The PastorAlp project: integrated strategies to manage pasture vulnerability to climate change in the Alps.

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Grasslands are among the most widespread ecosystems in the world and are responsible for one third of the global terrestrial carbon pool. In the Alps, natural grasslands, grazed pastures and meadows are important components dominating the mountain landscape. However, during the past decades socio-economic changes have led to differences and shifts in mountain grasslands management, which in combination with climate change are severely impacting the functioning of these vulnerable ecosystems and the associated ecosystem services.

Here we present the recently started LIFE project (October 2017) PASTORALP (Pastures vulnerability and adaptation strategies to climate change impacts in the Alps) which aims at investigating the vulnerability so as to increase the resilience of alpine pasture agriculture by assessing and testing adaptation measures, increasing capacity building and developing improved management strategies for adaptation to climate change. Two natural Parks in the Western Alps (Parco Nazionale Gran Paradiso and Parc National Des Ecrins, Italy and France, respectively) are the implementation areas of the project. In a first step, activities will be directed to the quantitative analysis of pasture typologies and distribution in the two study areas. A review of current national and European policies on pastures and climate change adaptation will be also carried out, so as to identify best current techniques and methods implemented. Secondly, a modelling approach will be applied to estimate vulnerability of natural pastures and identify feasible climate change adaptation strategies for alpine grassland management and socio-economic sustainability in the future. A core element of the project will be the stakeholder consultation and engagement through a multi-actor approach. Main outcomes from the project will be finally assembled in a web-based tool platform to promote adaptation strategies also in other EU mountain regions, ensuring replication and transferability of the proposed methodology.