Project Database of ICP Forests

PROJECT DESCRIPTION

PROJECT INFORMATION

Project title:	**Bioclimatic niche of insect pests and host trees in response to climate change**
Project ID:	203
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PROJECT DESCRIPTION

The overall goal of this project is to develop a procedure aimed to interpret and predict tree response to insect infestation and climatic variability considering the characterization of species bioclimatic niche with other non-climatic factors such as forest structure. The project is focused on drought and insect-induced mortality episodes affecting forests in Europe.

Specifically, the data will be used

1. to build correlative niche models (CNMs) characterizing bark beetles and host trees bioclimatic niches from its regional distribution and climate datasets (CHELSA);
2. to analyze host trees population responses (mortality), as recorded the health status of ICP Forests dataset, to episodic or chronic drought concurrent with bark beetle infestation;
3. to evaluate the relationships between tree population responses and CNMs outputs of bark beetle and host tree species, also including forest attributes obtained from the structural biodiversity of the ICP Forests dataset; and
4. to apply future climate scenarios to assess the vulnerability of host tree population to bark beetle infestation.