

## **Problem Statement:**

### **Analyzing Air Pollution Levels in India (2015-2020)**

Air pollution is a critical issue in India, adversely affecting public health and environmental sustainability. Rapid urbanization and industrial growth have led to increasing levels of harmful pollutants, including PM2.5, NO2, CO, SO2, and O3. Despite the availability of air quality data, effective analysis and visualization for specific cities remain limited, hindering informed decision-making.

This project aims to analyze and visualize air quality data from 2015 to 2020, focusing on key pollutants and the Air Quality Index (AQI). Utilizing Power BI, an interactive dashboard will be created to explore trends, AQI classifications, and correlations between pollutants. By providing clear insights into air quality, this project will support policymakers, environmentalists, and the public in developing strategies to mitigate pollution and improve air quality across Indian cities.

The primary objectives of this project include:

1. **Data Visualization:** Creating a user-friendly dashboard that visually represents air quality trends and pollutant levels.
2. **Trend Analysis:** Identifying and analyzing trends in various pollutants over time to determine peak periods of pollution.
3. **AQI Classification:** Understanding the distribution of AQI classifications to inform the public and policymakers about the quality of air in different cities.
4. **Correlation Study:** Exploring the relationships and correlations between different pollutants to uncover underlying patterns.