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Modern Traffic Management Techniques for National Highways

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Abstract : An Accident is a rare, multifactor event preceded by a situation or event wherein one or more road users failed to cope with road environment results vehicle collision. The location in a road where highest number of traffic accidents occurs is called a Black Spot⁵. In this study, an effort has been made to identify the accident prone zones within Coimbatore district using GIS. For this purpose, the road accident data for the year 2015 pertaining to Coimbatore district have been used. Accident particulars like date, location, type of vehicle involved, number of persons injured or died were included in the GIS database. The aim of the work is to locate the accident prone area on the national highways and to identify the high rate accident locations and safety deficient areas. The weighted overlay functions available in the spatial analyst extension of the Arc GIS software were applied to identify the accident prone areas in Coimbatore district during the year 2015. The kernel density was applied to identifying the accident patterns, the road geometry measured in the accident prone locations to find out the causes for the accident. Based on the result, suggestions were provided to minimize the traffic congestion. The present study attempts to identify the most vulnerable accident black spots in Coimbatore district.

Keywords : GIS, Black spots, Weighted Overlay.

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