

Wood heater smoke: Developing and testing novel solutions to a persistent problem

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Key Issues

- Reducing domestic wood heater smoke (WHS) is a complex issue, as **the use of wood heaters within the home is influenced by economic factors, traditional practices and cultural beliefs.**
- **Responsibility for managing WHS is divided** between local, state and national authorities.
- Wood smoke compliance is overseen by local government, most air quality monitoring is conducted by state organisations, while wood heater emissions standards are managed nationally.
- WHS is a pervasive issue. People are exposed inside their homes and around their neighbourhoods — the places where people spend the majority of their time, making WHS difficult to avoid.



Background

- **Exposure to ambient air pollution significantly contributes to increased mortality and morbidity rates.**
- In Australia, **domestic wood heater smoke (WHS) is a major contributor to air pollution across rural, regional and urban areas.**
- WHS contains toxic gases and fine particulate matter (PM_{2.5}) which negatively affect human health.
- When inhaled, PM_{2.5} is small enough to enter the blood stream, and has been associated with a range of health effects.
- **There is no safe level of air pollution exposure.** However, some people are disproportionately affected: **the elderly, pregnant, children, and those with cardiovascular or respiratory disease.**

Aims

- As part of the **National Environmental Science Program (NESP)**, a multi-year, multi-stakeholder, national project is being undertaken.
- The project aims to involve government, industry and community partners in a co-design process, to plan, implement and evaluate different interventions into WHS management and mitigation.

Methods

- Identify target regions across Australia that experience WHS pollution. On 12th December 2022, an online educational and information-sharing stakeholder workshop will be held.
- Establish or augment air quality monitoring in selected regions.
- Support our partners to roll-out interventions with appropriate data collection systems in place.
- Gather air quality and other relevant data over WHS seasons.
- Evaluate effectiveness of interventions with respect to wood smoke exposure reduction, health impacts and economic impacts.

Outcomes

- We intend to collaboratively identify practical solutions to WHS pollution by seeking to address key evidence and capability gaps, and by supporting and evaluating WHS interventions across multiple regions of Australia.
- The outcomes will provide practical guidance and solutions for decision makers across Australia.

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