Determining The Most Suitable Classifier (Algorithm) Of Supervised Classification Of Satellite Images For Land Use Mapping

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Abstract:

Satellite images have been developed in different fields especially for land use mapping due to their affection on decreasing cost and time of map production in comparison to traditional methods. Classification of the images is done with different methods such as visual and digital methods. Supervised classification is one of the digital classification methods. Different classifiers (algorithms) are used in this method among Maximum likelihood; Minimum Distance and Parallelepiped are the most important ones. Therefore evaluation and comparison of these classifiers is necessary for determining the best algorithm in different condition and for various satellite data. The objective of this research is to compare the accuracy of land use maps produced using different classifiers in Raziko area, Mazandararn province, Iran. ETM+ images were classified using the mentioned algorithms and the land use maps were produced. The result showed that Maximum Likelihood classifier is the best algorithm among the 3 applied algorithms. Also it is necessary to use and compare the other algorithms in different areas.