

## **Exploring the relationships between farm management, biophysical and sociocultural factors in ecosystem service coproduction**

### **Abstract**

Traditionally characterized by multifunctional low-intensity management that enhanced a wide range of ecosystem services, dehesas are complex social-ecological systems which are product of a long-term interaction between society and the landscape in which it is embedded. However, current farm management has shifted from traditional towards more intensified farm models. This paper assesses the coproduction of ecosystem services (ES) in the dehesas by exploring the relationship between biophysical and sociocultural factors and farm management practices. Based on 42 farm surveys and using multivariate techniques, we explore the synergies and tradeoffs associated with the farm management, analyzing how biophysical and sociocultural factors influence the range of management styles based on 16 quantitative farm management indicators, biophysical factors and sociocultural factors. The results show that farm management is the outcome of the dynamics between biophysical and sociocultural factors, which influence farmers' choices about what to prioritize and to invest in. We find that in the study area, the interaction between all the above-mentioned element covariates consistently, generating in the study area bundles of ES associated with three management styles depending on the intensity of the farm management.

### **References**

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