



WHO clean air guidelines a clarion call for action to protect health

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Health advocates have called for the immediate adoption of new World Health Organization (WHO) clean air guidelines by every federal, state and territory, and local government in Australia, pointing to thousands of lives and billions of dollars in health costs that could be gained through cleaner air.

The WHO released updated and stronger guidelines overnight drawing on the latest body of epidemiological research on the health risks of air pollution, the costs of which are estimated at around \$16 billion annually for Australia. In Australia, air pollution is estimated to cause between 2,616 and 4,884 premature deaths annually.¹

Australia's current air quality standards are woefully inadequate, according to experts, and should be updated to reflect this latest guidance as soon as possible.

“Just as health advice has saved countless lives from the pandemic, the World Health Organization's new clean air guidelines can save lives and prevent incidence of chronic diseases from air pollution, the world's biggest environmental cause of death and disease,” said Professor Yuming Guo, Head of Monash University Climate, Air Quality Research Unit.

Australia's current air pollution standards are significantly weaker than the WHO guidelines, resulting in poor air quality contributing to the avoidable loss of thousands of lives each year, contributing to increased deaths from coronary heart disease and a range of respiratory conditions including lung cancer, and an increase in children being hospitalised with asthma each year.

Australian standards for coarse and fine particle pollution have not been updated since 2015.

¹ Hanigan, I.C.; Broome, R.A.; Chaston, T.B.; Cope, M.; Dennekamp, M.; Heyworth, J.S.; Heathcote, K.; Horsley, J.A.; Jalaludin, B.; Jegasothy, E.; et al. Avoidable Mortality Attributable to Anthropogenic Fine Particulate Matter (PM2.5) in Australia. *Int. J. Environ. Res. Public Health* 2021, 18, 254:

“We need health-based pollution laws. Australia ought to update its ambient air standards to reflect health-based ambient air quality standards such as those determined by the WHO,” said Bronya Lipski, solicitor at Environmental Justice Australia.

“Each state and territory has the legal power to make health-based pollution standards, regardless of the national standard”, Ms Lipski said.

“People with asthma are the canaries in the coalmine when it comes to air pollution and the impact on them can be immediate, ranging from respiratory symptoms to asthma flare ups which result in hospitalisation and even death,” said Asthma Australia CEO Michele Goldman.

“We welcome the strengthened WHO guidelines and call on Australian governments to enact stronger air quality standards to protect people with asthma.”

“We know that air quality greatly influences lung function, and currently there are 7 million Australians living with a lung condition which can be worsened or caused by poor air quality,” said Lung Foundation CEO Mark Brooke.

“Lung conditions have a marked effect on people’s ability to enjoy life, be active, be productive and realize their full potential, so we encourage action that will protect health.”

Research published in the Australian and NZ Journal of Public Health showed that a 25% reduction in exposure to nitrogen dioxide, a gaseous irritant, from current values across NSW would lead to between 2597 and 12,286 fewer children developing asthma in that state.²

Epidemiologist and spokesperson for Doctors for the Environment Australia, Dr Ben Ewald said the WHO guidelines would provide even greater benefits from reduced exposure to nitrogen dioxide.

“Nationally, the prevalence of thousands of asthma cases in Australia could be prevented every year by meeting the new WHO guidelines, which would significantly reduce harms caused by motor vehicles and electricity generation,” Dr Ewald said.

“The good news is that by tackling air pollution, we can not only protect health now but reduce the causes of climate change.”

² Aust NZ J Public Health. 2021; 45:400-2; doi: 10.1111/1753-6405.13111

For comment:

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Appendix: Table of comparison of Australian standards and former and new WHO guidelines.

Pollutant	Averaging time	Australian standard	Previous WHO guidelines	New WHO guidelines
PM _{2.5} , µg/m ³	Annual	8	10	5
	24-hour	25	25	15
PM ₁₀ , µg/m ³	Annual	25	20	15
	24-hour	50	50	45
O ₃ , µg/m ³	Peak season	–	–	60
	8-hour	–	100	100
NO ₂ , µg/m ³	Annual	30	40	10
	24-hour	–	–	25
SO ₂ , µg/m ³	24-hour	53	20	40
CO, mg/m ³	24-hour	–	–	4

Note: In some instances a standard may exist for a different averaging period.