Review of: "Analysing the conglomeration of various urban pockets through the lens of environmental design for crime prevention: A case of Kolkata"

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Peer Review of "Analysing the Conglomeration of Various Urban Pockets Through the Lens of Environmental Design for Crime Prevention: A Case of Kolkata"

Abstract: This paper presents a comprehensive analysis of the evolution of Kolkata's urban fabric and its implications for crime prevention through environmental design. The historical perspective on the architectural transformation from nawabs to British rule, and the subsequent political changes, provides a foundational understanding of the city's built environment. The focus on 'Dalan' as a traditional element in crime prevention is innovative and grounds the research in local context.

Positive Aspects:

• The paper effectively integrates historical context with contemporary urban design challenges, offering a unique perspective on Kolkata's urban development.

• The application of Crime Prevention Through Environmental Design (CPTED) principles to analyze the city's built environment is insightful and adds depth to the study.

• The research's emphasis on the need for ward-level, tailored interventions demonstrates an understanding of the nuanced nature of urban planning and crime prevention.

• Incorporating Oscar Newman's 'Defensible Space Theory' is a significant strength, as it aligns with the study's focus on environmental design and crime prevention.

• The proposal of a 'fit-all' category for solutions is ambitious and suggests a potential model for other urban areas facing similar challenges.

Suggestions for Enrichment:

• To enrich the literature further, it would be beneficial to integrate findings from recent research that explores the intersection of structural equation modeling (SEM), urban development, environmental factors, and crime. Suggested research for incorporation to strengthen literature section-

Roy, S., & Chowdhury, I. R. (2023). Geography of crime against women in West Bengal, India: identifying spatio-temporal dynamics and hotspots. GeoJournal, 1-33.

Salem, M., Bose, A., Bashir, B., Basak, D., Roy, S., Chowdhury, I. R., ... & Tsurusaki, N. (2021). Urban expansion simulation based on various driving factors using a logistic regression model: Delhi as a case study. Sustainability, 13(19), 10805.

Roy, S., Bose, A., Majumder, S., Roy Chowdhury, I., Abdo, H. G., Almohamad, H., & Abdullah Al Dughairi, A. (2022).

Evaluating urban environment quality (UEQ) for Class-I Indian city: an integrated RS-GIS based exploratory spatial analysis. Geocarto International, 2153932.

Bose, A., & Chowdhury, I. R. (2020). Monitoring and modeling of spatio-temporal urban expansion and land-use/land-cover change using markov chain model: a case study in Siliguri Metropolitan area, West Bengal, India. Modeling Earth Systems and Environment, 6, 2235-2249.

Bose, A., Basak, D., Roy, S., Chowdhury, I. R., Abdo, H. G., Aldagheiri, M., & Almohamad, H. (2023). Evaluation of Urban Sustainability through Perceived Importance, Performance, Satisfaction and Loyalty: An Integrated IPA–SEM-Based Modelling Approach. Sustainability, 15(12), 9788.

Roy, S., Basak, D., Bose, A., & Chowdhury, I. R. (2023). Citizens' perception towards landfill exposure and its associated health effects: a PLS-SEM based modeling approach. Environmental Monitoring and Assessment, 195(1), 134.

Basak, D., Bose, A., Roy, S., Chowdhury, I. R., & Sarkar, B. C. (2021). Understanding sustainable homestay tourism as a driving factor of tourist's satisfaction through structural equation modelling: A case of Darjeeling Himalayan region, India. Current Research in Environmental Sustainability, 3, 100098.

• Technological Integration: Exploring the role of emerging technologies, such as smart city initiatives and AI-driven surveillance systems, in complementing traditional crime prevention through environmental design would be a significant addition. This could include examining how these technologies can be ethically and effectively integrated into Kolkata's urban landscape.

• Policy and Planning Implications: A more thorough examination of the policy and planning implications of your findings would be beneficial. Discussing how local governments and urban planners can practically implement the suggested interventions, considering budgetary, regulatory, and socio-political constraints, would make the research more actionable.

• Results and Discussion Section Enhancement: To make the Results and Discussion section more engaging, consider weaving in narrative elements that highlight the unique aspects of Kolkata's urban fabric. For instance, you could start with a vivid description of a typical street in Kolkata, illustrating how historical elements and modern developments coexist and interact. This visual storytelling approach can draw readers into the practical realities of the city, making the discussion of results more relatable and impactful. Additionally, incorporating visual aids like charts, maps, or photographs can help in illustrating key findings and making complex data more accessible. Integrating direct quotes or anecdotes from local residents or urban planners interviewed during your research can also add a human dimension to the data, making the discussion more compelling.

• Methodology Enhancement: For the Methodology section, a more detailed description of the research design, data collection methods, and analysis techniques would strengthen the paper. Explain the rationale behind choosing specific wards in Kolkata for the study, detailing the criteria and process used for selection. Elaborate on the data collection methods – if interviews, surveys, or field observations were conducted, describe how these were designed and executed. Clarify the analytical techniques used, such as how GIS mapping or SEM was applied to interpret the data. Discussing the limitations of your methodology and how they were mitigated can also add credibility to your research.

• Future Research Opportunities in the Concluding Section: In the concluding section, outline potential avenues for

future research that emerged from your study. Suggest exploring the long-term effects of the implemented urban design changes on crime rates in Kolkata, which could provide valuable insights into the effectiveness of these interventions over time. Another opportunity could be to expand the research scope to include comparative studies with other cities that have similar historical and socio-economic backgrounds. This could help in understanding the universal applicability of the findings. Additionally, recommend investigating the impact of technological advancements in urban design, such as smart city initiatives, on crime prevention and urban livability in Kolkata. Highlighting these future research directions would not only underscore the significance of your study but also open pathways for further scholarly exploration in this field.