The global burden of air pollution-associated deaths—how many are needed for countries to react?

The most lethal air pollution disaster, the Great Smog of London, was responsible for the death of about 12,000 people in 4 days during the winter of 1952; or 3000 deaths a day. By coincidence, this figure is about the same number of people who were killed in China, every day, in 2015 by causes linked to ambient air pollution: a total of 1·1 million people. In The Lancet, Cohen and colleagues carried out an impressive analysis of global and country-level air pollution from ground and satellite data and used these data, as well as estimates for population exposure and risk factors, to analyse trends in the number of deaths caused by air pollution between 1990 and 2015. A 20% increase in the number of deaths caused by ambient fine particulate matter (<2·5 µm in diameter [PM2·5]) was observed during this period, from 3·5 million to 4·2 million. While most attention has been given to south and east Asia, which accounted for 59% of the deaths caused by air pollution in 2015, figures for other countries such as Russia and Brazil merit consideration by their governments. The authors estimate 136,900 deaths caused by air pollution in Russia and 52,300 deaths in Brazil in 2015. In the case of Brazil, there were also 52,300 deaths due to road injuries and 61,200 due to interpersonal violence, according to the GBD 2015. How many deaths are necessary for governments to start real action? All of these causes of deaths are avoidable, but states have long failed to substantially reduce these numbers. Regarding air pollution, regulations as well as the use of technologies that reduce vehicle emissions are important but not enough. The huge increase in car fleets associated with traffic jams, notably in big cities, demands air quality monitoring and periodic vehicle emission tests. Most large (>1 million people) cities in Brazil have no air quality monitoring and there are no current mandatory emission tests either. Brazil’s largest city, São Paulo, has air quality monitoring but no emission tests on its more than 8 million vehicles. Diesel trucks releasing black exhaust smoke are common in Brazil and will continue to be until the government acts. Proportional differences in deaths due to air pollution exist between Brazil and countries like China, where air pollution is more severe and the population affected is larger; but any illness or death from air pollution is extremely relevant for the population affected. The ways to control air pollution are widely known. We need governments to give this theme the importance it deserves. The same lack of attention to air pollution has been observed in several countries even after so many data relating air pollution to adverse health effects and deaths are available. The USA and Japan are good examples of countries that faced high air pollution levels and managed to lower them, saving probably millions of lives over the past few decades. China has been trying to control air pollution as well, but it still has a long way to go. It is time for other countries to do the same.

I declare no competing interests.

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