Air pollution in China is killing 4,000 people every day, a new study finds

Air pollution is killing about 4,000 people in China a day, accounting for one in six premature deaths in the world's most populous country, a new study finds.

Physicists at the University of California, Berkeley, calculated about 1.6 million people in China die each year from heart, lung and stroke problems because of incredibly polluted air, especially small particles of haze. Earlier studies put the annual Chinese air pollution death toll at one to two million but this is the first to use newly released air monitoring figures.

The study, to be published in the journal PLOS One, blames emissions from the burning of coal, both for electricity and heating homes. It uses real air measurements and then computer model calculations that estimate heart, lung and stroke deaths for different types of pollutants.

Study lead author Robert Rohde said 38% of the Chinese population lived in an area with a long-term air quality average the US Environmental Protection Agency called "unhealthy."

"It's a very big number," Rohde said. "It's a little hard to wrap your mind around the numbers. Some of the worst in China is to the south-west of Beijing."

To put Chinese air pollution in perspective, the most recent American Lung Association data shows that Madera, California, has the highest annual average for small particles in the United States. But 99.9% of the eastern half of China has a higher annual average for small particle haze than Madera, Rohde said.

"In other words nearly everyone in China experiences air that is worse for particulates than the worst air in the US," Rohde said.

In a 2010 document the EPA estimated between 63,000 and 88,000 people died in the US from air pollution. Other estimates ranged from 35,000 to 200,000.

Unlike the US air pollution in China is worst in the winter because of burning of coal to heat homes and weather conditions that keeps dirty air closer to the ground, Rohde said. Beijing will host the 2022 Winter Olympics.

Outside scientists praised the research. Jason West at the University of North Carolina said he expected "it will be widely influential".

Allen Robinson at Carnegie Mellon University said in an email that parts of the United States, such as Pittsburgh, used to have almost as bad air but have become much cleaner "through tough regulations combined with large collapse of heavy industry".

As China started to clean up its air, limiting coal use, it would also reduce emissions of carbon dioxide, the chief global warming gas, Rohde said.

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