



CERCA Newsletter: November 2020

(Research on Air Pollution and Climate Change)

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Greetings from CERCA!

India, like other countries in the world has been battered by the Covid-19 pandemic. However, Covid-19 is not the only threat to the respiratory health of people in our country. So is the severe air pollution, that reached severe levels for days in New Delhi. Toxic exhaust fumes from road vehicles, industries, and the stubble burning in neighboring states have all had their share in contributing to the city appalling levels of air pollution. CERCA continually strives to find out solutions to mitigate air pollution and have been undertaking various studies on stubble burning especially mapping farm fires through satellite imagery. Another initiative undertaken by CERCA was mapping of emissions from point sources such as power stations and Brick kiln clusters around Delhi. Most recently, CERCA launched its maiden electric mobility initiative by retrofitting a vintage 1948 VW Beetle into an electric car which in fact, is a symbolic action to demonstrate that technology and innovation can help us fight against air pollution in India. Transition to EVs is one of the most amicable answers to the problem of air pollution today as these are 100 per cent emission-free and do not release any toxic gases into the environment which is already in a critical state in several parts of the country. Covid-19 vaccines are expected to hit the markets worldwide soon, but there is no vaccine yet for protecting us against harmful airborne pollutants that can blight our lives and destroy our health. Only well-considered efforts and rigorous enforcement can help us in reducing the appalling levels of toxic air in our country.

Best Regards, Hemant Kaushal, Project Coordinator CERCA

CERCA Events

CERCA Webinar On Source Apportionment And Emission Inventories Studies In Non- Attainment Cities In India

CERCA, Indian Institute of Technology Delhi organized a



webinar on "SA and EI studies in non-attainment cities in India: Bridging gap between Researchers and Regulators" on 26th November 2020. This half day workshop aims to bring together various Domain Experts from the Government, Think Tanks, Academia and Private sector to deliberate on the source apportionment studies carried out in different non-attainment cities in India. The focus of this workshop is to bridge gap between the researchers and regulators for better understanding of the way forward to formulate on-ground implementable strategies in these cities.



IIT Delhi Research Centre (CERCA) retrofits old vintage Beetle car into EV.

Centre of Excellence for Research on Clean Air (CERCA) on November 16, 2020 launched its maiden initiative on electric mobility with the retrofitting of a Classic Beetle car into an electric vehicle. The program at IIT, Delhi was attended by several members and Office bearers of the Heritage Motoring Club of India. Mr. Arun Duggal, Founder of CERCA, a former IIT Delhi Alum and Life Member of the Heritage Motoring Club of India in his message said Centre of Excellence for Research on Clean Air has been established at IIT Delhi to promote research and actions to reduce Air pollution. The Electric Beetle is a symbolic action to demonstrate that we can take actions to eliminate air pollution in Delhi/NCR and in India by use of technology and innovation.



IIT Delhi signed MoA with Bihar State Pollution Control Board

The Bihar State Pollution Control Board has signed a 'Memorandum of Agreement' (MoA) with IIT Delhi on 8th August 2020 for setting up of geographical information system (GIS) based platform for air quality management in the state. Prof. Sagnik Dey, from Centre for Atmospheric Sciences and Coordinator CERCA IITD, will be leading this project with his counterpart Mr. S.N Jayaswal of Bihar State Pollution Control Board, Patna.

CERCA in the News



First International Day of Clean Air for Blue Skies

The Indian Institute of Delhi (IITD) Centre of Excellence for Research on Clean Air (CERCA) also organized a webinar on the topic of Clean Air Goals for India: What did we achieve and where should we go?



IIT Delhi Research Centre retrofits old vintage Beetle car into EV

CERCA, an academic think tank and research centre at IIT Delhi under its maiden initiative on electric mobility launched the retrofitted 1948 vintage Beetle model.



Scientists use lockdown to get data on unpolluted Delhi air

The shutdown is not limited to a particular sector like industry or vehicles. Neither is it a city-level shutdown. It is a pan-India shutdown, so chances of pollution coming from outside has also been minimized. We are gathering data as this an opportunity that Delhi will not get in years to come,said Coordinator of CERCA at IIT Delhi.

Opinion Papers



Expressing Opinions

The Myth of Smog Towers

Under stressful times, there is often a strong desire, both social and political, to search for solutions driven by public perception instead of good science. Covid-19 times have seen quite a few examples of such ineffective prescriptions. Smog Towers being advertised as a vaccination for ambient or outdoor air pollution at the scale of a city or a community are no different.

