

Identifying The Spatial Impact of Land Use and Land Cover Changes on Land Surface Temperature

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Abstract: Land Surface Temperature (LST) is an important factor in global climate change studies. Climate change is one of the most popular topics among all the countries of the world and there are lot of factors effecting to global climate change. However, one of the main factors is land-use and land cover change. Land-usechanges for development typically result in significantly decreased vegetation cover, which decreases the land's heat reducing capacity. Therefore, Land-use change has been considered as a global environmental issue and it also has environmental implications at local and regional levels. Specially, unplanned land-use changes are a major problem and it is related with anthropogenic activities which create a lots of issues. As a result of urbanization and development, the land-use and land cover pattern is rapidly changing. It will be unbalanced the environment factors and also human livelihood. Mots anthropogenic activities, Unplanned constructions, agriculture and deforestation are major causes of land-use and land cover changes. Among these, the most effective problem is increase of land surface temperature. Changes in land surface temperature cause most of the environmental damages and degrade the living conditions. Land-use changes have been linked to many environmental problem as well as socio-economic impacts. Including air pollution, water pollution, loss of wildlife habitat, drinking water issues, loss of biodiversity and human health problems are some of them. Also climate change is the most important and this problem will be again attacked to the human life. They will face more health and other issues. So land-use and land cover changes and climate changes are most relative factors in human life and study of those things is very important to present and future planning of Sri Lanka. The main objective of this study wasto identify the impact of land-use and land cover changes on land surface temperature and Western Province, Sri Lanka was considered as the study area. Landsat8 and Landsat 7 ETM+ data from March 2003 and March 2016 were