

Science for Environment Policy

Embedding community consultation in noise maps and action plans

Researchers in Greece have added a new dimension to noise level mapping by including data on residents' perception and value of different sounds. This consideration of the experiences of residents in this way could lead to more effective policy implementation.

More than 30% of the EU population may be exposed to noise that affects their health, such as damage to hearing, sleep disruption and increased blood pressure. The Environmental Noise Directive¹ aims to identify noise pollution levels and trigger action within Member States. It required all EU cities to map [noise](#) levels by 2012, as well as develop strategies to reduce noise exposure. It also requires Member States to inform and consult the public about noise exposure, its impacts and possible measures to address it.

This study focuses on the medium-sized [cities](#) of Volos and Larissa in central Greece. To supplement the existing noise level maps, the researchers interviewed approximately 15% of residents in five districts to understand their personal perceptions of noise levels and how sounds affect the character of their area.

From this data, researchers produced maps of the different types of perceived sounds (e.g. [traffic](#), children playing, barking dogs, church bells) with an indication of their perceived level and whether they were judged to be pleasant or unpleasant. They also produced a sound identity map, colour coding the different sound character of the districts, for example, harbourside, natural, intense city or village-like.

These three types of map, in turn, provided different forms of action plan for noise management. Plans for managing the actual measured noise levels included actions such as erecting noise barriers and reducing or diverting traffic. For example, in three districts near a ring road, noise barriers, combined with roundabouts to slow the traffic and improvements in public transport, were proposed. In central districts, plans suggested building traffic islets, roundabouts and bicycle lanes.

Plans for residents' experience involved managing activities in the district to enable a more positive experience and to address sounds considered aggravating, for example, by dealing quickly with noise complaints. Such plans also proposed establishing playgrounds, vegetation, bicycle tracks and leisure centres in outer districts; while in inner city districts, cultural events, shopping activities and green spaces were proposed.

Plans based on sound identity maps aimed to enhance sounds that contributed to the perceived identity or character of an area, such as improving the clarity of church bells in a village-like area, while diminishing sounds that conflicted with this identity such as traffic. These strategies proposed community gardens, public clocks and sound sculptures (works of art that produce sound) for the outer districts while the inner city would benefit from fountains and promenade paths.

Providing these additional and more subjective dimensions to noise maps and action plans considers the residents' experiences, as well as cultural and aesthetic values. This embeds community consultation within these valuable tools, which could enable successful and effective implementation of policies.



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¹. See <http://ec.europa.eu/environment/noise/directive.htm>