Bulgaria

Air pollution was the 7th leading risk factor for premature death in Bulgaria in 2019, accounting for nearly 9% of all deaths (more than 11,000). Considered separately, ambient particulate matter (PM$_{2.5}$) ranked as the 6th leading risk factor, and household air pollution (HAP) and ozone were not in the top 20 risk factors.

**Key Statistics at a Glance**

<table>
<thead>
<tr>
<th>More than 11,000 deaths due to air pollution in 2019.</th>
<th>19 $\mu$g/m$^3$ population-weighted annual average PM$_{2.5}$ concentration.*</th>
<th>41 ppb population-weighted seasonal average ozone.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Around 6% of infant deaths attributable to air pollution.</td>
<td>More than 9,000 deaths attributable to exposure to outdoor PM$_{2.5}$.</td>
<td>More than 150 deaths attributable to exposure to ozone pollution.</td>
</tr>
</tbody>
</table>

**Key Exposure Facts**

**100% of Bulgaria's population** lives in areas where PM$_{2.5}$ levels are above the WHO guideline for healthy air (10 $\mu$g/m$^3$).**

- Between 2010 and 2019, exposure to PM$_{2.5}$ declined, while exposure to household air pollution increased, and exposure to ozone remained the same.
- There are more than 25 stations reporting PM$_{2.5}$ concentrations in Bulgaria.***
- Among the 29 countries in the Central Europe, Eastern Europe, and Central Asia region, Bulgaria ranks 14th in PM$_{2.5}$ exposure.

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

<table>
<thead>
<tr>
<th>2010 23 $\mu$g/m$^3$ PM$_{2.5}$</th>
<th>2010 45 ppb Ozone</th>
<th>2010 &lt;1% of population relying on solid fuels</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 $\mu$g/m$^3$</td>
<td>2019 41 ppb</td>
<td>2019 &lt;1% of population relying on solid fuels</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 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 Bulgaria, the best estimate of the annual average exposure is 19 $\mu$g/m$^3$, but it may range from 18 $\mu$g/m$^3$ to 21 $\mu$g/m$^3$.

** WHO provides an Air Quality Guideline of 10 $\mu$g/m$^3$ for PM$_{2.5}$ to minimize health risks to populations, as well as three interim targets (35 $\mu$g/m$^3$, 25 $\mu$g/m$^3$, and 15 $\mu$g/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 Bulgaria in 2019

Key Health Facts

- Air pollution is the 7th leading risk factor for premature death in Bulgaria. Leading causes of death in Bulgaria include ischemic heart disease, ischemic stroke, hypertensive heart disease, and intracerebral hemorrhage, while leading risk factors include high blood pressure, dietary risks, tobacco, high BMI, and high blood sugar.
- There are 76 deaths per 100,000 people attributable to air pollution in Bulgaria compared with 86 deaths globally, adjusted for differences in age.
- 4% of total air-pollution-attributable deaths in Bulgaria are in children under 5, and 9% 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.

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.