

# ANALYSIS OF SPATIAL AND TEMPORAL EVOLUTION OF THE NDVI ON VEGETATED AND DEGRADED AREAS IN THE CENTRAL SPANISH PYRENEES

L. Alatorre<sup>\*a</sup> S. Beguería<sup>b</sup>

<sup>b</sup> Estación Experimental de Aula Dei, , Av. Montañana, 1005, 50059, Zaragoza, Spain

<sup>a</sup> Pyrenean Institute of Ecology, , Campus de Aula Dei, Apdo 202, 50080, Zaragoza, Spain

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## ABSTRACT:

The temporal evolution of vegetation activity on various land cover classes in the Spanish Pyrenees was analyzed. Two time series of the normalized difference vegetation index (NDVI) were used, corresponding to March (early spring) and August (the end of summer). The series were generated from Landsat TM and Landsat ETM+ images for the period 1984-2007. An increase in the NDVI in March was found for vegetated areas, and the opposite trend was found in both March and August for degraded areas (badlands and erosion risk areas). The rise in minimum temperature during the study period appears to be the most important factor explaining the increased NDVI in the vegetated areas. In degraded areas, no climatic or topographic variable was associated with the negative trend in the NDVI, which may be related to erosion processes taking place in these regions.

**TOPIC:** Image processing and pattern recognition

**ALTERNATIVE TOPIC:** Image processing and pattern recognition