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APPLICATION OF FEHP METHOD IN NOISE PROTECTION PROJECTS SELECTION: THE CASE OF SERBIAN PUBLIC ROADS

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Abstract

Noise is one of the most significant contemporary environmental pollutants. Sources of noise are numerous, but traffic is undoubtedly one of the most prominent. In practice, there is a growing interest in traffic noise protection, but the selection of an adequate solution represents quite a challenge. The purpose of this paper is to suggest an innovative approach to selecting the optimal road noise protection solutions. The theoretical approach for public roads noise protection has been tested in practice, and this paper contains the main results and conclusions stemming from the testing process. The paper shows that the use of Fuzzy Extended Analytical Hierarchy Process (FEHP) method for selecting traffic noise protection projects yields excellent results, taking into account the complexity caused by a large number of difficult-to-estimate factors influencing the selection process. The concept presented in this paper offers numerous practical and social implications, i.e., optimal financial solution, best noise protection solution, healthier environment, while, at the same time, representing one new, innovative and original approach to environmental protection.

Key words: environment, fuzzy AHP, noise, project, protection

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