



Public Health Association  
AUSTRALIA

## Public Health Association of Australia: Policy-at-a-glance – Environmental Noise Policy

**Key message:** PHAA will –

1. Advocate for environmental noise to be regarded as a public health issue.
2. Advocate for clear standards for prevention and management of noise.
3. Advocate for development and implementation of policies and strategies to promote health by reducing adverse environmental consequences from noise pollution.
4. Advocate for measures to raise community awareness of and commitment to implementing the necessary policy, structural and behavioural changes for addressing adverse environmental noise.

**Summary:** Environmental noise is a public health issue that requires serious attention to limit its adverse effects as urbanisation increases. This policy describes environmental noise pollution and proposes action for PHAA to take.

**Audience:** Federal, State and Territory Governments.

**Responsibility:** PHAA's Ecology and Environment Special Interest Group (SIG).

**Date policy adopted:** October 2017

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## Environmental Noise Policy Statement

Refer also to the [PHAA Health Effects of Wind Turbines Policy Statement](#)

The Public Health Association of Australia notes that:

1. Environmental noise is increasingly being recognised as a public health issue.<sup>1-3</sup>
2. Sound is created when a vibrating source causes energy to travel through the air as pressure waves. The waves may be reflected or scattered by objects so that the sound reaching the ear may be different from the sound originally generated. The sound pressure level is measured in decibels (dB).
3. Common noise sources vary in sound level, for instance, normal conversation (60dB), lawnmower (90dB), chainsaw (100dB), rock drilling (120dB) and jet engine at 30 metres (140dB).<sup>4</sup>
4. Sound can also be characterised by their frequency (pitch). Frequency is measured in hertz (Hz), which gives the number of cycles that occur per second.
5. Noise is a sound that is loud, disturbing or unpleasant – in effect, unwanted sound.
6. People have varying levels of tolerance to noise. In some situations noise may not be particularly loud, but may be distracting. Moreover, the repetitive nature of a particular noise and/or the inability of an individual to control it can cause annoyance. Examples include dogs barking and bass amplification of recreational music.
7. Vulnerable groups, such as children, older persons, people with mental health issues, may be affected by noise in different ways compared to other members of the population.<sup>2</sup>
8. Environmental noise pollution relates to ambient sound beyond comfort levels. Numerous sources including traffic, construction, aviation, industrial, as well as some recreational activities exist.<sup>5,6</sup>
9. Deleterious effects of noise can include hearing loss,<sup>7</sup> sensory effects such as pain, annoyance<sup>6</sup> and sleep disturbance.<sup>8,9</sup>
10. Environmental sleep disorder is due to an environmental factor that causes either insomnia or daytime fatigue and drowsiness. Other effects include impairment of concentration, attention and cognitive performance, depression and irritability.<sup>10</sup>
11. The relationship between sleep and health is generally well accepted. Insufficient sleep can affect endocrine and metabolic function<sup>11</sup> or trigger inflammation, which may contribute to cardiovascular events. CRP (an inflammatory marker) levels have been found to linearly increase with sleep loss.<sup>12</sup>
12. Long-term environmental noise exposure can affect stress levels,<sup>13</sup> and may increase the risk of hypertension (aircraft and road traffic noise) and elevated risks of heart attacks (road traffic noise).<sup>14,15</sup>

13. Categorising noise with respect to sound level, pitch and intensity, and correct exposure is important in assessing impact.
14. The World Health Organization (WHO) published the Night Noise Guidelines for Europe. The Guidelines presented evidence of the health effects of night time noise and recommended threshold values to protect health. An annual average night exposure not exceeding 40 decibel (dB) outdoors has been recommended.<sup>10</sup>

**The Public Health Association of Australia affirms the following principles:**

15. Action to ensure a safe and healthy environment is a critical public health priority.
16. When society wide change is necessary for the common good, government's role is to lead, inform, regulate, monitor and enforce, and to motivate behaviour change by individuals and corporations.
17. Producers of pollution, including noise pollution, should pay the costs of remediation.

**The Public Health Association of Australia believes that the following steps should be undertaken:**

18. Competent authorities including government and relevant experts should work together to clearly define parameters for noise level, exposure assessment, and measures for assessing the health effects of noise.
19. Competent authorities should draw up "strategic noise maps" for existing major transport routes and other developments, using harmonised noise indicators  $L_{den}$  (day-evening-night equivalent level) and  $L_{night}$  (night equivalent level) as recommended in the EU policy.<sup>5</sup>
20. Proposed developments such as roads, rail lines, airports, mining, and industry should be required to undertake a strategic noise impact assessment before commencement of the development, and ensure noise minimisation design and engineering is included in development proposals.
21. Local noise issues should be identified through consultation with the public and local organisations. A policy to maintain acceptable amenity in terms of environmental noise should be developed and implemented at a local Council level. Strategies to reduce unacceptable noise should also be developed in consultation with residents and implemented at a local level.
22. A burden of disease relevant to environmental noise pollution should be established within constraints of current scientific knowledge.
23. A public health strategy should be investigated to reduce the number of people currently adversely impacted by environmental noise.

*PHAA Policy Statement on: Environmental Noise Policy Statement*

24. Innovative strategies for noise reduction in existing buildings and in development of new building materials should be explored.

**The Public Health Association of Australia resolves to undertake the following actions:**

25. Advocate for development and implementation by government of policies and strategies to both promote health and reduce adverse environmental consequences from noise pollution.
26. Advocate for measures designed to raise community awareness of and commitment to implementing the necessary policy, structural, political and behavioural changes for addressing adverse environmental noise.
27. Work with other organisations/agencies at the national, jurisdictional and local level to support these actions.

**ADOPTED INSERT YEAR, REVISED AND RE-ENDORSED IN 2017**

***First adopted at the 2014 Annual General Meeting of the Public Health Association of Australia. The latest revision has been undertaken as part of the 2017 policy review process.***

## References

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