problems** and also reduces visibility. It is **an endocrine disruptor** that can affect insulin secretion and insulin sensitivity, thus contributing to diabetes.

## Key Points

### ▪ Report on Indian Cities:

#### ◦ Delhi:

- In July 2020, Greenpeace found out that of the 28 global cities studied, **Delhi bore the highest economic cost of air pollution** with an estimated loss of 24,000 lives in the first half of 2020 despite a strict **Covid-19 lockdown**.
- In 2020, air pollutant levels in Delhi **remained almost six times above the prescribed WHO (World Health Organisation) limits of 10 µg/m<sup>3</sup> annual mean**.
- The **estimated air pollution-related economic losses** were USD 8.1 billion, which **amounts to 13% of Delhi's annual Gross Domestic Product (GDP)**.

#### ◦ Mumbai:

- An estimated **25,000 avoidable deaths in Mumbai** in 2020 have been attributed to air pollution from PM 2.5 and Nitrogen Dioxide (NO<sub>2</sub>).

#### ◦ Other Cities:

- Damage due to air pollution is equally worrying in other cities - **Mumbai, Bengaluru, Chennai, Hyderabad and Lucknow** - featured in the global analysis.
- Bengaluru, Chennai and Hyderabad estimated an approximate 12,000, 11,000, and 11,000 avoidable deaths respectively due to polluted air.

### ▪ Global Scenario:

- Globally, **approximately 1,60,000 deaths** have been attributed to PM 2.5 air pollution **in the five most populous cities** — Delhi (India), Mexico City (Mexico), São Paulo (Brazil), Shanghai (China) and Tokyo (Japan).
- In 2020, the estimated **economic cost of PM 2.5 air pollution exceeded USD 5 billion in 14 cities** included in the analysis.
- **Tokyo (Japan):**
  - Of the included cities, the **highest estimated total financial cost** from air pollution was recorded in Tokyo, which suffered approximately 40,000 avoidable deaths and an economic loss of USD 43 billion due to PM 2.5 air pollution in 2020.
- **Los Angeles (USA):**

- It recorded the **highest per capita financial cost of PM 2.5 air pollution** of all cities on the estimator, at approximately USD 2,700 per resident.

▪ **Indicators Used in Measurement:**

◦ **PM 2.5 Measurements:**

- Real-time ground-level PM 2.5 measurements were collected from different places and combined together in [IQAir's database](#).
  - IQAir is an air quality technology company.
- Using Algorithms, such data was applied to scientific risk models in combination with population and public health data to estimate the health and economic costs of air pollution exposure.

◦ **Willingness To Pay:**

- To show the impact of air pollution-related deaths on the economy, the approach used by Greenpeace is called '**willingness-to-pay**' — a lost life year or a year lived with disability is converted to money by the amount that people are willing to pay in order to avoid this negative outcome.

◦ **Cost Estimator:**

- The '**Cost Estimator**', an online tool that estimates the real-time health impact and economic cost from fine particulate matter (PM 2.5) air pollution in major world cities, was deployed in a collaboration between Greenpeace Southeast Asia, **IQAir** and the **Centre for Research on Energy and Clean Air (CREA)**.

▪ **Fatality of Air Pollution:**

◦ **Globally:**

• **WHO:**

- According to WHO, toxic air is now the biggest environmental risk of early death, responsible for one in nine of all fatalities.
- **It kills 7 million people a year**, far more than HIV, tuberculosis and malaria combined.

• **World Bank:**

- According to a 2016 World Bank report, the lost lives and ill health caused are also a colossal economic burden: USD 225bn is lost labour income in 2013, or USD 5.11tn per year (about \$1m a minute), if welfare losses are also added.

◦ **In India:**

- **Overall:** Long-term exposure to outdoor and [household \(indoor\) air pollution](#) contributed to over **1.67 million annual deaths** from stroke, heart attack, [diabetes](#), lung cancer, chronic lung diseases, and [neonatal diseases](#), in India in 2019.

- **Infant Related Data:** High PM contributed to the deaths of more than 1,16,000 Indian infants who did not survive their first month.

- Infants in the first month of life are already at a vulnerable stage and a growing body of scientific evidence-supported studies in India indicates that particulate air pollution exposure during pregnancy is linked to low birth weight and preterm birth.

▪ **Initiatives to Control Air Pollution In India:**

- [The Commission for Air Quality Management in National Capital Region \(NCR\) and Adjoining Areas](#): It coordinates efforts of state governments to curb air pollution,

and will lay down the parameters of air quality for the region.

- **Bharat Stage (BS) VI norms**: These are emission control standards put in place by the government to keep a check on air pollution.
- **Dashboard for Monitoring Air Quality**: It is a National Air Quality Monitoring Programme (NAMP) based dashboard, built on data from the **Central Pollution Control Board's** National Ambient Air Quality Monitoring (NAAQM) Network which was started in 1984-85 and covers 344 cities/towns in 29 states and 6 UTs.
- **National Clean Air Programme**: Launched in 2019, it is a comprehensive pan-India air pollution abatement scheme for 102 cities.
- **National Air Quality Index (AQI)**: It focuses on health effects one might experience within a few hours or days after breathing polluted air.
- **National Ambient Air Quality Standards**: They are the standards for ambient air quality with reference to various identified pollutants notified by the Central Pollution Control Board under the **Air (Prevention and Control of Pollution) Act, 1981**.
- **Breathe**: It is a 15 point action plan to fight air pollution by **NITI Aayog**.
- **Pradhan Mantri Ujjwala Yojana (PMUY)**: It aims at providing clean-cooking fuel to the poor households and bringing in qualitative changes in the living standards.

**Source:TH**

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