Based Crime Mapping and Analysis: A Case Study of Mudugiri Town Police Station Jurisdiction

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Madhugiri, also known as Maddagiri is a Taluk headquarter in Tumkur district in the Indian state of Karnataka, geographically located at 13.66°N and 77.21°E, with an average elevation of 787 m (2582 ft), located at ~43 km north of Tumkur town and 107 km north-west of Bangalore city. The present study aimed to analyze the crime scenario in Madugiri town police station jurisdiction by using Hot Spot and Buffer Analysis. Based on Madugiri police station records, the crime data were classified under various group of offence such as Murder, Robbery, Cheating, House theft, Motor-vehicles theft, Missing, Mobile theft, Pick pocketing, Burglary, Chain snatching, Quarreling and House breaking (day), House breaking (Night), etc. The distribution of crime incidence showed that *KHB* colony, Madugiri old and new bus-stand around Madugiri fort, Gowribidanur road, Koratgere road, Sira road and Madugiri market areas were affected by notorious activities. Crime maps generated were able to identify and differentiate hot spot of crime and their displacement, illustrate the relationship between the mapped crimes patterns and socio-economic characteristics of Madugiri town. It was concluded that in Madugiri police jurisdiction, crime rates were not so high, but still occurrences of crimes like house theft, material theft, etc., were of a great concern. The crime patterns change over space and time in an area and hence the data so generated will be of immense help to Indian Police Department to utilize *GIS* tools and techniques instead of traditional pin and dot maps to determine spatio-temporal crime pattern as well as to capture crime series and forecast future crime occurrences. The public can also be educated with the visual information obtained through *GIS* analysis to clarify crime concerns and enlist community action and finally to arrive at reducing overall crime disorders.

Key words: GIS, GPS, Hot spot analysis, Buffer analysis, Crime analysis