Thailand

Air pollution was the 7th leading risk factor for premature death in Thailand in 2019, accounting for 8% of all deaths (nearly 41,000). Considered separately, ambient particulate matter (PM$_{2.5}$) ranked as the 7th leading risk factor, and household air pollution (HAP) ranked 15th. Ozone was not in the top 20 risk factors

**Key Statistics at a Glance**

- **Nearly 41,000 deaths due to air pollution in 2019.**
- **Less than 10% of infant deaths attributable to air pollution.**
- **27 µg/m$^3$ population-weighted annual average PM$_{2.5}$ concentration.*
- **More than 32,000 deaths attributable to exposure to outdoor PM$_{2.5}$.**
- **21% of the population used solid fuels for cooking.**
- **More than 7,000 deaths attributable to exposure to household air pollution.**

**Key Exposure Facts**

**100% of Thailand’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 increased.
- There are 59 stations reporting PM$_{2.5}$ concentrations in Thailand.***
- Among the 23 countries in the Southeast Asia, East Asia, and Oceania region, Thailand ranks 4th in PM$_{2.5}$ exposure.

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

- 2010: 35 µg/m$^3$ PM$_{2.5}$
- 2019: 27 µg/m$^3$ PM$_{2.5}$
- 2010: 40 ppb Ozone
- 2019: 46 ppb Ozone
- 2010: 32% of population relying on solid fuels
- 2019: 21% of population relying on solid fuels

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*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 Thailand, the best estimate of the annual average exposure is 27 µg/m$^3$, but it may range from 24 µg/m$^3$ to 32 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 Thailand in 2019

Key Health Facts

- Air pollution is the 7th leading risk factor for premature death in Thailand. Leading causes of death in Thailand ischemic heart disease, lower respiratory infection, intracerebral hemorrhage, lung cancer, and Alzheimer disease, while leading risk factors include tobacco, high blood pressure, high blood sugar, dietary risks, and high BMI.
- There are 42 deaths per 100,000 people attributable to air pollution in Thailand compared with 86 deaths globally, adjusted for differences in age.
- 5% of total air-pollution-attributable deaths in Thailand 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.