THE ACCURACY ASSESSMENT FOR LAND-COVER MAPS CLASSIFIED FROM LANDSAT 8 IMAGES

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Abstract

Accuracy assessment of a remote sensing output is a most important step in classification of remotely sensed data. Without accuracy assessment the quality of map or output produced would be of lesser value to the end user. The aim of this research is to assess the thematic map (map for land cover) for specific area Thi-Qar Governorate through use data from satellite Landsat 8 date 23/1 /2015 and 3/3/2015 resolution 15m, which has been obtained from site GLOVIS USGS, using objective oriented classification in addition the indices for land cover for classification purpose with study the relationship between topography and classification method.

Landsat8 with 11 bands used to perform the land cover classification using the object oriented image analysis approaches. Ground truth data were collected from field survey about the land cover types in the study area by GPS. Object oriented image analysis approach was per formed through eCognition. The selected parameters for image segmentation are: the scale parameter 250 the composition of homogeneity criterion: shape 0.3 and compactness 0.8. Nearest neighbour was used as the classifier. Classification results by object oriented image analysis approach obtained was high; Overall accuracy obtained is 95% and Kappa 94%, using independent ground truth for accuracy assessment.

Keywords: Land cover, Landsat images, Remote sensing, GIS, Object-Oriented Classification.