Application of remote sensing in assessing vegetation area determination based on RGB color index

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Abstract

Vegetation and forestry are equally important for the living being and particularly for the human being in terms of providing foods, natural fuels, influencing the CO_2 and other gaseous level which affect the growth and development of the species and the food chain. It is equally responsible in development and restoration of species and the environment eco-system. Assessing the vegetations and forestry areas of a country is a key challenge to the govt. agencies, researchers and the policy makers. Traditional methods of recording, assessing and further analyzing the vegetation and the forestry areas on hard copies are now non-functional. Now CAPI (Computer Assisted Programming Interviews) is being inducted to collect and record data in order to assess the vegetation and forest areas. This deals with collecting the data by the field staff on the laptops/handheld gadgets and then data is pushed on the server for consolidation, visualization and analysis. It is cheaper and efficient but suffers biasness due to manual intervention. Application of remote sensing has now emerged extensively and now started replacing the ground surveys. This technology is now being inducted in the demarcation of forest land, vegetation, urban or another land to assess the different types of resources. It is very cheaper and simultaneously being used to assess different types of resources. Data collected from the satellite is close to real-time in some of the cases where the frequencies of the satellite are very frequent in the given region. As intelligent technologies are achieving new heights and recognition techniques are evenly becoming better thus these technologies are extensively being used in image processing applications by inducting computational modeling and algorithms. The RGB color index method is among one of the methods. It is equally smarter and light weight, for this reason, it is being inducted in the smart-phones to locate the faces for clarity and also in predicting the gender, and age. Now this algorithm is becoming more precise by the use of MM (Machine Learning).This paper largely discovers the application of RGB Color Index method in wider domain on the geo-spatial and geo-referenced images captured by the remote sensors of the satellite to determine the vegetation area.

Keywords: Remote Sensing, RGB color Index, Satellite, Vegetation

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