



SEPARATING THE TERRAIN COVER OF IRAQI MARSHES REGION USING NEW SATELLITE BAND COMBINATION

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Abstract

A band combination (542) has been adopted and applied as a new method to classify the Iraqi marshes regions which they are located in the southern of Iraq using Landsat-5 TM scene. The results of proposed band combination were compared to the standard band combinations which they are selected to classify scene classes (541, 543 and 742). In addition, the results reveal that the standard band combinations are failed to discriminate between the scene classes that due to the aquatic nature of the scene, which makes the spectral response of the different classes very close, thus, they miss-classify the scene. Furthermore, the green band which was used in the proposed band combination enhanced the spectral response to discrimination between the different land cover classes. It was found that the support vector machine technique that performed to classify the scenes was revealed to be a very good classifier. The contribution of this study is obvious as the resulting outcomes can be capitalized as guidelines to separate the land cover classes in the aquatic nature to an accuracy that has been reached to 98% compared with the scene's region of interest.

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Classification, Land cover, Spectral response, Support vector machine

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