Research Outcomes



Air pollution and critical air pollutant assessment during and after COVID-19 lockdowns: Evidence from pandemic hotspots in China, the Republic of Korea, Japan, and India

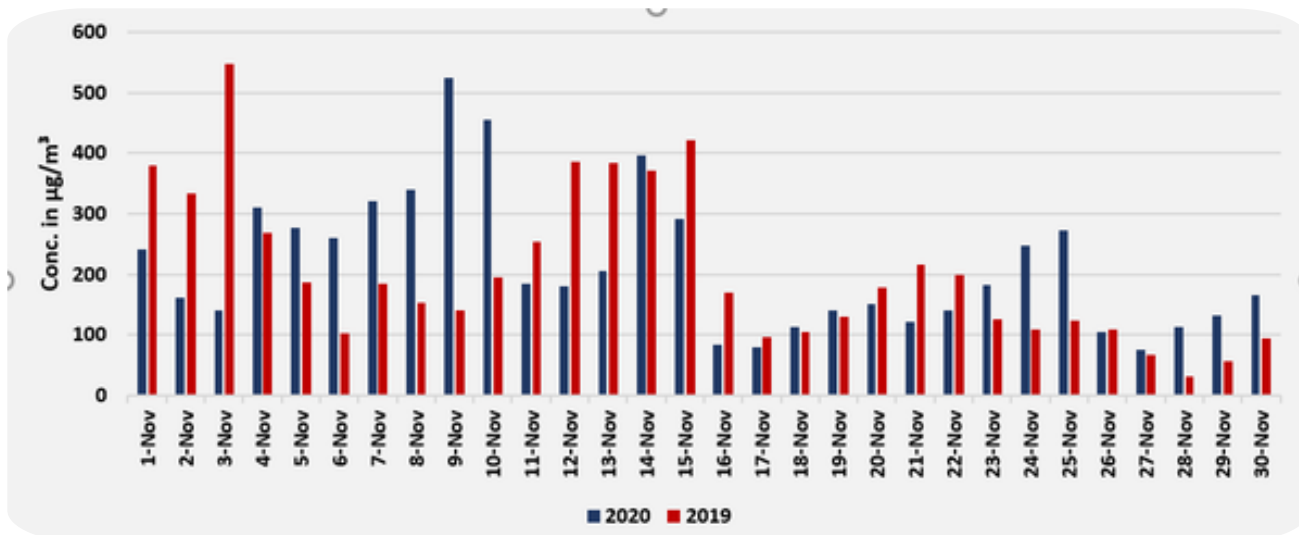
To assess air pollution during and after lockdowns, this study selected pandemic hotspots in China (Wuhan), Japan (Tokyo), Korea (Daegu), and India (Mumbai) and compared the Air Quality Index (AQI) in these areas for the past three years. The results indicated that air pollution levels were positively correlated with a reduction in pollutant levels during and after lockdowns in these cities.



Climatology and calibration of MERRA-2 PM2.5 components over China

Due to the lack of ground monitoring data, current research on ambient fine particulate matter (PM2.5) is limited to mass concentration, and few studies have investigated climatology of PM2.5 components in China. The Version 2 Modern-Era Retrospective analysis for Research and Applications (MERRA-2) data provides a series of surface PM2.5 component datasets, including black carbon (BC), organic carbon (OC), and sulfate.

Delhi Air Quality Trend for 24 hr. Daily Average



About 5% decrease in PM2.5 levels in November 2020 in comparison to November 2019 have been observed.

Data Source: CPCB

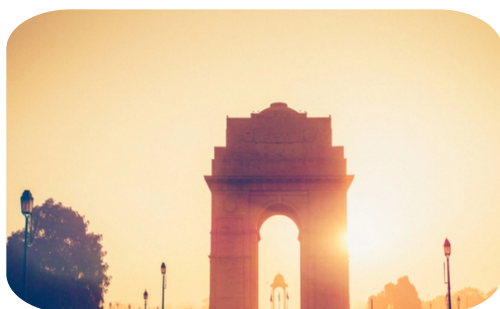
News Highlights



States to get air pollution funds based on meeting performance targets

Centre, based on recommendations of 15th Finance Commission, released exactly half 2200 crore of allocation to 15 States

Source: The Hindu &



Delhi breathed more polluted air in November this year than 2019

The national capital witnessed more polluted November this year than in 2019, largely due to lesser precipitation and large-scale stubble burning. The city also recorded nine 'severe' air days this November, the maximum number in the month in four years.

Source: The Economic Times

China Urges Steps to Reduce Emissions as Cities See Pollution



Source: Bloomberg Green

China's environmental regulator has asked authorities in some northern provinces to take measures to reduce emissions, as air pollution is expected to continue next week.



Source: The Jakarta Post

Inquest to probe role of air pollution in death of British girl

A coroner's inquest starts in London on Monday to determine whether air pollution played a role in the death of a nine-year-old girl who lived near a busy road.

About US

CERCA was inaugurated at IIT Delhi on 16th February 2018 by the Honorable Lt Governor of Delhi, Shri Anil Baijal and has been set up with the help of Shri Arun Duggal. CERCA will function as think-tank and Action Centre hosted at and drawing from the high quality research expertise available at IIT Delhi and working along with multiple stakeholders including Government, academia and Industry for finding sustainable clean air solutions for Delhi, India and beyond, as appropriate.

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