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PREDICTIVE MODELLING OF ENVIRONMENTAL NOISE LEVELS IN LITHUANIAN URBAN AREAS

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Abstract

Modelling of environmental noise is a process aimed at estimating the noise levels in an area of interest under a particular set of conditions. The aim of the work is to evaluate the impact of the planned reconstruction work on the change of noise level in Panevėžys city. The software MapNoise was used for modelling work. Strategic noise maps are updated on a regular basis and information dating back not more than three years will be used for their build. Values of emissions from each individual source of noise are summed up, thus obtaining the total value of emissions from different-composition traffic flow. As the performed theoretical and modelling work of the predicted noise level shows, the change of noise level is proportional to the change of a motor traffic flow, which is of particular relevance where the number of heavy weight vehicles significantly increases in the total traffic flow. The modelled noise level in Panevėžys city nearly fully corresponded to the theoretically predicted changes in noise levels with an error up to 5 dB(A).

Key words: MapNoise, noise modelling, prediction, strategic noise maps

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