Air pollution was the 10th leading risk factor for premature death in Germany in 2019, accounting for 3% of all deaths (more than 29,000). Considered separately, ambient particulate matter (PM$_{2.5}$) ranked as the 11th leading risk factor. Ozone and household air pollution were not in the top 20 risk factors.

**Key Statistics at a Glance**

<table>
<thead>
<tr>
<th>More than 29,200 deaths due to air pollution in 2019.</th>
<th>12 µg/m$^3$ population-weighted annual average PM$_{2.5}$ concentration.*</th>
<th>42 ppb average seasonal population-weighted ozone.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5% of infant deaths attributable to air pollution.</td>
<td>27,000 deaths attributable to exposure to outdoor PM$_{2.5}$.*</td>
<td>More than 2,300 deaths attributable to exposure to ozone.</td>
</tr>
</tbody>
</table>

**Key Exposure Facts**

85% of Germany's population lives in areas where PM$_{2.5}$ levels are above the WHO guideline for healthy air (10 µg/m$^3$).**

- Between 2010 and 2019, exposures to PM$_{2.5}$ and household air pollution declined, but exposures to ozone remained the same.
- There are more than 365 stations reporting PM$_{2.5}$ concentrations in Germany.***
- Among the 34 countries in the high-income region, Germany ranks 14th in PM$_{2.5}$ exposure.

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

2010

<table>
<thead>
<tr>
<th>16 µg/m$^3$ PM$_{2.5}$</th>
<th>42 ppb Ozone</th>
<th>0.2% of population relying on solid fuels</th>
</tr>
</thead>
</table>

2019

| 12 µg/m$^3$ PM$_{2.5}$ | 42 ppb Ozone | 0.01% of population relying on solid fuels |

* Please note that PM$_{2.5}$ 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 Germany, the best estimate of the annual average exposure is 11.8 µg/m$^3$, but it may range from 11.6 µg/m$^3$ to 12 µg/m$^3$.

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

*** Based on data from OpenAQ.
Air Pollution Accounts for a Substantial Percentage of Global Deaths from Specific Causes.

Air pollution exposures, including exposure to outdoor PM$_{2.5}$ 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$_{2.5}$ 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 Germany in 2019

Key Health Facts

- Air pollution is the 10th leading risk factor for premature death in Germany. Leading causes of death in Germany ischemic heart disease, lung cancer, stroke, Alzheimer disease, and chronic obstructive pulmonary disease (COPD), while leading risk factors include high blood pressure, high blood sugar, tobacco, dietary risks, and high BMI.
- There are 14 deaths per 100,000 people attributable to air pollution in Germany compared with 86 deaths globally, adjusted for differences in age.
- 3% of total air-pollution-attributable deaths in Germany 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.

ADDITIONAL RESOURCES:
For open-access, real-time air quality data, visit OpenAQ.