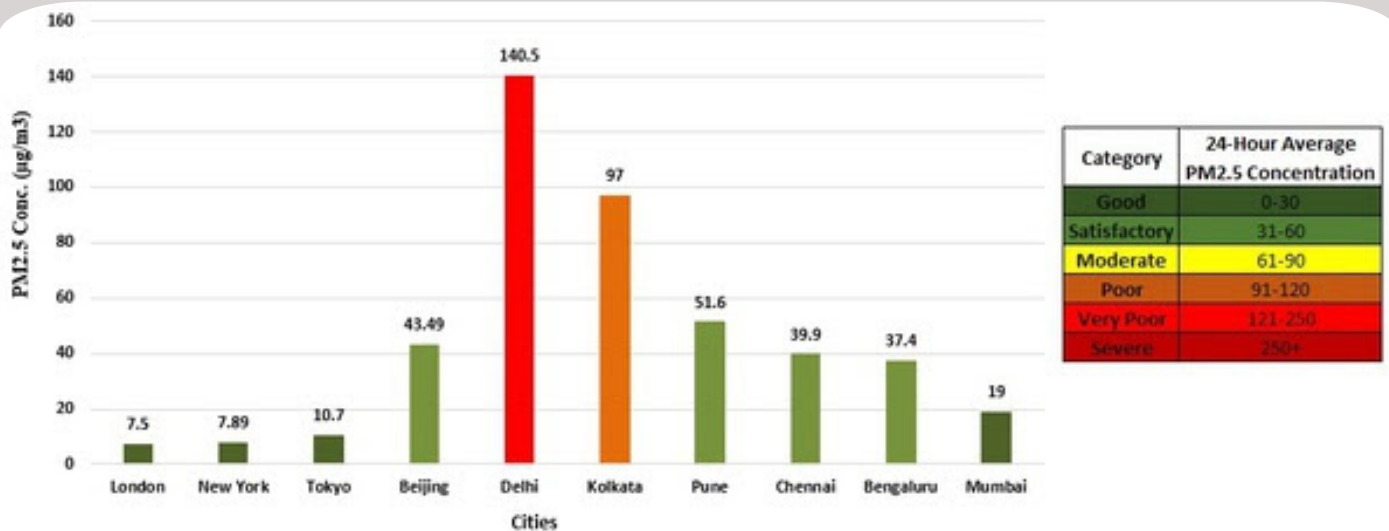


CERCA Weekly Newsletter



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

Air Quality in Different Cities

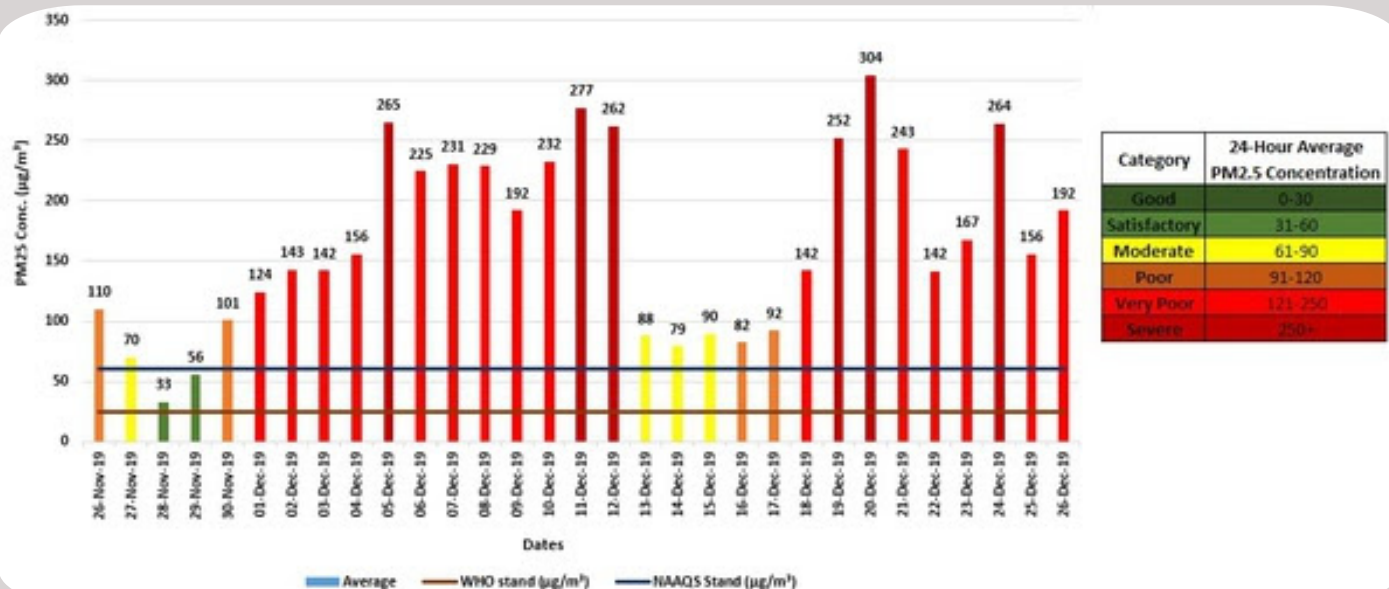


January 16, 2020, 11:00-12:00 IST (Hourly Average)

Delhi Air Quality was in 'Very Poor' category in comparison to other cities in India and Globally.

Data Source: Berkeley Earth

