

Land use changes and spatial susceptibility in small Mediterranean basins

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Soil erosion is one of the most recurrent environmental problems of public interest today. The western Mediterranean is an area sensitive to the effects of Climate Change, according to the latest IPCC Sixth Assessment Report, due to the proven increase in extreme events such as heat waves, extreme rainfall and droughts. Within this, the importance of competition in the territory between tourism and agriculture will be the result of radical changes in land use that are affecting the ecomorphological system to the point of making it even more susceptible due to the emergence and increase of high risks in the Mediterranean basins. Therefore, it will be essential to determine the levels of susceptibility of the basins under study with respect to erosive processes in order to create new mitigation measures to improve soil management and reduce these risks.

Through this study we intend to analyze changes in land use and territorial susceptibility in several basins in southern Spain, in Malaga. The main objective is to determine the incidence and susceptibility of these basins and to analyse how they have been affected by land use changes through an observation of land use changes and the application of the RUSLE model. This project will look at the differences between two contrasting basins. One basin with steep slopes and the emergence of more sensitive crops, such as vineyards, which will increase the fragility of Mediterranean basins after torrential events, causing the appearance of a higher risk of erosion, while the other basin will be differentiated with the appearance of clearings that decrease the steep slopes together with changes to more competitive crops, such as subtropical crops. The results demonstrate the correlation between land use and torrential events in Mediterranean basins with respect to their susceptibility in their ecogeomorphological system.