Joint media release

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Australia can reduce premature deaths from air pollution and mitigate global warming at the same time.

Australians are exposed to air pollution from natural and human-made sources. Human emission sources include motor vehicles, industry, coal fired power stations and wood heaters while natural sources include smoke from bushfires as well as wind blow dust. Exposure to ground level air pollution is harmful to our health. Some gaseous air pollutants enter the upper atmosphere and cause climate change which will have health impacts in the future. Long-term exposure to air pollution is an established risk factor for a range of cardiovascular and respiratory diseases contributing to premature mortality and reduction in life expectancy.

A recent study published in the International Journal of Environmental Research and Public Health by researchers from the Centre for Air pollution, energy and health Research (CAR) looked at human-made air pollution in Australia, in the form of small particulate matter ($PM_{2.5}$), between 2006-2016 to assess the impacts on health and economic cost. While Australia has generally low levels of $PM_{2.5}$ air pollution by international standards, the study found approximately 2600 deaths annually due to human-made $PM_{2.5}$ pollution in Australia, resulting in reduced average life expectancy of more than 2 months. The study estimated the financial costs due to human $PM_{2.5}$ pollution at $6.2 billion dollars annually for the lost years of life. Surprisingly, the number of deaths attributable to human-made $PM_{2.5}$ pollution was more than the national road toll (approximately 1,100 road deaths in 2018).

The study was led by Dr Ivan Hanigan at the University of Sydney's Faculty of Medicine and Health and University Centre for Rural Health who commented: "This study illustrates the substantial burden of mortality due to air pollution in Australia and economic costs of this health burden. A wide range of health impacts due to air pollution were not included in our study - like increased hospital admissions, adverse birth outcomes, increased doctor visits and increased medication usage – so our study of mortality is really the tip of the iceberg".

To counteract this health burden, Dr Hanigan stressed the need for a variety of changes such as the move towards continuous reductions in air pollution as a national policy, de-carbonising our energy and transport systems by moving away from coal and gas-fired electricity generation, replacing internal combustion engines with electric motors fuelled by renewables, and reducing emissions from wood heaters.

This research also has implications for the health and wellbeing of future generations of Australians. If human-made pollution was reduced then there would also be a benefit in terms of reducing global warming. Such a win-win situation, called a "co-benefit", occurs when actions taken to avoid the health impacts of air pollution today also results in reductions in future global warming. A Cost-Benefit analysis could be done to investigate if the costs outweigh the benefits of interventions to reduce air pollution. Therefore, acting now to reduce air pollution will improve health and save billions of dollars each year, and also reduce the risk of future global warming.

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Contact

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About

The Centre for Air pollution, energy and health Research (CAR) is a Centre of Research Excellence funded by the National Health and Medical Research Council (NHMRC). The centre brings together more than 30 researchers at the forefront of their fields, investigating the health impacts of air pollution and new forms of energy.

CAR
Centre for Air pollution, energy and health Research

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