# Project-1:

**Introduction**

**Air Quality in Delhi City**

Air pollution is one of the main causes of death in the world. Several cities are on the radar of WHO, which are about to touch the dangerous level. Sadly, India is one of the countries with maximum number of most polluted cities in the world.

Especially, on the onset of Diwali, the air quality index of DelhiNCR soars to new heights resulting in depletion of Ozone layer.

**Problem Statement**

Air pollutants are being let out into the atmosphere from a variety of sources, and the concentration of pollutants in the ambient air depends not only on the quantities that are emitted but also the ability of the atmosphere, either to absorb or disperse these pollutants.

There were conflicting reports in media on the actual cause of air pollution in New Delhi. Some sections claimed vehicles as the main source of pollution, while others held road dust & construction debris responsible. But the root cause of the problem is Industrial pollution.

It is also important to understand the behavior of meteorological parameters in the planetary boundary layer because, atmosphere is the medium in which air pollutants are transported away from the source, which is governed by the meteorological parameters such as atmospheric wind Solar Radiation, temperature, the month and day.

# Data Source

Study the ‘airquality’ dataset provided and identify patterns of Ozone concentration and identify key factors of Ozone depletion across New Delhi.

With an objective to determine the quality of air in terms of ozone depletion, machine learning was identified as the pervading mechanism by the meteorology department, data on multiple detrimental contents in air was captured using sensors setup in a polluted location of Delhi city. Attributes for the dataset include:

* Ozone
* Solar Radiation(Solar.R)
* Wind Velocity
* Temperature
* Month
* Day

All the attributes are well studied and the prepared dataset is available for data analysis and predictive modeling.