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**CRIME MAPPING AND SPATIAL ANALYSIS
OF KIRULAPONE POLICE DIVISION:
A PILOT PROJECT FOR COLOMBO CITY**

A PROJECT REPORT PRESENTED BY

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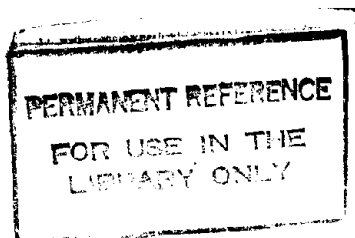
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ABSTRACT

Crime maps are becoming significant tools in crime and justice. Advances in the areas of information technology and Geographic Information Systems (GIS) have opened new opportunities for the use of digital mapping in crime control and prevention programs. Crime maps are also valuable for the study of the locational aspects of crime. Maps enable areas of unusually high or low concentration of crime to be visually identified. A hierarchical model dealing with crime analysis is proposed and applied to the regional analysis of crime in Colombo city, the model helps to identify spatial concentration of crimes in specific area.

In Sri Lanka, though the Police Department consists of an IT Division, still GIS is not being implemented for crime analysis or any other operation. There is a need to apply this potent technology in Sri Lanka police department and the present study was done as a model for the implementation of GIS in Sri Lanka policing. The aim of the present study is to analyze the crime scenario of Colombo city by using GIS technology.

GIS software such as Arcview (3.2), ArcGIS (9.0), and Access 2003 were used in the study. Data pertaining to the grave crimes were taken for the years 2004 and 2005 in the Kirulapone Police Division. The crime data were obtained in the study area under the

groups of grave crimes such as Robbery, Theft, Burglary, Murder, Rape, Kidnap, Hurt by knife, Grievous hurt, Drug arrest, Possession of fire arms etc.

The distribution of crime incidents showed that almost all parts of the city are affected by nefarious activities. Except for a few pockets, water areas and wetlands in the east, the whole of the study area is witnessing crime incidents.

The GIS analysis done are Hot spot analysis, Temporal analysis, Proximity analysis, Network analysis, Digital elevation models (3d Models), Weighted overlays, Suitability analysis etc. In the description and analysis of these maps, it succeeded in identifying and demarcating hotspots of crime, displacement of crime, temporal changes of crime, neighborhood quality assessment using crime densities etc. After determination of hot spots, spatial function is used to find suitable location to establish new police posts in the study area in order to reduce crimes.

On the practical level, the results showed that, the Sri Lanka Police Department could utilize GIS very effectively, instead of the traditional pin maps.