Correlation of Roads Hazardous Areas and Traffic Accident Points

Robert ŽUPAN, Stanislav FRANGEŠ, Adam VINKOVIĆ, Eleonora KUČIĆ
University of Zagreb, Faculty of Geodesy, Kačićeva 26, 10000 Zagreb, Croatia
rzupan@geof.hr, sfranges@geof.hr, avinkovic@geof.hr, ekucic@geof.hr

Abstract

First, we analyzed indicators of the spatial development of road networks in Croatia in relation to selected countries in Europe and counties in Croatia. An assessment of the causative consequences of the total number of traffic accidents per county is given, along with a link to spatial development indicators. The results of the study on the spatial distribution of traffic accidents in Croatia by county are presented based on statistical reports of accidents, and an example identifying danger spots on the A6 motorway. All comparisons and analyses are presented graphically in the form of charts and other thematic cartographic depictions. From the results, it can be seen that there are significant differences between counties, but often, similar values for counties are the results of similar degrees of development and population sizes. We conclude that the number of traffic accidents depends more on the population size than the length of the road network in relation to the surface area of the county. Investing in repairs at hazardous locations involves several factors, which result in repeated traffic accidents. Finally, some conclusions and suggestions for measures to reduce the risk of traffic accidents at observed “black spots” are given.

Keywords: roads, danger, black spots, analysis, cartographic visualization