"Delhi Air Quality" for last 30 days



Average PM 2.5 values for 10 Stations (Dilshad Garden, Shadipur, NSIT Dwarka, ITO, DTU, Siri Fort, Anand

Vihar, Mandir Marg, R.K Puram and Punjabi Bagh)

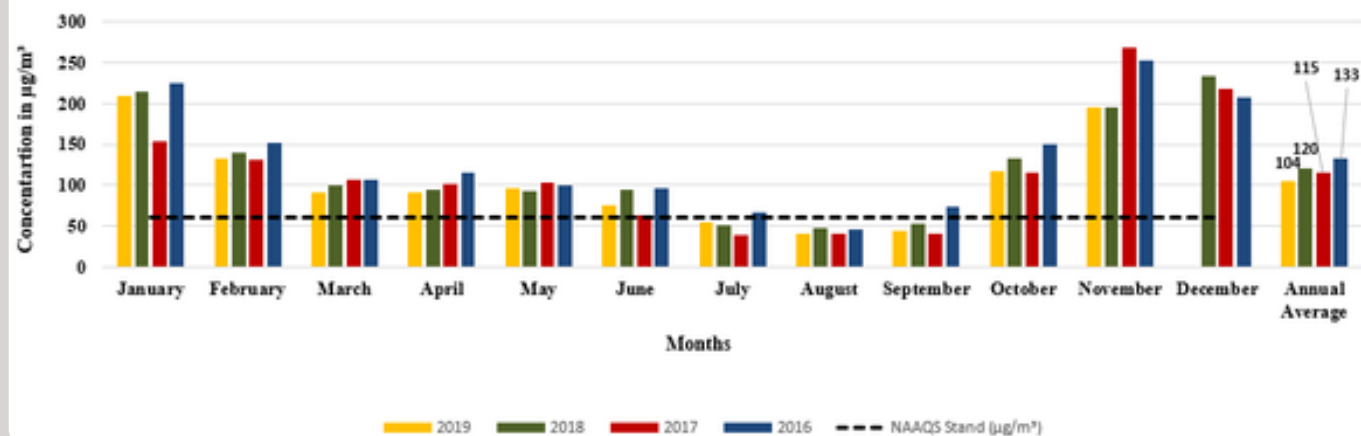
* WHO - World Health Organization

* NAAQS - National Ambient Air Quality Standards

During the last 30 days, Delhi Air Quality was in "Very Poor" category.

