MAPPING OF PALMYRAH TREE USING GEOSPATIAL TECHNOLOGY

Shanmugalingam Vinujan* and Srithayalan Srivijeindran
Palmyrah Research Institute, Palmyrah Development Board, Jaffna, Sri Lanka

**Corresponding Author: vinujans1989@gmail.com*

ABSTRACT

This paper calls an application that permits the user to direct the detection of trees from satellite imagery and spatial vegetation data. In the plant science physical interpretation of aerial pictures and practice of digital photogrammetry methods are common for estimating tree species composition. Numerous circumstances surrounding trees, such as the density of grass and other trees, will disturb tree recognition and counting. Panchromatic and multispectral imageries can progress and surge the classification accuracy of land use and land cover using WorldView-2 imagery. From the acquiesced data, after geometric and radiometric corrections, image enhancement was undertaken through image fusion techniques using multispectral and panchromatic images. Then, the data on the canopy pattern of palmyrah was extracted out by feature recognition and finally been produced the distribution map and report on number of trees. In this study, the total number of trees, true positive values, false negative values and final accuracy percentages were estimated. In the nine Grama Niladhari (GN) divisions from Karainagar District Secretariat (DS) division, it was observed that highest number of palmyrah trees in Karainagar east and lowest number was observed in Karainagar north GN division. False negative values were in the range of 9 – 62 and highest accuracy (95.3 %) was gained in Karainagar east, where least accuracy (83.2 %) was from Karainagar south west GN division. This study will facilitate further to compare the crown changing pattern of palmyrah in future.

***Keywords**: GIS, palmyrah, remote sensing, tree counting*