

## Submitted Abstract

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<b>Title</b>	The Multiple Values Of (Pre-)alpine Grasslands: Contrasting Socio-Cultural And Economic Values With Agri-Environmental Payments.
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## Abstract

The agricultural management of grasslands, a major form of land-use in (pre-)mountainous landscapes, is strongly linked to fodder production and cattle farming. Besides these, the cultural landscapes also provide other valuable ecosystem services such as carbon sequestration, nutrient regulation, and recreation. The provisioning of these ecosystem services is currently threatened due to changes in both management intensification and abandonment of grasslands as well as climate change. Capturing the values that societal actors place on such ecosystem services is a key step to provide management recommendations and governance advice. Valuation of nature and its ecosystem services, especially of agro-ecosystems, has most frequently been conducted in terms of their monetary value only. However, values of grasslands are diverse and include instrumental, relational, and intrinsic value types. Hence, to elicit underlying factors of sustainable grassland management, we are investigating the matches and mismatches between economic and socio-cultural values of grasslands and their ecosystem services in a case study in pre-Alpine and Alpine southern Bavaria, Germany. We assess economic values in terms of the energy content of grass harvests, based on remotely-sensed data. Socio-cultural values are based on spatial, quantitative, and qualitative survey data conducted with citizens living in the area as well as the distribution of geo-tagged photos on grasslands. In order to investigate the role of policy instruments towards sustainable grassland management, we additionally link payments of agri-environmental schemes with the multiple values of grasslands. The study reveals that specific grasslands are valued for a variety of reasons on different spatial locations and point out the need to assess the context-specific prevailing values when designing policy measures. With our results we are able to identify hotspots and coldspots of grassland values in space and their correlation with agri-environmental payments. We conclude that it is vital to take multiple values of grasslands and their ecosystem services into account when designing transformation strategies towards sustainability in mountainous grassland systems.