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Monitoring of Forest Cover Dynamics in the High Atlas of Morocco (Zaouit Ahansal) Using Remote Sensing Techniques and GIS

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Abstract: The present work focuses on the assessment of forestlandscape changes in the region of ZaouitAhansal, using multitemporal satellite images at high spatial resolution. Several remotes ensing methods were applied namely: The supervised classification algorithm and NDVI which were combined in a GIS environment to quantify the extent and change in density of forest stands (holmoak, juniper, thya, Aleppo pine, crops, and others). The results obtained showed that the forest of ZaouitAhansal has undergone significant degradation resulting in a decrease in the area of juniper, cedar, and zeenoak, as well as an increase in the area of baresoil and agricultural land. The remotes ensing data provided satisfactory results for identifying and quantifying changes in forest cover. In addition, this study could serve as a reference for the development of management strategies and restoration programs.

Keywords: remote sensing, GIS, satellite image, NDVI, deforestation, zaouit ahansal

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