

**Using the Pareto Frontier Method to analyse trade-offs between ecosystem services;
towards effective management policies at landscape level**

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Ecosystem services (ES) are benefits that properly functioning ecosystems provide for human societies through provision, regulation, cultural and supporting services. Forest provide several ES such as timber, food, fuel, genetic resources, carbon storage, biodiversity, climatic and water regulation, erosion protection, cultural and recreational services. Many of these forest ES are in trade-offs, meaning that the production of one service has negative effect to others. The assessment of relationship between ES can help to optimise the forest management and provide further insight about the forest management planning problem and help set adequate levels of achievement for various objectives. Objective of the SVV is to develop a trade-off assessment of ES in Mediterranean conditions at landscape level. The targeted ESs are: timber, carbon sequestration, mushrooms, scenic beauty and risk of erosion. Study data consist of existing models for tree growth and mortality of selected species, national forest inventory records, Lidarcats data, digital elevation model and Spanish forest map MFE25. The study will use combination of Pareto-Frontier method, interactive decision maps and simulation approaches. These methods will be used at the landscape level assessment of ecosystem service trade-offs. As the time during the visit was not sufficient, the study will continue in the near future using the data and methods described and results will be presented later.