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An open "laboratory" in the forest to land managers, scholars and to society: the Mariola fire-affected study site

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In Mediterranean ecosystems, fire must be considered a natural factor, but land use changes during the last decades have modified its natural regime transforming it, in some cases, to an environmental problem with great socio-economical impact. In this work we want to show our experience of how to transfer part of our knowledge and results of research to society using one catastrophic forest fire event in the Alicante Province (E Spain).

A big forest fire (500 ha) in "Sierra de Mariola (Alcoi)" occurred in July 2012, with a great impact produced on the populations of nearby affected villages. Thanks to a good cooperation between the Alcoi council and University a collaborative research program started at beginning 2013. Usually, society calls for early reforestation in fire-affected areas and this pressure on forest managers and politicians can produce a non-adequate response. The soil is a fragile system after a wildfire, and burned areas are more or less affected depending on many factors such as fire severity, previous history of fire in the area, soil type, topography, etc.

During all these years and especially since 2015 (International Year of Soils) we are continuously organizing activities with stakeholders in the study area. Every year the landscape is changing and we are adapting our recommendations on specific sites depending on their evolution and necessities. These are used as examples of how to perform daily activities as an educational tool with scholars, volunteers, and land managers. Examples of these activities such as demonstrative experiments with rainfall simulations in different plots with different post-fire managements, the application of different types of mulch in vulnerable areas, afforestation with native species in some sites, or clear-cutting in other sites with high density of pines will be shown in this presentation as an example of how to bring soil science to society.

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