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

Authors : Abdelaziz Moujane, Abedelali Boulli, Abdellah Ouigmane

Abstract : The present work focuses on the assessment of forestlandscape changes in the region of ZaouitAhansal, usingmultitemporal satellite images at high spatial resolution.Severalremotesensingmethodswereappliednamely: The supervised classification algorithm and NDVI whichwerecombined in a GIS environment to quantify the extent and change in density of forest stands (holmoak, juniper, thya, Aleppo pine, crops, and others).The resultsobtainedshowedthat the forest of ZaouitAhansal has undergonesignificantdegradationresulting 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 remotesensing data providedsatisfactoryresults for identifying and quantifying changes in forestcover. In addition, thisstudycould serve as a reference for the development of management strategies and restoration programs.