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MENA LAND COVER MAPS USING SUPERVISED CLASSIFICATION OF SENTINAL-2 DATA

Abstract

A simple remote sensing technique such as land cover classification helps one to get familiar with each country's landscape and their constituent resources. This work explores land cover classification focusing on the Middle East and North Africa (MENA) region, to understand the underlying characteristics along with comparing the similar and contrasting features in this region. Land cover classification techniques used in this study exhibits a more diverse type of supervised classification algorithms considering the training samples and validation outputs. The data used in this study is Sentinel-2 level 2A data at 10m spatial resolution consisting of a 4-band which are the primary colors and near infrared. Esri's ArcMap and L3Harris's Envi are the software's used in this study. The training samples are selected via visualization of satellite images and from previous studies on land cover classification in that area. The availability of the data used depends on the atmosphere cloud clearance for each site in addition to the seasons where vegetation and watershed are at their least peak to have a more visible land characteristic so that it would help in observation of the ground truth. The classes of each country are defined based on their physical landscape and its characteristics as one country's landscape tend to differ from another one.