

A method for resilience assessment in dry Mediterranean socio-ecological systems

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Resilience is acknowledged as an important concept to understand and forecast the evolution of ecosystems. Even more so when these ecosystems are at risk of undergoing a regime shift that could radically modify its functioning and the provision of important ecosystem services. However, there is a lack of methodologies for practical assessment of resilience on the ground that could be useful to improve land management strategies. We present here a methodology based on the WOCAT approach to land management evaluation, that allows assessing in a semi quantitative way the resilience of a land use system, and in particular the role of land management in preventing, mitigating or fostering recovery following a disturbance. The first step of the evaluation centers on assessing the values of land users with regards to the provision of ESS and the perception of degradation; this allows defining the healthy state of the system in a participative way. Furthermore, scientific and experience knowledge are combined to assess the possible evolution of the system and of the internal and external pressure sources that can degrade it, and the impact of shocks and disturbances on the system. The contribution of land management practices to the resilience of the system is analyzed in detail, together with the resilience of land management itself across time, space and different disturbances. Results from the first application of the Resilience Assessment Tool in the study sites of the CASCADE project will be shown, along with some general conclusions about the most relevant factors playing a role in the resilience of dry Mediterranean socio-ecological systems.