



Adapting land management to emergence of novel site conditions on the continental lowlands of SE Europe

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The rapid progress of site potential change, caused by the shift of climate zones is a serious problem of lowland management in Southeast Europe. In forestry, the resilience potential of main, climate-dependent tree species (e.g. spruce, beech, sessile oak) and ecosystems is limited at their lower (xeric) limits of distribution.

A conventional mitigation measure for adaptive forest management is the return to nature-close management. Severe drought- and biotic impacts in forests indicate however the urgency of fundamental changes in forest policy. To provide assistance in selecting climate-tolerant provenances, species and adaptive technologies for future site conditions is therefore critical.

A simplified Decision Support System has been developed for Hungary, keeping conventional elements of site potential assessment. Projections are specified for discrete site types. Processing forest inventory, landcover and geodata, the System provides GIS-supported site information and projections for individual forest compartments, options for tree species better tolerating future climate scenarios as well as their expected yield and risks. Data respectively projections are available for recent and current conditions, and for future reference periods until 2100. Also non-forest site conditions in the novel grassland (steppe) climate zone appear in projections. Experiences for proper management on these sites are however scarce.