Spatial Analysis of Crimes and Perceptions
of Security in Public Spaces

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ABSTRACT

As urban areas expand, creating safe and inclusive public spaces becomes essential for achieving sustainable development goals. This study explores crime patterns in urban public spaces in Thiruvananthapuram, Kerala, focusing on key offenses such as attempted murder, theft, and molestation, between 2018 and 2024. It investigates how spatial variables and infrastructural factors in public environments contribute to urban insecurity, while aligning these findings with the principles of sustainable urban planning.

Using a dual approach, the research incorporates an objective spatial analysis based on crime data from the DCRB, Thiruvananthapuram, and a subjective perception survey of public safety in identified crime hotspots. Geospatial techniques reveal significant crime clusters, while space syntax metrics highlight how urban configurations influence crime patterns. The study emphasizes that poorly lit areas, inadequate surveillance, and unmaintained infrastructure not only exacerbate crime but also undermine the sustainability of urban spaces by discouraging community use and reducing inclusivity.

The findings advocate for sustainable interventions, such as improved urban lighting, active surveillance, and community-based infrastructure maintenance, to foster safety and resilience in public spaces. By linking security with sustainability, this study provides actionable insights for urban planners to design safe, inclusive, and resilient cities that prioritize both environmental and social well-being.

Keywords: Public Space, Urban Security, Sustainability, Inclusive Development