Bosnia and Herzegovina

Air pollution was the 7th leading risk factor for premature death in Bosnia and Herzegovina in 2019, accounting for nearly 13% of all deaths (nearly 5,000). Considered separately, ambient particulate matter (PM2.5) ranked as the 6th leading risk factor, and household air pollution (HAP) ranked 13th. Ozone was not in the top 20 risk factors.

Key Statistics at a Glance

- Nearly 5,000 deaths due to air pollution in 2019.
- Nearly 11% of infant deaths attributable to air pollution.
- 30 µg/m³ population-weighted annual average PM2.5 concentration.*
- More than 3,600 deaths attributable to exposure to outdoor PM2.5.
- 38% of the population used solid fuels for cooking.
- More than 1,200 deaths attributable to exposure to HAP.

Key Exposure Facts

100% of Bosnia and Herzegovina’s population lives in areas where PM2.5 levels are above the WHO guideline for healthy air (10 µg/m³).**

- Between 2010 and 2019, exposures to PM2.5 and HAP declined, but exposures to ozone increased.
- There are 7 stations reporting PM2.5 concentrations in Bosnia and Herzegovina.***
- Among the 29 countries in the Central Europe, Eastern Europe, and Central Asia region, Bosnia and Herzegovina ranks 7th in PM2.5 exposure.

How Have Pollutant Exposures Changed Between 2010 and 2019?

- **2010** 34 µg/m³ PM2.5
- **2019** 30 µg/m³ PM2.5
- **2010** 46 ppb Ozone
- **2019** 44 ppb Ozone
- **2010** 46% of population relying on solid fuels
- **2019** 38% of population relying on solid fuels

* Please note that PM2.5 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 Bosnia and Herzegovina, the best estimate of the annual average exposure is 30 µg/m³, but it may range from 27 µg/m³ to 33 µg/m³.

** WHO provides an Air Quality Guideline of 10 µg/m³ for PM2.5 to minimize health risks to populations, as well as three interim targets (35 µg/m³, 25 µg/m³, and 15 µg/m³) 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 Bosnia and Herzegovina in 2019**

- 30% of COPD deaths
- 22% of diabetes deaths
- 19% of ischemic heart disease deaths
- 22% of lung cancer deaths
- 22% of stroke deaths
- 19% of lower respiratory infection deaths
- 11% of neonatal deaths

**Key Health Facts**

- Air pollution is the 7th leading risk factor for premature death in Bosnia and Herzegovina. Leading causes of death in Bosnia and Herzegovina include ischemic heart disease, ischemic stroke, lung cancer, type II diabetes, and colorectal cancer, while leading risk factors include tobacco, high blood sugar, high blood pressure, high BMI, dietary risks.
- There are 84 deaths per 100,000 people attributable to air pollution in Bosnia and Herzegovina compared with 86 deaths globally, adjusted for differences in age.
- 8% of total air-pollution-attributable deaths in Bosnia and Herzegovina are in children under 5, and 13% are in people over 70.

**GOOD NEWS:** Deaths attributable to HAP decreased by 26% since 2010. Bosnia and Herzegovina released its National Clean Air Programme in 2019 with a view to reducing outdoor PM$_{2.5}$ levels by 2024. In April 2020, the country initiated a switch to Bharat Stage VI (BS-VI) emission standards, which is likely to bring benefits over the next few years.

**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).

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.