



Urban Sprawl Using Shannon Entropy Approach - A Case Study of Special Economic Zone – Geo Spatial Technique

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Abstract

All nations focus on developing of their own countries with several policies and regulations for the industries. The recent increase in the world's population has magnified the effects of our agricultural and economic activities. Population growth lead to urbanization and industrialization which causes overexploitation of resources. The changes over the land use practices and encroachment affect biodiversity and alter species ranges and interactions. Industrialization and other economic development lead to solid waste accumulation which causes health issues on humans and other organisms. This study is mainly aimed to analyze the transformation of the sub-urban region shifting to sub-urban-economic centre due to employment opportunities. The remote sensing satellite image of Linear Imaging Self Scanning Sensor (LISS-4) is used to measure the urban trend pattern in SEZ using Shannon's entropy model. Immense growth of industrialization and urbanization causes the habitat loss, change over land cover pattern and bio-diversity loss in this region. The population data has been used for the population density study and the growth of economic activity in this region. The sustainable development is a key to balance the socio-ecological development as well as environment. In this study, the merits and demerits of SEZ will be discussed and identified. Hence, the result concludes that the urbanization causes agricultural loss, water scarcity and land pattern changes in the special economic zone (SEZ).

Keywords: Shannon's Entropy Model, Urbanization, Geo-spatial, Urban Trend Pattern, Special Economic Zone.