World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:9, No:08, 2015

Use of Data of the Remote Sensing for Spatiotemporal Analysis Land Use Changes in the Eastern Aurès (Algeria)

Authors : A. Bouzekri, H. Benmassaud

Abstract : Aurès region is one of the arid and semi-arid areas that have suffered climate crises and overexploitation of natural resources they have led to significant land degradation. The use of remote sensing data allowed us to analyze the land and its spatiotemporal changes in the Aurès between 1987 and 2013, for this work, we adopted a method of analysis based on the exploitation of the images satellite Landsat TM 1987 and Landsat OLI 2013, from the supervised classification likelihood coupled with field surveys of the mission of May and September of 2013. Using ENVI EX software by the superposition of the ground cover maps from 1987 and 2013, one can extract a spatial map change of different land cover units. The results show that between 1987 and 2013 vegetation has suffered negative changes are the significant degradation of forests and steppe rangelands, and sandy soils and bare land recorded a considerable increase. The spatial change map land cover units between 1987 and 2013 allows us to understand the extensive or regressive orientation of vegetation and soil, this map shows that dense forests give his place to clear forests and steppe vegetation develops from a degraded forest vegetation and bare, sandy soils earn big steppe surfaces that explain its remarkable extension. The analysis of remote sensing data highlights the profound changes in our environment over time and quantitative monitoring of the risk of desertification.

Keywords : remote sensing, spatiotemporal, land use, Aurès
Conference Title : ICLDSSM 2015 : International Conference on Land Degradation and Sustainable Soil Management
Conference Location : Istanbul, Türkiye
Conference Dates : August 17-18, 2015