Data Source: CPCB

Delhi Long Term Air Quality Trend



PM 2.5 values from 10 monitoring stations in Delhi (Dilshad Garden, Shadipur, NSIT Dwarka, ITO, DTU, Siri Fort, Anand Vihar, Mandir Marg, R.K Puram and Punjabi Bagh)

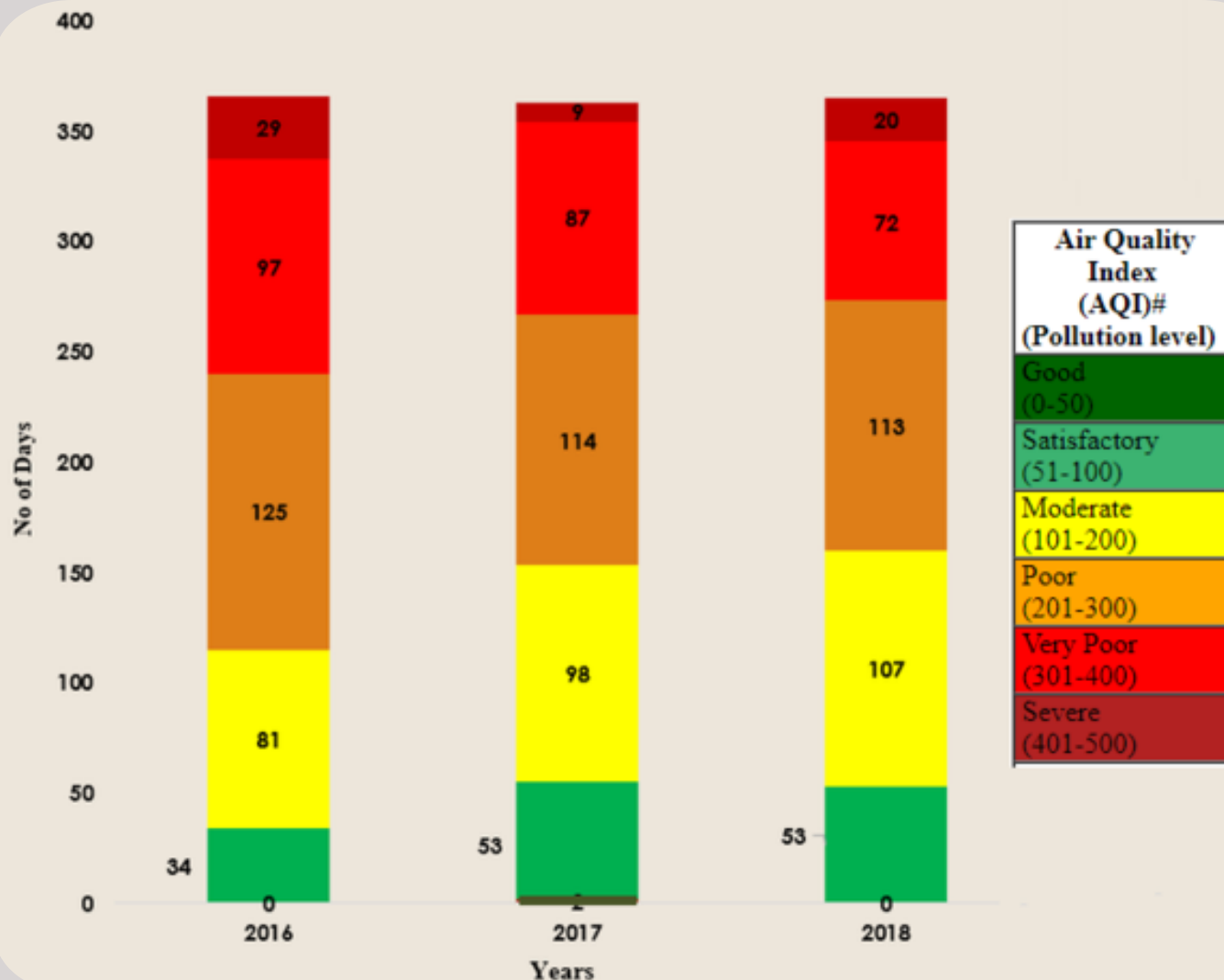
Note: Data for 2019 has been considered till the month of November 2019 only

