Study of the categorisation method using long-term measurements

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Previous studies concerning the categorisation method have been based on short daytime measure- ments. These studies demonstrated urban-noise stratification in the daytime. Nevertheless, legislation and standards refer to noise estimation throughout the day. This paper presents the first attempt to apply the categorisation method to indicators obtained through long-term measurements. The study was conducted in Plasencia, Extremadura (Spain) which has approximately 41,500 inhabitants. First, we conducted a stratification of the roads using the categorisation method. Second, long-term measurements (approxi- mately one week) were conducted at different sampling locations across different categories of streets. The results were analysed by category. Moreover, the profile of the noise-level variation was analysed during the day. The results revealed a stratification of sound levels measured across the different categories. Furthermore, we found health risks due to the noise levels in this town. Short-term measurements were also conducted to complete the categorisation method suitability analysis.

Noise pollution

Sampling methods

Street categorisation

Long-term measurements

Noise estimation

Noise levels

Sampling location

Sampling method

Sound level

Suitability analysis

Acoustics

Noise pollution