

# Air Quality Index in India

## Introduction

Air pollution means exactly what you think it means : it's when the quality of the air you breathe drops. But how does that happen ? That's the real question. It's induced by the presence of harmful, unwanted substances in air (more precisely, into Earth's atmosphere). Those bad substances are the pollutants and most of the tables in this database focus on those pollutants and give information about their presence in the air. As said earlier, air pollution is due to the presence of some pollutants, it's time to learn more about the main pollutants that are present in our database :

- Sulphur dioxide (SO<sub>2</sub>) : This contaminant is mainly emitted during the combustion of fossil fuels such as crude oil and coal.
- Carbon monoxide (CO) : This gas consists during incomplete combustion of fuels example : A car engine running in a closed room.
- Nitrogen dioxide (NO<sub>2</sub>) : These contaminants are emitted by traffic, combustion installations and the industries.
- Ozone (O<sub>3</sub>) : Ozone is created through the influence of ultra violet sunlight (UV) on pollutants in the outside air.
- Particulate Matter (PM) : Particulate matter is the sum of all solid and liquid particles suspended in air. This complex mixture includes both organic and inorganic particles, such as dust, pollen, soot, smoke, and liquid droplets. These particles vary greatly in size, composition, and origin.

So how are those pollutants produced in our daily lives ? Well as you may have guessed, The main sources of air pollution are the industries, agriculture and traffic (held responsible for one-third of the greenhouse gas emissions). That being said, us consumers are also responsible of polluting the air through some of our activities such as smoking or heating houses ...

## Air quality index

Basically the AQI is the measure of how air is polluted, with respect to some pollutant. That means that for a specific hour in a specific place you'll have different AQIs, one for each pollutant.

I would calculate the air pollution in india and see whether the air pollution has increased or decreased in lockdown.