عنوان مقاله:

Detecting pollarded stands in Northern Zagros forests, using artificial neural network classifier on multi-temporal lansat-۸(OLI) imageries (case study : (Armarde, Baneh

محل انتشار:

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خلاصه مقاله:

Local economy, based on animal husbandry in Northern Zagros forest leads to increase employing leaves and branches (pollarding) compared to the other parts of Zagros. Pollarding is a convenient method in forest utilization to supply fodder and it has been always trying to obtain its stable production by proper management skills. One of the most important forest management tools in a given forest is to provide up-to-date spatial maps of pollarded regions. The objective of this study was to investigate the capability of multi-temporal Landsat ۸ OLI sensor for mapping pollarding areas of Northern Zagros forests. So that, we employed Landsat ۸-OLI single and multi-date images acquired on ۲۰۱۴ and ۲۰۱۵. To assess the accuracy of output maps, a complete ground-truth of the study area was used to calculate the accuracy heuristics for the output maps. Different classification approaches were applied including minimum distance and maximum likelihood classifiers, artificial neural networks and fuzzy method. The classification accuracy was calculated on the basis of overall accuracy and kappa coefficient. The results indicated that artificial neural network and fuzzy classifier present the highest accuracy than the other classifiers. It was also found that utilizing the multi-temporal OLI imageries improves the accuracy over employing a single date. The results indicate that .the multi-temporal imagery is moderately capable of mapping pollarded stands and classifying pollarding types, using ANN and Fuzzy classifiers

کلمات کلیدی:

OLI, Pollarding, Zagros forests, ANN

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