SATELLITE IMAGE CLASSIFICATION FOR MANGROVE FOREST IN THE MEKONG DELTA, VIETNAM

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Abstract: General applications of remote sensing technique are focused on using satellite imagery to classify land use/ land cover. Its results are depended on types and characteristics of data and other factors from the user side such as classification technique, training data sampling. Optical and radar images are the two types of remote sensing data, whose the features have their own advantages; optical and radar imagery can be fused together to enhance the information. In those cases of different data, accuracy assessment requires evaluation with more parameters than usual.

This report focuses on comparison of performance of optical images and radar fused-optic images in land cover classification. Landsat 5-TM, SPOT 5 and ALOS PALSAR imagery are taken to examine the performance on classifying land cover, mangrove types over the area, Ca Mau, the Mekong Delta, Vietnam. SAR and optical data are separately classified and each type of optical images is fused with radar SAR data to compare classification results of prior and after fusion. The analysis results show that if important accuracy assessment parameters were omitted it could lead to a bias evaluation of the classification results.

Keyword: SAR, Optical data, Accuracy assessment, Mangrove, Mekong Delta