The use of remote sensing to assess forest fire resilience: A study case in SE Iberian Peninsula

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Fire is one of the most drastic disturbances in forest ecosystems, particularly in Mediterranean ecosystems. Global change, including climate change and land use changes, is strengthening the rising of frequency and intensity of them. The knowledge of the resilience of the main Mediterranean ecosystems would allow defining policies and actions to protect the most vulnerable species. One of the problems that the concept of resilience presents it is to be a concept associated to the dynamic of the ecosystem and there is no definition to quantify in a normalized and standardized way. This work propose an original methodology that involves the definition of type curves of recovery based on a time series of NDVI data, from Landsat satellite images, and the analysis of the potential changes in the taxonomic composition of the ecosystem after fire. We present the analysis of two areas affected by forest fires in the southeast of the Iberian Peninsula. It involves representative plant communities in this region, specifically esparto-grassland, esparto and rosemary shrubbery, and Aleppo pine forest.

Biography

Jorge de las Heras is a full Professor in Department of Plant Production and Agricultural Technology, School of Agricultural Engineering of Albacete, University of Castilla-La Mancha, Spain.

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