

# Reducing air pollution 'could prevent 50,000 EU deaths'

January 20 2021, by Patrick Galey

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Limiting air pollution to levels recommended by the World Health Organization could prevent more than 50,000 deaths in Europe annually,

according to research published Wednesday that called for urgent action.

The WHO estimates that air pollution kills more than seven million people each year and is one of the leading causes of sickness and absenteeism globally.

Cities, with their crowded streets and high energy use, are hotspots for illness and disease linked to air pollution.

The WHO recommends that [fine particulate matter](#) (PM2.5) not exceed 10 milligrammes per cubic metre of air, averaged annually. For [nitrous oxide](#) (NO<sub>2</sub>), the threshold not to be exceeded is 40 mg/m<sup>3</sup>.

Wednesday's study, published in the *Lancet Planetary Health* journal, estimated the premature death burden due to these two pollutants in nearly 1,000 cities across Europe.

It found that reducing PM2.5 and NO<sub>2</sub> to safe WHO levels could prevent 51,213 [premature deaths](#) each year.

Nearly 125,000 deaths annually could be saved if [air pollution levels](#) were reduced to the lowest recorded in the study, its authors said.

Mark Nieuwenhuijsen of the Barcelona Institute for Global Health (ISGlobal) said the research "proves that many cities are still not doing enough to tackle air pollution."

"Levels above WHO guidelines are leading to unnecessary deaths," he said.

Using [city](#)-specific data on air pollution models combined with mortality figures, the researchers formed a "mortality burden score" ranking individual cities from best to worst.

Deaths due to [air pollution](#) varied widely, with NO<sub>2</sub> levels in Madrid, for example, responsible for seven percent of annual deaths there.

Cities in the Po-Valley region of northern Italy, Poland, and the Czech Republic were the highest in mortality burden, with the Italian cities of Brescia, Bergamo and Vicenza all within the top five for PM<sub>2.5</sub> concentrations.

Those with the lowest mortality burden included Tromsø in Norway, Umeå in Sweden and Oulu in Finland, as well as the Icelandic capital Reykjavik.

On average, 84 percent of the population in cities studied were exposed to PM<sub>2.5</sub> levels above the WHO guideline.

Nine percent were exposed to higher-than-recommended NO<sub>2</sub> levels, the study found.

Sasha Khomenko, study co-author from ISGlobal, said that it was important to implement local emissions reductions measures in light of the high variability in mortality linked to poor air.

"We need an urgent change from private motorised traffic to public and active transportation (and) a reduction of emissions from industry, airports and ports," she said.

Khomenko also said a ban on domestic wood and coal burning would help heavily polluted cities in central Europe, and called for more trees and green spaces in urban areas.

**More information:** Khomenko S, Cirach M, Pereira-Barboza E, Mueller N, Barrera-Gómez J, Rojas-Rueda D, de Hoogh K, Hoek G, Nieuwenhuijsen M. Premature mortality due to air pollution in European

cities; an Urban Burden of Disease Assessment. *The Lancet Planetary Health*, 2021. [https://doi.org/10.1016/S2542-5196\(20\)30272-2](https://doi.org/10.1016/S2542-5196(20)30272-2)

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