
Classification and Detection of Land Use Changes in Orumieh City Using Object Oriented Method in the period 2009-2018

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Abstract

Satellite data is one of the fastest and least expensive methods available to researchers to prepare land use maps. The study of changes in land cover and land use from the distant past on the earth's surface has been proposed and allows the observation and recognition of differences and differences in time series of phenomena, complications, and patterns of the earth's surface. The present study is an example of applications of remote sensing technology in urban resource management in which land use changes in Urmia County during a 9-year period from 2009 to 2018 have been evaluated. To conduct this research, the MTL sensor images of Landsat SPOT 8 and SPOT5 satellites were used and the images were classified by applying the object-oriented classification method. In the ArcGIS environment, the area of land use classification was examined. For the process of changes in rangeland use, man-made, dense, and dense vegetation and salt marshes, the method of detection of changes were used. The results of land use detection in Urmia city showed that during the 9-year period, the area of these land uses has changed from 551/1597 square kilometers in 2009 to 39/1678 square kilometers in 2018. The highest level of change in terms of the percentage of land uses is related to rangelands that have been destroyed and the lowest level of land use changes is related to salt land use.

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