

PROJECT INFORMATION

Project title: Phenotypic and Genetic Diversity of Pedunculate oak (*Quercus robur* L.) in Europe – FGErobur

Project ID: 93

Contact person: Martina Temunović (martina.temunovic@gmail.com)

PROJECT DESCRIPTION

The ecological niche of common oak will be analyzed to determine the change of niche breadth and its optimum, as well as the realized niche position within the available ecological space along the geographical gradient of this species. The niche will be analysed using a combination of data of common oak distribution from the EVA database and other sources for the whole Europe and environmental variables with various statistical packages and software (SAS, ecospat R package, Juice v7.0). Also a niche width of common oak will be defined using the method of species co-occurrence based assessment of habitat specialization. The ecological niche model will be created using the method of maximum entropy, which is implemented in the program Maxent (Phillips et al. 2006). After processing and analysing, a visualization model will be created in ArcGIS Desktop 10.2 software. The study will also combine some phenotypic and genetic diversity analysis of common oak populations according environmental conditions in which these populations develop. Since the ability of forest tree species to adapt to a certain level of environmental condition changes in their habitats, including global climate changes, greatly depend on their ecological niche breadth and their phenotypic and genetic diversity.