

EMISSION LEVELS RISING FASTER IN INDIAN CITIES THAN IN CHINA

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Urbanisation is accelerating greenhouse gas emissions from vehicles in India at a faster than in China.

On an average, an Indian emitted about 20 kg per capita while commuting for work, with the highest (140 kg CO₂) in Gurugram district (Haryana) and the lowest (1.8 kg CO₂) in Shrawasti district (Uttar Pradesh), says a study that analysed the link between population density and emissions from transport, across India's districts.

The experience in most developed countries was that urbanisation led to a reduction in emissions — more urbanisation meant shorter distances between the workplace and home and thereby, a preference for public transport. However this didn't effectively apply to developing countries, the authors argue.

In China a 1% increase in urbanisation was linked with a 0.12% increase in CO₂ emissions whereas, in India, it translated into 0.24% increase in emissions, said the study, to be published in the peer-reviewed journal *Environmental Research Letters*.

India's CO₂ emission grew by an estimated 4.6% in 2017 and its per-capita emission was about 1.8 tonnes. In spite of being the 4th largest emitter, India's per capita emissions are much lower than the world average of 4.2 tonnes. But those emissions have been growing steadily, with an average growth rate over the past decade of 6%, according to data from the Global Carbon Project.

Fuel price hikes aren't always a solution to curb emissions, the study says.

With a Rs. 1 increase in diesel price, commuting emissions decreased by 11% in some districts whereas it only fell by about 3% in low-income districts. "Given these districts have least commuting emissions and low socio-economic status our study finds limited support for increasing gasoline prices as a strategy to mitigate commuting emissions," say the authors Sohail Ahmad and Felix Creutzig, who are at the University of Glasgow and the Mercator Research Institute on Global Commons and Climate Change, Berlin, respectively. "In total, India's transport patterns are very climate friendly, and much better than those of Europe and the United States. We find that some districts are mostly relying on three-wheelers for short commuting distances, while others are highly urban, rich, and rely on cars," Creutzig said in an email.

The mean commuting distance (among commuters) is 5.9 km, with the lowest 1.3 km in Longleng district (Nagaland) and the highest 14 km in Dharmapuri district (Tamil Nadu).

Delhi had the highest commuting emissions per capita — a factor that also contributed to its high level of pollution — and the national capital region had 2.5 times higher commuting emissions than Mumbai, Kolkata, Chennai, Bangalore, and Hyderabad. "Delhi's higher socio-economic status and heavy reliance on private travel modes led to higher commuting emissions than in other megacities," the report noted.

Because there were several instances of districts with similar population density but varying per

capita emissions, a “simple-minded densification” was an inappropriate policy for reducing commuters’ GHG emissions and India would do well to focus on electric vehicles and an efficient public transit system. This too however ought to be tailored to a region’s geographical context, the authors contended.

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