

05-06: Forest regeneration after fire in semi arid land in the north west of Algeria analysis with remote sensing data

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The South West region of Algeria is affected each summer by forest fires a very violent which last several days and affects the Underwood, natural forests and reforestation. Forest regeneration in this semi-arid land is conditioned by several factors, climatic, topographic, and linked to the timber species. Remote sensing and geographic information systems (GIS) offer to environmentalists and managers, an opportunity for the evaluation, the monitoring and analysis of the vegetation. Usually NDVI is used, other derived index from radiometric data for remote sensing are widely used in programs to monitor the dynamics of the vegetation. The forest domain has benefited greatly from this approach. Using remote sensing data to several dates such as the data ALSAT and Landsat in our case, combined with the topographic parameters seems promising in the assessment of the spatial and temporal effects of regeneration after fires. The site studied is in the region of Sebdou in the south Tlemcen in Algeria, burned in 2003 allowed to take better account of new factors to explain the regeneration and its spatial and temporal variation. Our attention is to show the potential for the use of remote sensing data of the satellite ALSAT, spatial resolution of 32 m, and that of the Landsat resolution 30 m and the derived index from normalized difference vegetation index (NDVI / RVI) and the index of regeneration (NRI / RI), in the assessment and quantification of the regeneration after fire in a context of Algerian forest. The software IDRISI Selva has been used to analyze the layers of information involved in the evaluation of the regeneration post fires. The results obtained allow us to identify the speed of regeneration by species influenced by topographic conditions, climatic and ecological.

Key words: Remote Sensing, Forest Fires, Forest Regeneration, Alsat Data, Semi Arid Land, Multi Temporal Analysis