SPATIAL DISTRIBUTION AND BIOMASS ANALYSIS OF RUBBER TREES IN PENINSULAR MALAYSIA USING REMOTELY SENSED DATA

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Abstract: Terrestrial ecosystems become important global carbon pool and source of biomass. The preservation and sustainable management of forest and other land cover ecosystem such as rubber trees will help addressing two major recent issues, such as climate change and bio-resource energy. The rubber trees dominantly distributed in the Negeri Sembilan and Kedah on the west coast side of Peninsular Malaysia. This study is aimed to analyse the spatial distribution and biomass of rubber trees in Peninsular Malaysia with special emphasis in Negeri Sembilan State. Geospatial data from remote sensors are used to tackle the time and labour consuming problem due to the large spatial coverage and the need of continuous temporal data. Remote sensing imagery used in this study is a Landsat 7 ETM+. The image from optical sensor was used to sense the rubber trees and classified rubber tree by different age. Image segmentation technique and secondary information were used to estimate rubber trees biomass by using the combination of two vegetation index, namely NDVI and LAI. The results from image processing will be compared with field measurement.

Keywords: Biomass, spatial distribution, rubber tree, remote sensing