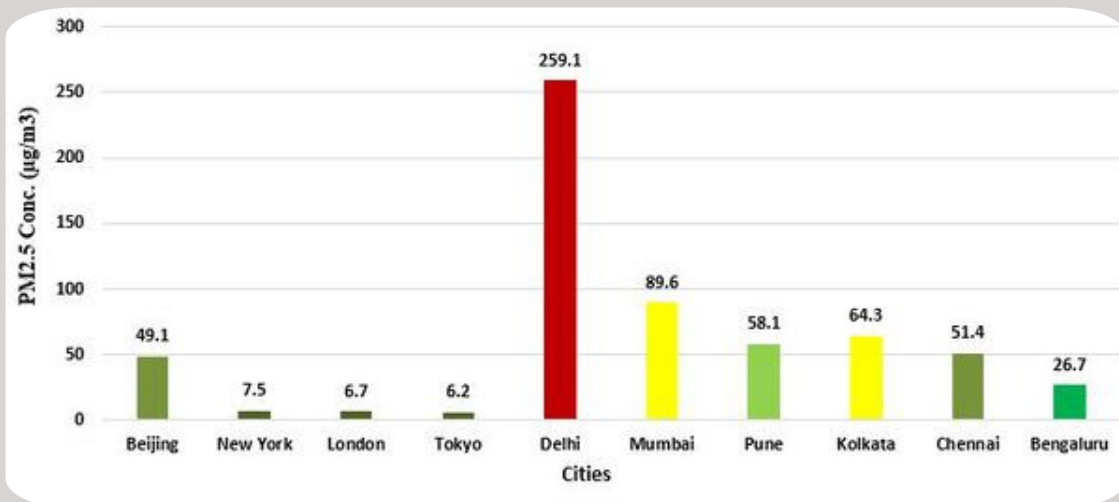


CERCA Weekly Newsletter



Centre of Excellence for Research on Clean Air (CERCA)
Indian Institute of Technology, Delhi

Air Quality in different cities

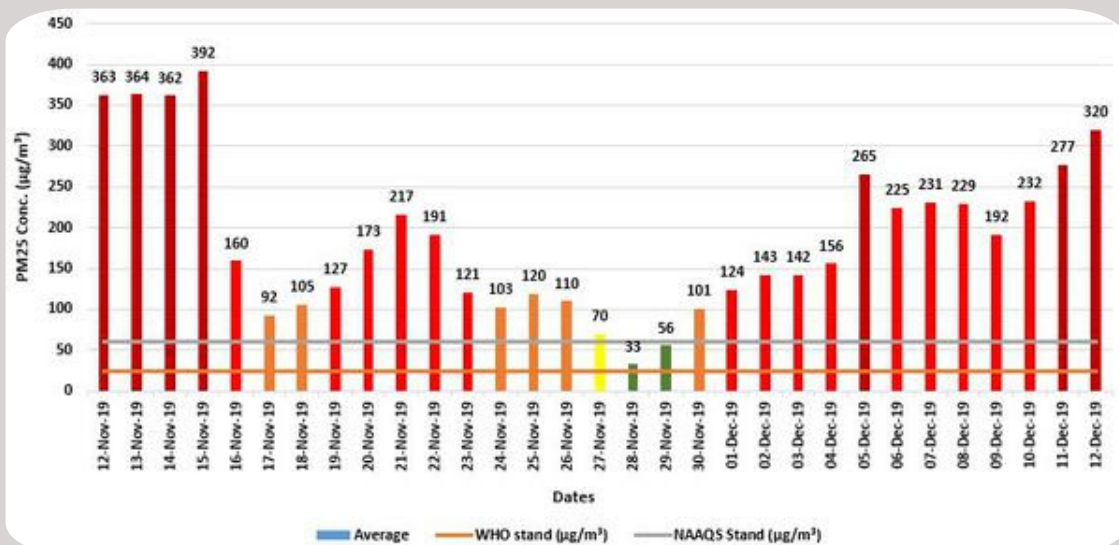


Delhi Air Quality is in 'very poor' category in comparison to other cities in India and Globally.

