

Modelling species compositions changes and biomass evolution under different climate change scenarios and forest management strategies

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For forestry, climate change is a challenge due to direct impacts on forest ecosystems. Forests adaptation to climate change has to be done by modifying traditional forest management to reduce stand susceptibility to disturbance and to improve forest resilience. For identifying suitable management type in order to adapt forests to climate change was used LandClim model which was developed for studying the impacts of topography, climate change, forest management and disturbances on forest dynamics, composition and structure.

The results showed a strong decrease of forest biomass and a change in species composition, at low elevation, in extreme climate and adaptive management simulations. Instead, in no management simulation, only at low elevation and in extreme climate was affected the biomass stock and species composition.