UNIVERSITI TEKNOLOGI MARA

ESTIMATION OF RUBBER TREE HEALTHINESS LEVEL USING SPECTRAL INDICES

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the Regulations of Universiti Teknologi Mara. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been Submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the academic rules and regulations for post graduate, Universiti Teknologi Mara, regulating the conduct of my study and Research.

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ABSTRACT

Rubber trees play an important role as a carbon dioxide sequester from the atmosphere at a rate comparable to if not better than the natural forest. Rubberwood is economically and socially important. Rubberwood has traditionally been used as a low-cost source of supports the effectiveness in most countries where rubber plantations are plentiful, such as for industrial brick burning, tobacco curing, or locomotive engine fueling. This study aims to using image classification and vegetation indices to find the rubber trees. In this study Sentinel 2 image will be used for healthiness detection using vegetation analysis. The goals of this study were to I examine the precision of unsupervised classification for determining to identify NDVI of Rubber tree in year 2015,2018 and 2021 and to analysis the healthiness of rubber tree. NDVI was used in the study to identify vegetation indexes. This study is very important for farmers to produce better rubber tree products by using remote sensing methods as well as identifying the location where rubber trees are located. The results will be proven by analyzing the accuracy of image classification and creating a Vegetation index map. For the determination of the environmental impact of the rubber tree plantation, which will result in greater rubber tree productivity, accurate information about rubber tree plantations and the healthiness of the plantations will be of great assistance.

Keywords: Rubber Tree, Unsupervised Classification, Vegetation index, Remote Sensing

TABLE OF CONTENT