January 01, 2020, 11:00-12:00 IST (Hourly Average)

Data Source: Berkeley Earth

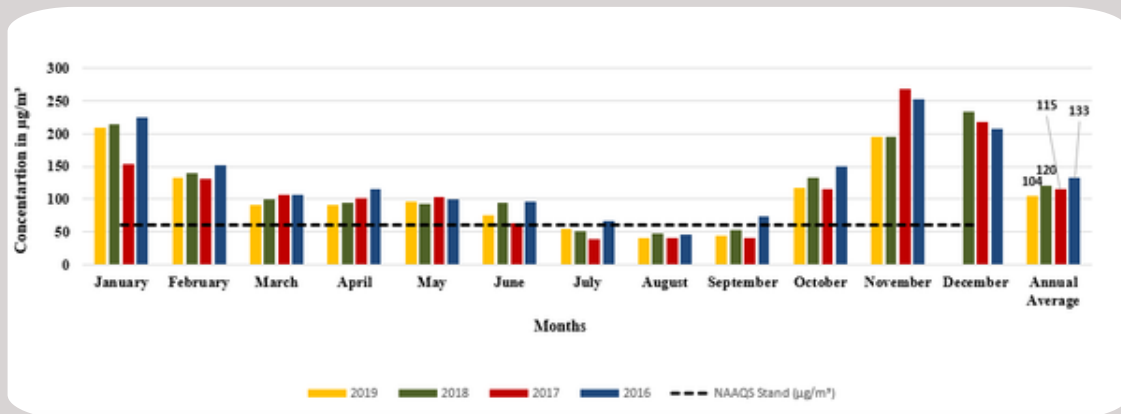
Delhi air quality for last 30 days



During the last 30 days, Delhi Air quality is in "severe" category.

Average PM2.5 Air Quality for 10 monitoring stations in Delhi

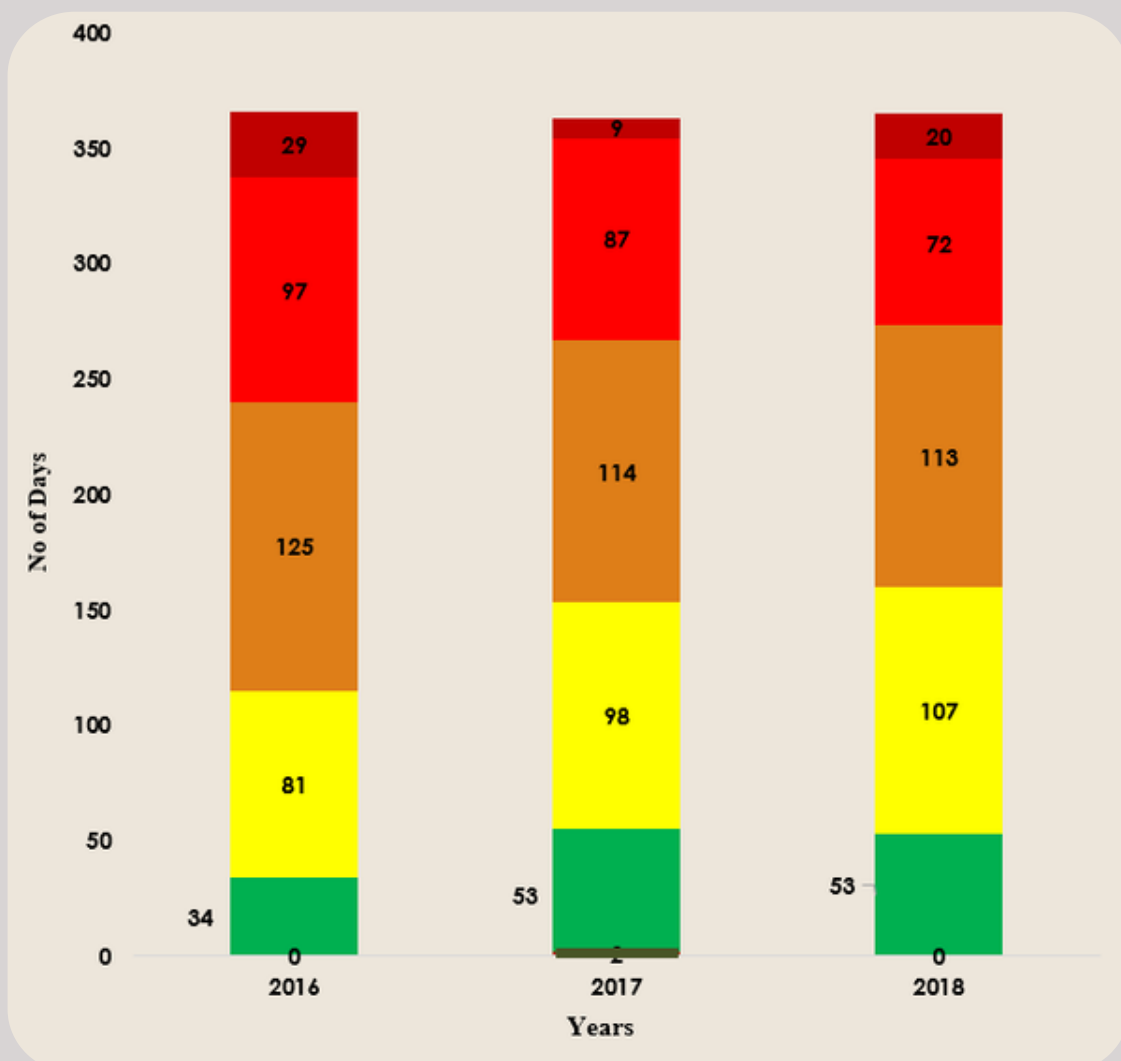
Delhi long term air quality trend



Average Air Quality has marginally improved in 2019 w.r.t 2018, 2017 and 2016.

