

## **Adapting European forests to climate change: resource modelling at high resolution based on inventory data**

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European forests are highly diverse, serve a wide variety of societal needs, and are owned by a wide range of forest owners in 36 countries.

In order to improve our simulations of European forests we have gathered plot level National Forest Inventory data from each national NFI institute. We now have 330,000 plots from 18 countries. This is sufficient to make projections of the European forests at 1x1 km resolution. Never before such harmonised and detailed data were compiled of European forests. A new high resolution simulation model (EFISCEN-SPACE) based on these data is presented as an improved tool to analyse European forest resource development under climate change. The new tool allows overlays with various sorts of GIS material and allows improved assessments in relation to forest management changes. The improved model is a diameter class cohort model running for pseudo-stands at the 1x1 km resolution. Being able to deal with local circumstances, but still deal with large resources, we are now able to study specific local adaptation. Namely, measures will have to be different in every region. E.g. a fire smart landscape in Portugal, or harvesting biomass for bioenergy with reduced storm risk in Atlantic Europe. Only in this way, the optimal combinations between mitigation and adaptation (and other functions of the forest) can be found and implemented

In the future, issues to be addressed are related to wood availability, biomass for bio energy, bio diversity, accessibility and distances to industry, impacts of climate change and carbon issues.