ACCURACY COMPARISON BETWEEN NDVI AND SAVI FOR VEGETATION CANOPY DENSITY MAPPING USING LANDSAT 7 ETM+

Case Study on Teak Forest, Gunung Kidul, DIY

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Vegetation index has been successfully used to map various vegetation biophysical properties and understand their dynamics in spatial and temporal context. One of the most basic and important vegetation properties is their canopy density as it represent their abundance and related to other biophysical properties such as LAI, stand volume, and biomass. The aim of this research is to compare the accuracy of NDVI and SAVI vegetation index for canopy density mapping of using Landsat 7 ETM+ image. NDVI is the most common and widely used vegetation index and SAVI is known to be able to normalize soil background variations. Teak forest in Gunung Kidul area is selected as the study area due to its unique forest floor characteristics. Since each vegetation index has different sensitivity to the variation of vegetation compositions and characteristics, it is important to understand which vegetation index will deliver better accuracy. The output of this research provides understanding about which vegetation index works better on canopy density mapping of Teak forest.

Keywords: NDVI, SAVI, teak, Landsat 7 ETM+, canopy density