LANDSCAPE FACTORS INFLUENCING ROE DEER AND WILD BOAR ROADKILL FREQUENCIES ON THE M1, M3, M7 HIGHWAYS OF HUNGARY

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According to the national standards each highway has to be surrounded by protective fencing in Hungary. Though there are thousands of animals getting onto the highway's surface and victimized to traffic annually. Roe deer (Capreolus capreolus) and Wild boar (Sus scrofa) are one of the most dangerous ones for traveller's safety amongst the regularly occurring, conflicting wildlife species. Severity of these collisions might be minimized by manipulating its influencing factors, but these factors are firstly to identify and recognize. In this study we investigated the landscape features which remain totally or almost unaltered on a larger scale of time. Our purpose was to evaluate how the easily, and free-of charge-accessible spatial databases may be used to derive landscape factors by predicting spatial patterns of roe deer and wild boar roadkills on three of the most important Hungarian highways (M1, M3, and M7). Roadkill data were derived of the database of the State Motorway Management Company Ltd. Our results suggest that existing landscape databases which had been used in this work are not suitable to support roadecology-decisions alone, but may have a supplementary role. This consequence put the weight to other possible predicting factors (such as traffic-, and human related factors), and emphasizes the importance of the proper mitigation measures, and well maintained protective fencing, taking into special account that temporary dysfunctions of the protective fencing may lead to occasional – and so unpredictable – wildlife occurrences on highways. Research was supported/subsidized by the TÁMOP 4.2.2/B-10/1-2010-011 „Development of a complex educational assistance/support system for talented students and prospective researchers at the Szent István University" project.