

Air pollution killing Ulaanbaatar (Mongolia) residents

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A new study by Simon Fraser University's Ryan Allen shows one in 10 deaths in Mongolia's capital city of Ulaanbaatar can be attributed to air pollution. His research, in collaboration with colleagues in Ulaanbaatar, was recently published online in the journal, [Air Quality, Atmosphere and Health](#).

“Ulaanbaatar hasn't received as much attention as some of Asia's mega-cities, but the air pollution there is as bad as anywhere in the world,” says Allen, an assistant environmental health professor with Canada's Simon Fraser University. “Our main objectives in this study were to characterize the situation and quantify air pollution's impact as a public health problem.

“The environment's impacts on health are often overlooked, but we found that one in 10 deaths in Ulaanbaatar can be attributed to air pollution. That far exceeds the number of deaths in the city caused by things that people may be more familiar with, such as traffic accidents.”

Previous research, mostly conducted in North America and Europe, has shown air pollution causes a wide range of health effects, such as respiratory illness and cardiovascular effects, including heart attacks and strokes. The public health impact is particularly large in many parts of Asia because of the extraordinarily high concentrations of air pollution and large exposed populations.

Using government-supplied measurements, the researchers found

concentrations of fine particles in Ulaanbaatar's air were more than seven times the level considered safe by the World Health Organization. Using a range of techniques, including satellite images to map pollution across the city, researchers discovered the situation was even worse in the city's low-income neighbourhoods, where coal is burned for heat.

“Even in a highly polluted city, there can be a lot of variation in exposure depending on where you live,” says Allen.

Pollution levels are especially bad in the winter, when bitterly cold temperatures force residents to burn more coal and the pollution is trapped by nearby mountains, choking the city in a cloud of polluted air.

“This is a very serious problem in Mongolia and in many other parts of the developing world, and it needs to receive the same attention and resources as any other major public health or development challenge,” says Allen.

More information: Link to study: [i.sfu.ca/zWImno](https://www.sfu.ca/~zWImno)

Provided by Simon Fraser University

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