





# Vietnam

Air pollution was the 5th leading risk factor for premature death in Vietnam in 2019, accounting for more than 11% of all deaths (nearly 72,000). Considered separately, ambient particulate matter (PM<sub>2.5</sub>) ranked as the 8th leading risk factor, and household air pollution (HAP) ranked 9th. Ozone was not in the top 20 risk factors.

## Key Statistics at a Glance

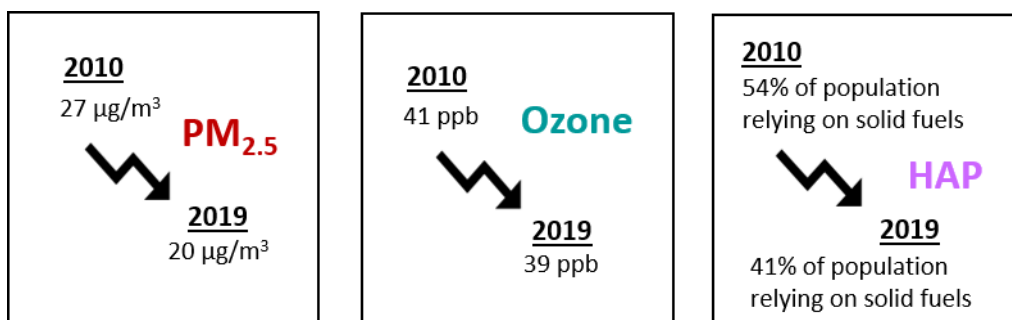
<p><b>Nearly 72,000 deaths</b> due to air pollution in 2019.</p> <p><b>10% of infant deaths</b> attributable to air pollution.</p>	 <p><b>20 µg/m<sup>3</sup></b> population-weighted annual average PM<sub>2.5</sub> concentration.*</p> <p><b>37,500 deaths</b> attributable to exposure to outdoor PM<sub>2.5</sub>.</p>	 <p><b>41% of the population</b> used solid fuels for cooking.</p> <p><b>More than 33,000 deaths</b> attributable to exposure to household air pollution.</p>
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## Key Exposure Facts

**93% of Vietnam's population lives in areas where PM<sub>2.5</sub> levels are above the WHO guideline for healthy air (10 µg/m<sup>3</sup>).**\*\*

- Between 2010 and 2019, exposures to PM<sub>2.5</sub>, household air pollution, and ozone declined.
- There are 2 stations reporting PM<sub>2.5</sub> concentrations in Vietnam.\*\*\*
- Among the 23 countries in the South Asia region, Vietnam ranks 8th in PM<sub>2.5</sub> exposure.

## How Have Pollutant Exposures Changed Between 2010 and 2019?



\* Please note that PM<sub>2.5</sub> concentrations reported here are estimated using a combination of satellite data, ground air quality monitoring data, and chemical transport models. These estimates can be more uncertain in regions where ground monitoring data are limited or not available. In Vietnam, the best estimate of the annual average exposure is 20 µg/m<sup>3</sup>, but it may range from 17 µg/m<sup>3</sup> to 25 µg/m<sup>3</sup>.

\*\* WHO provides an Air Quality Guideline of 10 µg/m<sup>3</sup> for PM<sub>2.5</sub> to minimize health risks to populations, as well as three interim targets (35 µg/m<sup>3</sup>, 25 µg/m<sup>3</sup>, and 15 µg/m<sup>3</sup>) as incremental steps toward the progressive reduction of air pollution.

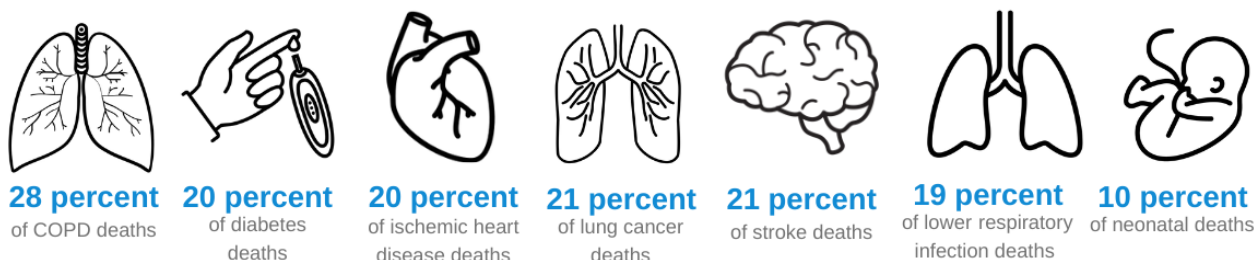
\*\*\* Based on data from OpenAQ.

# STATE OF GLOBAL AIR /2020

## Air Pollution Accounts for a Substantial Percentage of Global Deaths from Specific Causes.

Air pollution exposures, including exposure to outdoor PM<sub>2.5</sub> and HAP, have been linked to increased hospitalizations, disability, and early death from respiratory diseases, heart disease, stroke, lung cancer, and diabetes, as well as communicable diseases like pneumonia. Exposure to ozone is linked to chronic obstructive pulmonary disease (COPD), and in children, especially those under the age of 5, increases susceptibility to lower-respiratory tract infections. Exposure to PM<sub>2.5</sub> also puts mothers at risk of delivering babies too early and smaller than normal, and such babies are more susceptible to dying from a range of diseases.

## Percentage of Deaths (by Cause) Attributed to Air Pollution in Vietnam in 2019



## Key Health Facts

- Air pollution is the 5th leading risk factor for premature death in Vietnam. Leading causes of death in Vietnam include intracerebral hemorrhage, ischemic heart disease, ischemic stroke, type II diabetes, and lower back pain while leading risk factors include high blood pressure, tobacco, high blood sugar, alcohol use, and high BMI.
- There are 45 deaths per 100,000 people attributable to air pollution in Vietnam compared with 86 deaths globally, adjusted for differences in age.
- 7% of total air-pollution-attributable deaths in Vietnam are in children under 5, and 12% are in people over 70.

### FOR MORE INFORMATION:

For the full report and additional data, please visit [www.stateofglobalair.org](http://www.stateofglobalair.org).

### ADDITIONAL RESOURCES:

For open-access, real-time air quality data, visit [OpenAQ](http://OpenAQ)



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For more details, please visit [www.stateofglobalair.org](http://www.stateofglobalair.org)

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The State of Global Air website is a collaboration between the Health Effects Institute and the Institute for Health Metrics and Evaluation, with expert input from the University of British Columbia.