

# STATE OF GLOBAL AIR /2020



## Japan

Air pollution was the 10th leading risk factor for premature death in Japan in 2019, accounting for less than 5% of all deaths (more than 42,500). Considered separately, ambient particulate matter (PM<sub>2.5</sub>) ranked as the 9th leading risk factor, while household air pollution (HAP) and ozone were not in the top 20 risk factors.

### Key Statistics at a Glance

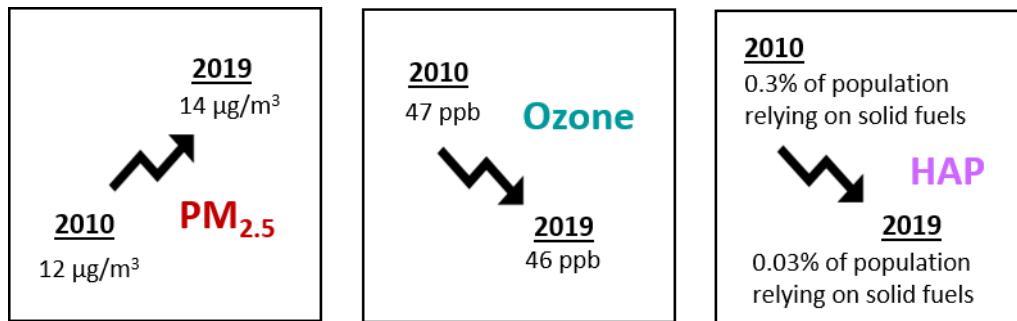
<p><b>Nearly 43,000 deaths due to air pollution in 2019.</b></p> <p><b>Less than 5% of infant deaths attributable to air pollution.</b></p>	 <p><b>14 <math>\mu\text{g}/\text{m}^3</math> population-weighted annual average PM<sub>2.5</sub> concentration.*</b></p> <p><b>Nearly 40,000 deaths attributable to exposure to outdoor PM<sub>2.5</sub>.</b></p>	 <p><b>46 ppb population-weighted seasonal average ozone.</b></p> <p><b>More than 3,000 deaths attributable to exposure to ozone.</b></p>
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### Key Exposure Facts

**96% of Japan's population lives in areas where PM<sub>2.5</sub> levels are above the WHO guideline for healthy air (10  $\mu\text{g}/\text{m}^3$ ). \*\***

- Between 2010 and 2019, exposures to household air pollution and ozone declined, but exposures to PM<sub>2.5</sub> increased.
- Among the 34 countries in the High-Income region, Japan 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 Japan, the best estimate of the annual average exposure is 14  $\mu\text{g}/\text{m}^3$ , but it may range from 11  $\mu\text{g}/\text{m}^3$  to 16  $\mu\text{g}/\text{m}^3$ .

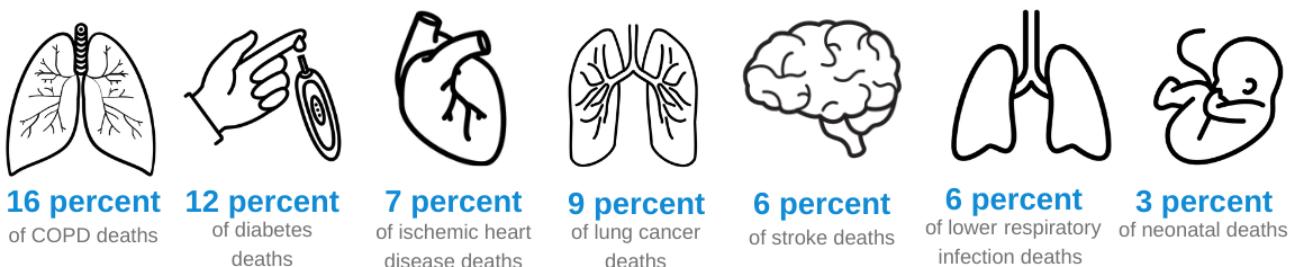
\*\* WHO provides an Air Quality Guideline of 10  $\mu\text{g}/\text{m}^3$  for PM<sub>2.5</sub> to minimize health risks to populations, as well as three interim targets (35  $\mu\text{g}/\text{m}^3$ , 25  $\mu\text{g}/\text{m}^3$ , and 15  $\mu\text{g}/\text{m}^3$ ) as incremental steps toward the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

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## 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 Japan in 2019



### Key Health Facts

- Air pollution is the 10th leading risk factor for premature death in Japan. Leading causes of death in Japan include Alzheimer's disease, ischemic heart disease, lower respiratory tract infections, stroke, and lung cancer, while leading risk factors include tobacco, high blood pressure, dietary risks, high blood sugar, and kidney dysfunction.
- There are 10 deaths per 100,000 people attributable to air pollution in Japan compared with 86 deaths globally, adjusted for differences in age.
- Only 1% of total air-pollution-attributable deaths in Japan are in children under 5, and 3% 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)



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.