www.thehindu.com 2018-04-02

Carbon cuts could help 15 cities each avoid at least 1 million early deaths: study

A young boy walking with his face covered, as the smog crosses dangerous level near Geeta Colony Area in New Delhi. | Photo Credit: R.V.Moorthy

Fifteen cities in Asia and Africa could each see at least a million fewer premature deaths this century if they cut toxic carbon dioxide emissions along the levels promoted in the global climate change agreement, scientists said on Monday.

The metropolis of Kolkata in India stands to benefit most from cutting carbon pollution — a by-product of burning fossil fuels like oil, gas and coal — with 4.4 million fewer early deaths by 2100.

The findings come as nearly 200 countries are looking at ways to uphold pledges they made as part of the 2015 Paris accord to slash emissions of planet-warming gases.

The study by U.S. scientists, which was published in the journal *Nature Climate Change*, showed 11 of the 15 cities are on the Indian subcontinent.

India's capital, Delhi, and its northeastern city of Patna, along with Bangladesh's capital, Dhaka, and Pakistan's Lahore could each avoid between 2.6 and 4 million deaths, according to computer models applied to 154 large cities.

"They have very weak air-quality regulations currently," said Drew Shindell, the study's lead author and a professor at Duke University in the U.S. state of North Carolina.

Ibadan in Nigeria, Bandung and Jakarta in Indonesia, and Dongguan in China are the only four megacities located in other regions of the world that could also see more than a million people's lives saved with less air pollution, the study said.

To arrive at their conclusions, the scientists considered deaths indirectly tied to carbon dioxide, namely those due to surface-level micro-particles and ozone gas that form with high concentrations of carbon, Shindell said by phone.

Those deaths are typically caused by respiratory ailments and cardiovascular diseases such as strokes and lung cancer, the researchers said.

"Our cars still give out that pollution that leads to particles and ozone, our power plants do, our furnaces," Shindell told the *Thomson Reuters Foundation*. "You see that black smoke when people fire up their oil burners in the winter – it's black because there are particles."

The scientists' estimates are based on nations achieving the carbon emissions cuts necessary to meet the Paris accord's most ambitious target of keeping the global temperature hike to 1.5 Celsius above pre-industrial times.

But according to a draft United Nations' report seen by *Reuters* earlier this year, unless governments make unprecedented economic shifts from fossil fuels, temperatures are on track to breach the 1.5 C limit.

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