Abstract

Urban sprawl has become a universal problem, and is being faced by many cities. When cities grow, the surrounding land and the natural green areas are engulfed to build houses, roads, pathways, to match the needs and desires of the inhabitant population. This spread of urban areas into rural area, farmlands and forests on outer edges of a city is referred as Urban Sprawl. A proper assessment of urban sprawling is imperative for monitoring the development and future planning of the city in terms of limitation, extension, bifurcation etc. The inevitable physically expanding urban areas in a Gangtok City located in Eastern Himalayan range, at an elevation of 1,650m (5,410ft) are increasing. The complexity of urban development, especially in a hilly town like Gangtok is so rapid that it demands quick response and perspective physical planning of the city. This case study of Gangtok city is to detect and predict the possible sites for deforestation, encroachment of land and to identify the area cause by the sprawling in the city and use the relevant methods for future assessment for sprawling.

**Index Terms**

Computer Science

Information Sciences

**Keywords**

Urban sprawl, Encroachment, Inhabitant Population, Deforestation.