



Number of pass-bys and its influence on noise annoyance ratings

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Abstract Noise management of environmental sound aims to reduce the exposure of the population to the adverse effects of noise. It is usually an approach based on acoustics, restricted to a number of sources (such as transportation or industry) and to a number of sound descriptors (such as L_{den} , $L_{Aeq,t}$, penalties for characteristics). Individual perceptions are not taken into account, except at an aggregate, statistical level (such as percentage of exposed, annoyed or sleep-disturbed persons in the population).

Individual perceptions and reactions to sound vary in intensity and over different dimensions (such as pleasure/fear or distraction). Sound level is in fact a weak predictor of health effects of sound. The positive or negative perception of the sound is a better predictor of its effects.

This paper aims to show how the two perspectives ('population acoustics' and individual) can lead to a combined approach in the management of environmental sound. In this approach the reduction of annoyance (and possibly an increase in positive sound) is the main aim, not primarily reductions in level. An important aspect in this approach is what a sound means to people: does it lead to anxiety or worry, does it fit in the environment? As an example this will be applied to wind farm planning and operation.