China could prevent 3 million deaths a year if air quality standards tightened, study suggests

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Chinese researchers say enforcing World Health Organisation standards to reduce dangerous particles in smog would have huge impact on public health

China could prevent three million premature deaths a year if stricter air

quality standards were adopted and enforced, according to a scientific study.

The lives would be saved if the mainland enforced World Health Organisation guidelines for the level of harmful particles in air pollution, a team led by Zhou Maigeng at the Chinese Centre for Disease Control and Prevention said.

Their research was published on Wednesday in the *British Medical Journal*.

Many of China’s cities suffer from chronic air pollution and the government vowed three years ago to wage a war on smog.

The scientists studied daily mortality levels and concentrations of small particles in the air, PM10, in 38 large cities.

The World Health Organisation recommended standard for concentrations of PM10 particles is 20 microgrammes per cubic metre (ug/m3), but the average level recorded in the cities was 93 ug/m3, according to the report.

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On average there were 8.6 deaths a day in each city district, including 4.4 from cardio-respiratory diseases. The researchers found that an increase of 10 ug/m3 in PM10 concentration levels led to a 0.44 per cent increase in total mortality.

“A back-of-the-envelope calculation reveals that bringing China’s PM10 levels to World Health Standard of 20 μg /m3 would save three million premature deaths,” the paper said.

The data studied covered a period from January 2010 to June 2013.

The most polluted city researched was Urumqi in the Xinjiang region, with average daily PM10 concentrations of 136 μg/m3.

Women were more vulnerable to air pollution related to the particles, with a higher death rate than men, according to the study.

Researchers also found the effect of PM10 on people aged under 60 was statistically insignificant, with air pollution mainly affecting older people in the short term.

“Our analysis showed a positive association between daily mortality and exposure to PM10 in most sampled cities,” the paper said.

Similar research has previously been carried out on the health impact of air pollution in China.

Researchers at Nanjing University in Jiangsu province suggested that about one third of 3.03 million deaths in 2013 in 74 cities in the Beijing-Tianjin-Hebei region and the Yangtze River Delta and Pearl River Delta could be linked to PM 2.5 pollution – the tiny particles in smog deemed most hazardous to health.

***This article appeared in the South China Morning Post print edition as:***

*real war on smog ‘could save millions’*