Climate change may impact substantially the forest sector in Portugal. Several studies point out to the warming of winters and to the increase of both the length of the dry season and the frequency of extreme events. We present research aiming at assessing impacts of climate change on Eucalypt forest management planning. The proposed approach integrates a process-based model that is sensitive to environmental changes, Glob3PG, and a multi-objective optimisation model in a DSS to identify optimised management plans under changing environmental conditions. The application problem includes multiple objectives e.g. pulpwood and biomass annual flows, carbon storage and net present value, subject to ending inventory. For testing purposes, a eucalyptus forest with over 1000 stands extending over 11873 ha in Portugal was considered. The test problems encompassed a 20 years temporal horizon and two climate scenarios. A mixed integer linear programming (MILP) model was developed and solved using CPLEX (ILOG CPLEX 12.1). Results demonstrated the potential of the proposed approach to provide information and insight to support landscape analysis and planning under scenarios of climate change.

**Keywords:** Climate change; Decision support system; Eucalypt, forest management; mixed integer programming

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