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S. Luque

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Symposium 7: A landscape approach to sustainable forest management: the challenge to adaptive management and the maintenance of biodiversity value

The challenge to adaptive management and the maintenance of biodiversity value

Luque, S.⁽¹⁾

Cemagref Institute for Agricultural and Environmental Engineering Research, Mountain Ecosystem Unit, 2 Rue de la Papeterie, 38402 Saint-Martin d'Hères, France

ABSTRACT

Considering the resulting impacts on land use and biota, the option of adapting land use and landscapes to mitigate undesired implications by climate change is now appearing on the political and research agendas. One of the most important challenges for future research will be to integrate research across different scales, including spatio-temporal scales within an interdisciplinary and multidisciplinary framework. If we manage to follow this route, science will be able to move from analytical to actionable climate knowledge.

This work provides views and examples on how the holistic approach of landscape ecology can be considered towards the interplay between biodiversity value and the needs of forestry activities. Focusing on biodiversity conservation as a proxy for ecological dimensions of sustainable forest management the work proposes a series of requirements for the conservation of habitat networks and ecological processes to be met by forest landscape managers.

Landscape ecology, proposes a comprehensive and integrative approach from the plot level to the landscape level, considering adaptive management and an analysis of ecological thresholds. Spatial conservation prioritization methods are applied to a national-scale conservation planning task.

Results from Boreal and temperate forests in Europe demonstrate the importance of forest habitat quality models and the development of a spatial framework to integrate information of protected and private forest land.