Unveiling urban violence crime in the State of the Selangor, Kuala Lumpur and Putrajaya: a spatial–temporal investigation of violence crime in Malaysia's key cities

ABSTRACT

This study investigates the intricate relationship between violent criminal activities, temporal patterns, and land utilization across Selangor State, Kuala Lumpur Federal Territory (KLFT), and Putrajaya Federal Territory (PFT), Malaysia, spanning from 2015 to 2020. Employing the Hot Spot (Getis-Ord Gi*) technique within a GIS framework, the research contributes to data storage and map generation, enhancing the capabilities of entities such as the Royal Malaysia Police (RMP) and Local Authorities (LA) in addressing land use-related violent crimes. The analysis identifies four significant temporal hot spot intervals: midnight (12:00–6:59 a.m.), morning (7:00–11:59 a.m.), evening (12:00–6:59 p.m.), and night (7:00–11:59 p.m.). Central to this study delineates violent crime hot spots within the Kuala Lumpur Contingent Police Headquarters (KLCPH) encompassing 18 police stations and the Selangor Contingent Police Headquarters (SCPH) comprising 12 stations. These insights are crucial for law enforcement and urban planning authorities to target high-risk areas for preventive measures. Additionally, the research highlights the significant role of land use in influencing criminal behavior, particularly the association of violent crime hot spots with residential areas and transport infrastructures. By identifying specific areas where violent crimes are prevalent, this study aims to contribute to the development of tailored crime prevention strategies, fostering safer neighborhoods and enhancing public safety. Moreover, the research underscores the necessity of understanding the spatial distribution of criminal activity and its relationship with various land uses, guiding future policies and strategies aimed at mitigating crime and enhancing public safety in urban environments.