Data Source: Source: Data from 10 monitoring stations (CPCB)

Delhi Air Quality



The graph represent the no of days in each category i.e., Good to Severe for last three years (2016-2018). The no of days in severe category reduced from 29 (2016) to 09 (2017) and then increased to 20 in 2018..

Data Source: Source: Data from AQI (CPCB)

Air quality health impacts

AQI	Associated Health Impacts
Good (0–50)	Minimal Impact
Satisfactory (51–100)	May cause minor breathing discomfort to sensitive people
Moderate (101–200)	May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults
Poor (201–300)	May cause breathing discomfort to people on prolonged exposure and discomfort to people with heart disease with short exposure
Very Poor (301–400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases
Severe (401–500)	May cause respiratory effects even on healthy people and serious health impacts on people with lung/heart diseases. The health impacts may be experienced even during light physical activity

Thought Leadership



Air pollution, an emergency

Eleven of the 12 most polluted cities in the world on the World Health Organization list of 2018 are in India. This is borne out by an air pollution emergency being called out every summer and winter in many cities, with Delhi being one of the worst.

Source: *The Hindu Business Line*

New Measures and Initiatives



IIT Bombay, McKelvey Engineering partner to study air pollution in India

In order to study and find solutions to air pollution, which is one of the most pressing problem in India in current times, Indian Institute of Technology Bombay (IIT Bombay) and McKelvey School of Engineering have announced a partnership.

Source: *DQ India*



Coming up in 2020: Air pollution to figure in a number of developments

From new BS-VI standards in Delhi to likely entry of more electric vehicles to efforts for combating stubble fires, India will be stepping up its battle against the menace

Source: *Down to Earth*

Health Impact



Reduced levels of air pollution has dramatically positive effects on people's health

The study 'Health Benefits of Air Pollution Reduction' published in the American Thoracic Society's journal *Annals of the American Thoracic Society*, by the Environmental Committee of the Forum of International Respiratory Societies (FIRS), has reviewed interventions that have reduced air pollution at its source.

Source: First Post



Exposing exposure: Finding the connections between air pollution and health

In April 2019, the American Lung Association reported that nearly half of Americans, 141.1 million people, lived in areas with unhealthy amounts of air pollution, an increase of more than 7.2 million people since 2018. This includes both ozone pollution and particle pollution.

Source: Psu.edu

International Developments



Prince William Announces Environment Prize, Calls For 'Decade of Action to Repair the Earth

Prince William has announced a multi-million pound prize for visionaries working to solve Earth's greatest environmental problems from climate change to air pollution. The Earthshot Prize will be awarded to five winners, every year, for the next 10 years. The initiative's goal is to provide at least 50 solutions to the world's greatest problems by 2030.

Source: Time



Afghanistan: Air pollution more dangerous than civil war

Increased air pollution in Afghanistan in recent years reportedly killed more people than the current civil war in the country, according to officials.

Source: Anadolu Agency

New Research (study) or Policy



Severe cold days may be linked to air pollution, say scientists

Jenamani published a study in the Current Science journal in 2007 which said that there has been a fall in average maximum temperature by 2-3 degree C over 2 stations in the peak winter of January since 1989 with increase in average fog (all intensities of fog) hours per day by 8 h during the same period. “Correlation coefficients computed between various fog and no-fog hours with temperatures and pollutions also confirm that maximum temperatures over Delhi are strongly negatively correlated with fog hours which are strongly positively correlated with pollutant levels.

Source: Hindustan Times



Investigation of size distribution and mass characteristics of ambient aerosols and their combustion sources during post-monsoon in northern India

This study explores the size distribution and mass characteristics of ambient atmosphere in the source region of biomass burning (Punjab). The enhanced level of particulate matter (PM) concentrations were interpreted through measurements of number and mass concentration.

Source: Science Direct

New Technology



Delhi gets first smog tower to combat air pollution

A proposed pilot project to consider the efficacy of smog towers is being undertaken by the IIT-Bombay in collaboration with IIT-Delhi and the University of Minnesota.

Source: Hindustan Times



Clean air in just 2 mins from this car air purifier made by AIIMS and IIT scientist duo

Designed and developed in India, Airlens is focused on providing clean air inside a vehicle which meets WHO

standards. The air filter acts as a replacement for the cabin or the air-conditioning filter and promises to clean the air inside a vehicle within 2 minutes.

Source: Financial Express

For more details visit <http://cerca.iitd.ac.in/>

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