

Transport and Infrastructure Net Zero Consultation Roadmap

Asthma Australia Submission, July 2024

Asthma Australia welcomes the opportunity to comment on the Transport and Infrastructure Net Zero Consultation Roadmap (the Consultation Roadmap). Australia is experiencing the compounding and cascading effects of climate change.¹ In the past decade, our communities have been affected by the catastrophic 2016 Melbourne thunderstorm asthma event, drought-driven dust storms, the 2019-20 bushfires and prolonged bushfire smoke crisis, record temperatures and heatwaves, repeated heavy rainfall and flooding events and a related mould epidemic. Climate change is increasing the frequency, severity, and duration of these natural hazards, all of which can trigger asthma symptoms and flare-ups and increase the risk of developing the condition.² As a result, it is imperative that Australian governments act to urgently and significantly reduce human-made emissions. Failing to do so will leave people with asthma, and many other populations who are vulnerable to poor air quality, exposed to serious health risks.

ASTHMA AND CLIMATE CHANGE

Asthma affects 1 in 9 Australians, or 2.8 million people, with children being the most impacted. People with asthma are particularly vulnerable to adverse health impacts associated with climate change and air pollution.³ Australia's asthma prevalence is high by international comparison, as are our rates of asthma hospitalisation and mortality.⁴ People with asthma experience poorer health outcomes and quality of life and they may live for a long period of time with its associated disability. As one of the largest population groups vulnerable to climate change and poor air quality, people with asthma need rapid decarbonisation, as well as urgent adaptation measures.

THE CONSULTATION ROADMAP

The Consultation Roadmap recognises transport is the third largest emissions source and will become the highest greenhouse gas emitting sector in Australia by 2030 if further action is not taken. There is considerable opportunity for Australia to reduce transport-related emissions, particularly in relation to road transport, which accounts for 83% of transport emissions.⁵

In addition to contributing to climate change, vehicles are a major source of air pollution in urban areas.⁶ Vehicles produce a range of pollutants that can harm health, including particulate matter and nitrogen dioxide.⁷ Research has demonstrated that relatively low levels of nitrogen dioxide are associated with the onset of asthma in children, as well as respiratory symptoms.⁸ Nitrogen dioxide can also cause asthma exacerbations in adults and a range of additional respiratory health problems.⁹

Asthma Australia refers to our joint submission with the Centre for Safe Air to the inquiry into the transition to electric vehicles,¹⁰ which articulates the broader health damage associated with vehicle emissions, including tailpipe emissions, tyre and brake wear and roadway dust dispersion. The submission also recognises the disproportionate, detrimental impact of traffic-related air pollution on people living in lower socio-economic areas. These areas typically have greater road density, including major roads with high traffic volumes and heavy vehicles, as well as greater industrial air pollution, compared with higher socio-economic areas.¹¹ While this disproportionate exposure to air pollution leads to inequitable health impacts,¹² it also represents an opportunity to increase health equity by prioritising transport decarbonisation actions that reduce air pollution in lower socioeconomic areas.

As the Consultation Roadmap indicates road transport is increasing, the Transport and Infrastructure Net Zero Roadmap and Action Plan must prioritise urgently reducing reliance on passenger vehicles. Increasing access to active and public transport will both reduce reliance on passenger vehicles and generate valuable co-benefits for health and wellbeing. Transitioning to active and public transport has been shown to improve cardiovascular, respiratory, musculoskeletal, diabetic, and cognitive health outcomes by reducing air pollution, increasing physical activity, and reducing environmental noise.¹³ While the Australian Government's Active Transport Fund will help states and territories deliver cycling and walking path infrastructure, further investment is needed to expand access to active transport, for example, through increased walking and cycling infrastructure, as well as public transport, and to engage with Australian communities to increase uptake of these options.

A meaningful and rapid reduction in vehicle emissions can contribute to reducing the burden of asthma in Australia by both mitigating climate change and delivering immediate improvements in air quality. Asthma Australia urges the Australian Government to accelerate efforts to reduce transport emissions and prioritise actions to reduce emissions from road transport. Accelerating these actions over the coming years is critical to mitigating climate change and will result in vital short-and -long term health co-benefits by immediately improving air quality.

ABOUT ASTHMA AUSTRALIA

Asthma is a respiratory condition that affects 2.8 million Australians, with children being the most impacted. Asthma is responsible for at least one Australian death every day, making it a serious health concern. More than 30,000 people are hospitalised each year due to asthma, yet 80% of these hospitalisations are considered potentially avoidable. Despite the prevalence of asthma, it is often misunderstood, causing fear and anxiety for those living with the condition.

