

“Spatio-Temporal Analysis of Land Use/Land Cover Change and Perform the Shannon Entropy Model for Urban Built-Up Growth of Silchar City, India: Very High-Resolution Satellite Data”

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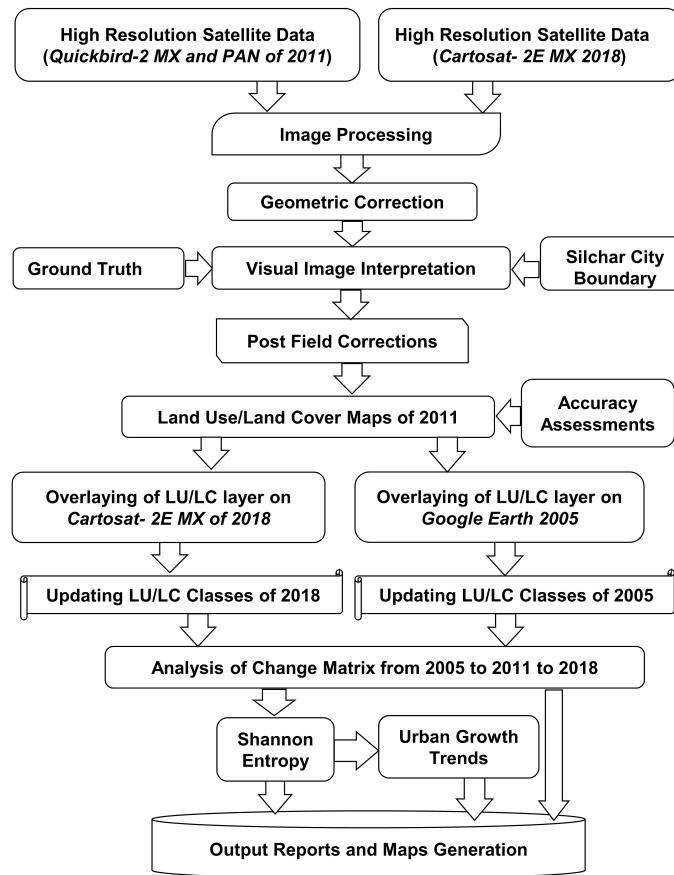
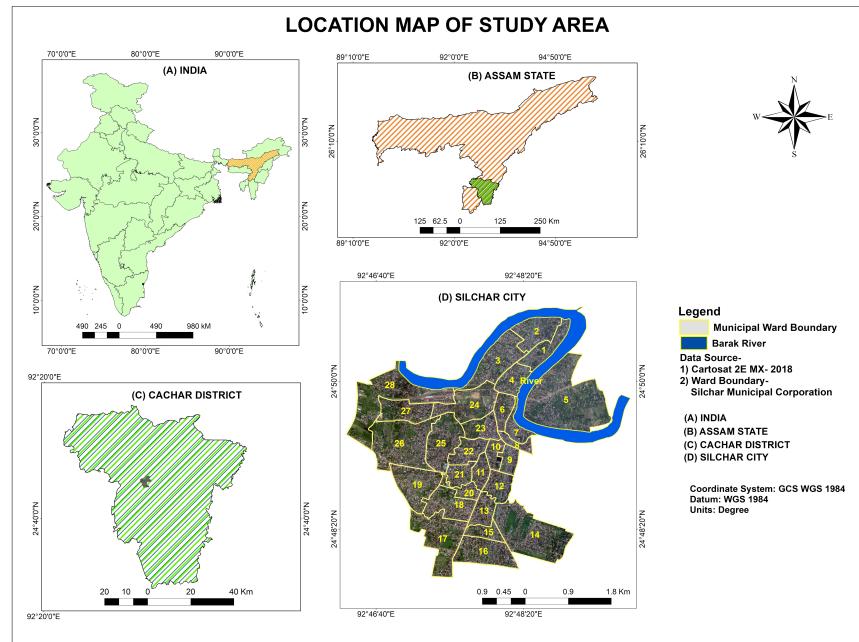
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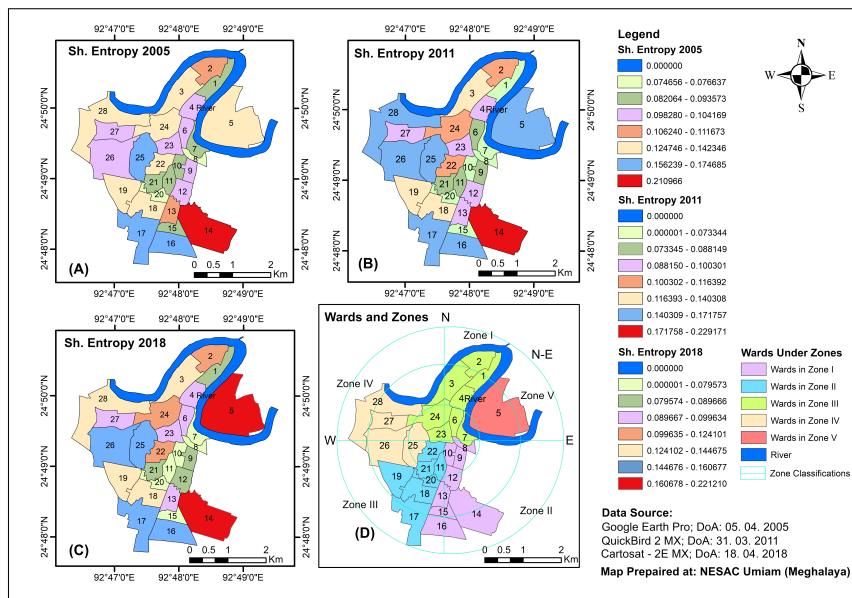
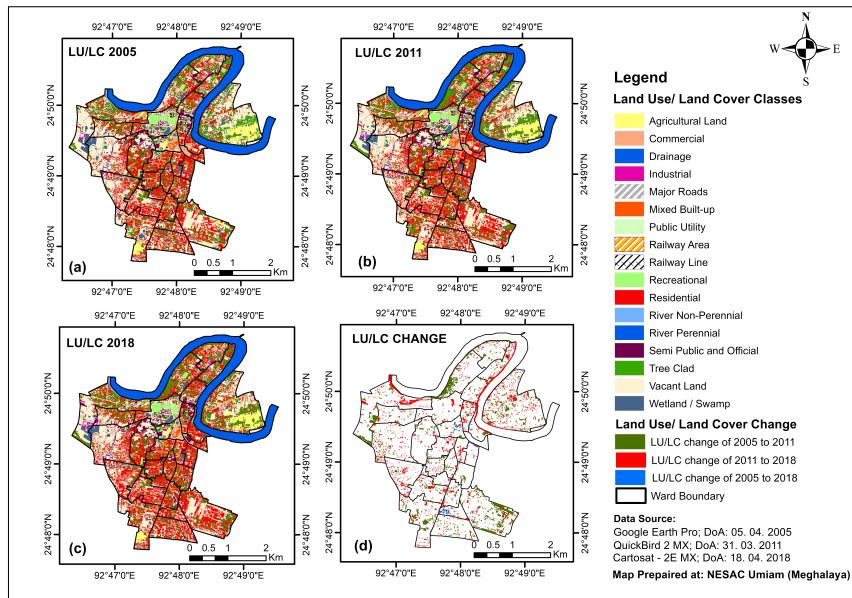
Abstract