* NAAQS - National Ambient Air Quality Standards

Average Air Quality has marginally improved in 2019 vis-a-vis 2018, 2017 & 2016

Source: Data from 10 monitoring stations (CPCB)

Delhi Air Quality trend in terms of days from good to severe category



The graph represents 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.

Source: 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



Source: NY Times

New Measures and Initiatives



Source: Down to Earth



Source: Live Law

Health Impact

ScienceDaily[®]

Source: Science Daily

Air Pollution, Evolution, and the Fate of Billions of Humans

It's not just a modern problem. Airborne toxins are so pernicious that they may have shaped our DNA over millions of years.

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.

Delhi Air Pollution: Judicial Interventions in Abating Vehicular Emissions

For last few years now, Delhi National Capital Region (NCR) has been grappling with air pollution crisis. Scores of studies have emerged which attribute this state of affairs to coal-fired power plants, vehicular pollution, burning of crop residue, emissions from heavy industries, construction dust and bursting of Diwali firecrackers, among other reasons.

Mix of stress and air pollution may lead to cognitive difficulties in children

Children with elevated exposure to early life stress in the home and elevated prenatal exposure to air pollution exhibited heightened symptoms of attention and thought problems, according to researchers.

Australia in 'uncharted territory' with long-term health impacts of air pollution

One of Australia's leading lung cancer specialists says we could



Source: *The Lighthouse*

International Developments

Outlook

see a potential spike in lung cancer in coming decades, particularly if poor air quality persists.

New obstacles ahead in China's pollution fight: report

China's fight against pollution faces new threats from rising levels of harmful ozone gas despite an "impressive" reduction in other airborne particles, according to a report released Thursday.

Source: *Outlook*



Source: *The Verge*

Wildfire smoke forced tennis players to withdraw from Australian Open matches

Athletes at the Australian Open are breathing in poor-quality air polluted by bushfire smoke, making it nearly impossible for them to do their jobs.

New Research (study) or Policy



Source: *ET Energy world*

Air pollution from oil, gas production sites visible from space

For the study, published in the journal *Geophysical Research Letters*, researchers set out to see if a suite of satellite-based instruments could help scientists understand more about nitrogen oxides pollution (including nitrogen dioxide) coming from engines in US oil and gas fields.

Air pollution could kill 160,000 in next decade - report

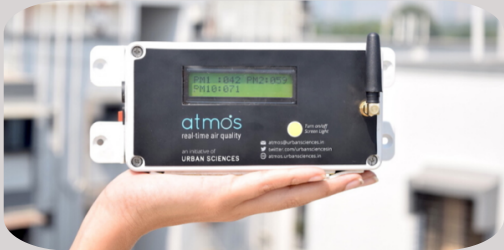
The British Heart Foundation (BHF), which compiled the figures, said there are an estimated 11,000 deaths per year at



Source: Guardian

the moment, but that this will rise as the population continues to age. It wants the UK to adopt World Health Organization (WHO) guidelines on air pollution and meet them by 2030.

New Technology



Source: Your Story

This Mumbai startup is making breathing easier with its air quality monitoring device

A startup founded by Ronak Sutaria in 2017, Respirer Living Sciences has built a real-time IoT-based air quality monitoring device that can measure particulate matter, temperature, and humidity.



Source: Occupational Health and Safety (OH&S)

Yes-Air Pollution Exists Inside Your Car, Too

Did you know that your biggest daily exposure to air pollutants comes while driving to work? A recent study from the University of California gives tips on how to best clean the air inside your car.

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

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