Asthma Australia has been the leading charity for people with asthma and their communities for over 60 years. The challenges of climate change, unhealthy air, and health inequity make it more important than ever for people with asthma to have a voice. We search for new and progressive approaches to challenge the status quo. Our work is grounded in evidence and centred on the experiences of people affected by asthma. We believe by listening to those living with asthma, designing solutions with them, and influencing change, people with asthma can live freely, unrestricted by their asthma.

REFERENCES

- ¹ Intergovernmental Panel on Climate Change (IPCC). 2022. Summary for Policymakers. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. <https://www.ipcc.ch/report/ar6/wg2/>
- ² See e.g.: D’Amato G et al. 2014. Climate change and respiratory diseases. *Eur Respir Rev*, 23, 161–169. Patrick R et al. Asthma—The canary in the Australian coalmine: Making the links between climate change, fossil fuel and public health outcomes. *Health Promot J Austral*. 2023.
- ³ D’Amato G et al. 2014
- ⁴ Australian Centre for Asthma Monitoring (ACAM). 2011. Asthma in Australia 2011. Global Asthma Network. 2018. The Global Asthma Report, New Zealand.
- ⁵ Commonwealth of Australia. 2024. Transport and Infrastructure Net Zero Consultation Roadmap. [https://workspace.internal.dotars.gov.au/sites/EXI/NZPR/Roadmap/Planning/Public Roadmap/Transport and Infrastructure Net Zero Consultation Roadmap \(storage.googleapis.com\)](https://workspace.internal.dotars.gov.au/sites/EXI/NZPR/Roadmap/Planning/Public%20Roadmap/Transport%20and%20Infrastructure%20Net%20Zero%20Consultation%20Roadmap%20(storage.googleapis.com))
- ⁶ Commonwealth of Australia. 2021. Australia State of the Environment Report. 2021. <https://soe.dcceew.gov.au/air-quality/>
- ⁷ Asthma Australia and Lung Foundation Australia. 2021. Joint submission to the NSW Parliament Public Works Committee’s Inquiry into the impact of the Western Harbour Tunnel and Beaches Link.
- ⁸ Knibbs et al. 2018. The Australian Child Health and Air Pollution Study (ACHAPS): A national population based cross-sectional study of long-term exposure to outdoor air pollution, asthma, and lung function. *Environment International* 120:394-403.
- Achakulwisut et al. 2019. Global, national, and urban burdens of paediatric asthma incidence attributable to ambient NO₂ pollution: estimates from global datasets. *The Lancet*. Volume 3(4).
- ⁹ Dean and Green. 2017. Climate Change, Air Pollution and Health in Australia. UNSW Sydney, Grand Challenges.
- ¹⁰ Centre for Safe Air and Asthma Australia. 2024. Joint Submission: Inquiry into the transition to electric vehicles. <https://asthma.org.au/wp-content/uploads/2024/05/AA-CSA-Joint-Submission-Inquiry-into-the-transition-to-electric-vehicles-2024.pdf>
- ¹¹ Cowie CT, Ding D, Rolfe MI, et al. 2016. Neighbourhood walkability, road density and socioeconomic status in Sydney, Australia. *Environmental Health*. 15(1): 58.
- Knibbs LD, Barnett AG. 2015. Assessing environmental inequalities in ambient air pollution across urban Australia. *Spatial and Spatio-temporal Epidemiology*. 13: 1-6.
- ¹² Morello-Frosch R, Obasogie OK. 2023. The Climate Gap and the Color Line — Racial Health Inequities and Climate Change. *New England Journal of Medicine*. 388(10): 943-9.
- ¹³ Karolemeas C, Mitropoulos L, Koliou K, et al. 2023. A Systematic Literature Review on Health Benefits, Incentives, and Applications to Promote Walking in Urban Areas. *Future Transportation*. 3(4): 1385-400.
- Mueller N, Rojas-Rueda D, Cole-Hunter T, et al. 2015. Health impact assessment of active transportation: A systematic review. *Preventive Medicine*. 76: 103-14.
- de Nazelle A, Bode O, Orjuela JP. 2017. Comparison of air pollution exposures in active vs. passive travel modes in European cities: A quantitative review. *Environment International*. 99: 151-60.