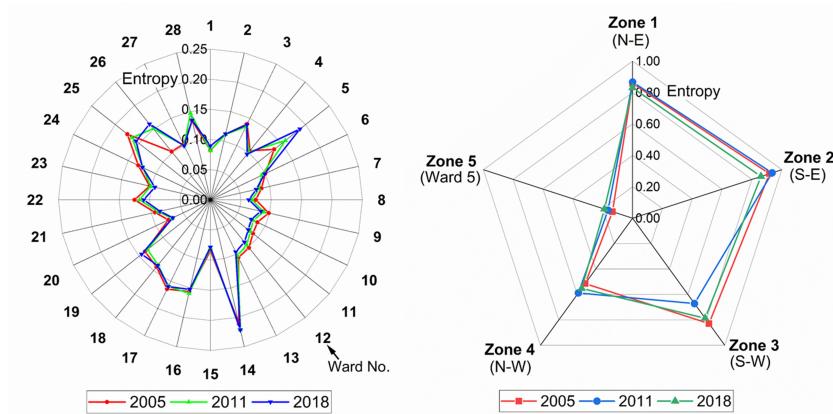
In the last few decades, Silchar city and its surrounding areas have witnessed massive population growth due to local and migrated peoples, which led to the rapid transformation of its land use/land cover (LU/LC) pattern. For detailed micro-level LU/LC analysis, very high-resolution satellite data (VHRS) and on-screen visual interpretation techniques were used. The LU/LC classification of the city has been prepared for 2005, 2011 and 2018 with five major and further seventeen sub-classes. The wards of the city were classified into five zones and the Shannon entropy model applied to analyze the degree and trends of urban built-up development. The obtained results indicate that the Silchar city is compact near the center which follows the infill built-up growth trend. However, as the distance has increased from its center the scattering with infill growth pattern was observed. The accuracy assessment techniques are used to validate the results of the classification. The results of this study can provide detailed information for land-use planners, researchers, policy-decision makers, and municipal authorities.

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