Sustaining ecosystem services in forest landscapes

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AppTitude©: A tool for forest sustainability assessment

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Forests provide different services and products in processes involving diverse groups of stakeholders with particular perceptions and perspectives. The relationship between forest uses and stakeholders can be more or less compatible, which affects forest management decisions. Part of the solution for potential conflicts among forest uses and stakeholders relies on the definition of the best locations for different uses: it depends on gathering and processing information and on establishing a framework for optimal (or satisfactory) forest management decision making. The AppTitude© software was developed to evaluate the suitability of landscape for different forest uses based on stakeholder’s judgment and minimum-maximum limitations (inputs). The software implements and automatized Multi-Criteria Decision Making (MCDM) methodologies were used to evaluate suitability according to a hierarchy of different types of criteria (e.g. social, economic, environmental, political, and technical) associated with spatial information through attributes connected to vector or raster files. Finally, the software solves automatically the hierarchy and spatial probability distribution to obtain spatial suitability surfaces (output raster files) for particular use and regions.