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/m3 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_2).
  - **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 charges in the living standards.

Source:TH