

PRESS RELEASE

Worsening air quality causes premature mortality in cities of Bihar, finds report

CEED & IIT-Delhi report reveals a massive air pollution spike in Patna and Gaya

Patna, 28 May 2018: Worsening air quality in Patna, Gaya and Muzaffarpur is one of the reasons behind the high premature mortality existing in these cities, as per the findings of a report titled 'Know What You Breathe¹' prepared by IIT-Delhi and supported by the Centre for Environment and Energy Development (CEED). The report studies the annual mean PM_{2.5} concentration for eleven cities of Bihar, Uttar Pradesh and Jharkhand using the satellite data of the past 17 years which estimate premature mortality of 4,082 persons per year in three cities of Bihar (1). It collates the air quality data with the deaths caused due to air pollution-related diseases. The data and findings of the report related to the cities of Bihar released today underline the urgency to take stringent measures to curb air pollution.

The findings revealed that an estimated 290–300 deaths per one lakh population took place annually in Patna, Muzaffarpur, and Gaya due to pulmonary diseases, Heart diseases, stroke, lung cancer and acute lower respiratory infection.

While speaking on the urgent actions needed to improve the air quality in these cities of Bihar, Mr. Abhishek Pratap, Program Director, CEED said, "Air pollution does not discriminate between the rich and the poor, but the poorest and the most marginalized sections bear the brunt of the health burden the most. The report is a grim reminder of the fact that air pollution is a public health crisis impacting the present as well as the future generations. Preventing air pollution from causing more premature mortality, the government needs to put it high on its priority list. The announcement of an Air Action Plan preparation for Patna is a welcome step and shows the government's sense of commitment." "Given the urgency of the situation, the process of formation of a clean air action plan for Patna will speed up while a similar process will kick-start for Gaya and Muzaffarpur. If a clean air action plan gets implemented with utmost stringency, the premature deaths due to air pollution will reduce by 18% in Patna," he further added.

It has been found in the report that the PM_{2.5} level in Patna, Gaya, and Muzaffarpur is 175% to 200% higher than the national limit and it is disproportionately

¹ [CEED & IIT Report \(Know What You Breathe\)](#)

increasing over the years. In the last 17 years the particulate matter pollution has increased to an average 23 $\mu\text{g}/\text{m}^3$, 13 $\mu\text{g}/\text{m}^3$ and 6 $\mu\text{g}/\text{m}^3$ in Patna, Gaya, and Muzaffarpur respectively. With specific findings related to the sources of pollution and the aerosol composition, the study indicates a higher percentage of sulphates, organic carbons, and black carbon, which are emitted primarily from anthropogenic sources. All these three aerosol species showed a steady rise over the years while dust and salt show a marginal rise over the years indicating the role of rapid urbanization in increasing pollution.

While speaking about specific findings of the report for Patna, Ms. Ankita Jyoti, Senior Programme Officer, CEED said, “On an average, 30% of the total deaths related to chronic exposure to air pollution were because of pulmonary diseases while 27.4% of the total annual premature deaths occurred in children because of acute lower respiratory infection.” Further elaborating the method used in the study, she said, “The method for health burden estimation is developed as a part of the global burden disease because a cause-specific mortality data doesn’t exist.”

While speaking on required actions for improving air quality in the cities of the Indo-Gangetic region, Dr. Sagnik Dey, Associate Professor at the Centre for Atmospheric Sciences, IIT-Delhi and author of the report 'Know What You Breathe', said, "One of the critical factors in the air quality management plan is to set targets in short, medium and long-term (of meeting air quality standards), along with a detailed implementation plan. To improve the air quality in the region, we need to transit towards cleaner fuel for cooking, on priority. To achieve the National Air Quality Guideline, the PM2.5 concentration should reduce by over 54.2% in Muzaffarpur; by 53.4% in Patna and by 41.8% in Gaya.”

The report stresses the need to promote public awareness; inter-state coordination and an efficient regional clean air action plan for the Indo-Gangetic plain, along with a source apportionment study for each city as the most plausible action agenda for improving air quality in these cities.

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