

Carbon cleanup would save millions of lives, study finds

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This picture taken on August 14, 2013 shows smoke rising from a chimney at a coal chemical factory in Huaibei, east China's Anhui province.

Reducing fossil-fuel emissions to safer levels would save millions of lives annually by the end of the century, a study said on Sunday.

The estimate is based on a simulation of levels of two big pollutants, [fine particulate matter](#) and ozone, from coal, oil and gas.

Researchers led by Jason West at the University of North Carolina at Chapel Hill derive their model from an emissions projection called RCP4.5.

RCP4.5 is a middle-of-the-road scenario under which average [surface temperatures](#) would be about 2.6 degrees Celsius (4.7 degrees) higher at 2100 compared to pre-industrial levels.

Under RCP4.5, there would be around half a million avoided deaths annually in 2030, rising to 1.3 million in 2050 and 2.2 million in 2100, according to the paper.

Avoiding [premature deaths](#) would keep people healthier and leave them in the workforce.

That would translate into an [economic benefit](#) that, in 2030 and 2050, would exceed the costs of reducing emissions, especially in East Asia, where two-thirds of these fatalities would occur.

The cost advantage, though, would narrow at the end of the century as it would become more expensive to wring out substantial further emissions cuts.

The paper is published in the peer-reviewed journal *Nature Climate Change*.

It coincidentally appears ahead of a new assessment on global warming and its impacts that the UN climate panel is due to release in Stockholm on Friday.

Ozone is a triple-atom molecule of oxygen that is protective in the stratosphere, as it helps to filter out the Sun's dangerous ultraviolet light.

At ground level, though, where it results from a reaction between traffic exhausts and sunlight, it is an irritant for the airways, as is fine particulate matter, which can lodge dangerously in the lungs.

More information: Paper: [dx.doi.org/10.1038/nclimate2009](https://doi.org/10.1038/nclimate2009)

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