



Aircraft noise is more annoying now than in the past

Aircraft noise has become more annoying for European citizens in recent years, according to new research. The research found that annoyance with road traffic noise had not increased, suggesting attitudes to aircraft noise have changed. The researchers call for changes to the standard procedure used in the EU to predict aircraft noise annoyance.

Major sources of noise annoyance include air, road and rail traffic. Social factors play a significant role in the perception of noise, with the loudness and persistence of noise only partly explaining the level of annoyance.

In the EU, annoyance curves¹ are used to predict the number of people who are annoyed by specific sources of noise, such as aircraft or road traffic, and illustrate the relationship between exposure and response to noise. Many of the studies that were used to develop these curves were developed over 25 years ago and newer investigations suggest that the perception of aircraft noise and attitudes to towards it have changed.

Between 2003 and 2005, a consortium of European researchers from the EU-funded HYENA project², interviewed 4861 people, aged between 45 and 70 years, who lived near major airports in Amsterdam, Athens, Berlin, London, Milan and Stockholm. The health status, socio-economic background, lifestyle, behavioural, annoyance and personality factors, including sensitivity to noise, of all the participants were examined.

Modelled noise exposure levels to road traffic and aircraft traffic noise were linked to the location of the participants' homes. The researchers identified the associations between noise levels from aircraft and road traffic noise with annoyance ratings for the participants and compared these results with the EU-annoyance curves.

The study suggests that annoyance with aircraft noise has increased over the years in the vicinity of the six airports. For example, citizens in both northern and central Europe became highly annoyed with aircraft noise at a volume that is 5-7 dB(A) lower than predicted by the annoyance curves used by the European Commission.

However, responses to road traffic noise agreed with the predictions of the annoyance curves for road traffic. The results imply that the relationship between exposure levels and response to aircraft traffic noise has changed, while responses to road traffic noise have not. One possible explanation is that people's attitudes towards aircraft noise have changed, although it is not clear why this change might be.

Since the EU reference curves refer to older studies, the researchers suggest that the prediction curve for aircraft traffic noise should be modified.

1. See: http://ec.europa.eu/environment/noise/pdf/noise_expert_network.pdf

2. HYENA (Hypertension and Exposure to Noise near Airports) is supported by the European Commission under the Fifth Framework Programme. See: www.hyena.eu.com

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