

PROJECT INFORMATION

Project title: **Modelling the effects of extreme droughts on forest ecosystem functioning –Towards climate smart forestry.**

Project ID: 181

Contact person: Ward Fonteyn (ward.fonteyn@kuleuven.be)

PROJECT DESCRIPTION

Recent rapid changes in natural disturbance regimes are documented in many forest ecosystems across the world, with climate change being a prominent driver of this trend. Especially extreme drought events push forests beyond their limits. Since climate change will make droughts more frequent, more intense and longer in the future, it is of great importance to gain a better understanding of the effects of extreme droughts on forests. This study aims to achieve this goal by using advanced computer models to combine data from satellites and field monitoring networks. First, the effects of the tree species diversity on the impact droughts have on forests will be studied. Using this knowledge the study will then assess the suitability of the current and projected climate for species currently used in Belgian forestry as well as new species that are not yet used in Belgium. The results from this research project will be directly valuable to forest managers, therefore, we will communicate the results clearly to the forestry sector through, among other methods, a user-friendly tool for forest managers. Our research will also serve as a starting point for more specified research towards the application of new tree species in forestry. The overall goal is to provide information to allow the forestry sector to move to climate-smart practices.