









General objective and context

Drought events are expected to be more frequent and more extreme in the forthcoming decades due to climate change. Indeed, those observed in Europe in the past decade are the most severe on record. Drought-induced diebacks of forest trees have led to a loss of forest area in Europe estimated at 500,000 ha between 1987 and 2016. Many forest tree species are affected, even rather drought-resistant sessile oaks, and especially when they grow under limiting environmental conditions.

Wise use of forest genetic diversity has unseen power to transform forest management decision making. Choosing locally recommended provenance for native species can improve forest stand vitality, while assisted migration could facilitate local forest adaptation. This requires detailed information about the inheritable (genetic) and non-inheritable ("plastic") bases of adaptive variation within and between species.

In this webinar we focus on both the potential and limits of genetic adaptation of forest tree stands to drought. We will present the latest science and show how it can support management strategies and policies at regional, national and international level to foster adaptation to drought in European forests, based on feedback from ongoing practices.

This webinar is part of the FOREST EUROPE's "From the roots to the canopy" series in preparation for the 9th FOREST EUROPE Ministerial Conference in Königswinter (Bonn), 1-2 October 2024. FOREST EUROPE has joined forces with the European Forest Resources Genetic Resources Programme (<u>EUFORGEN</u>), and the EU-funded H2020 project <u>FORGENIUS</u> (FORest GENetic Resources Information and Services for End-USers) to continue with its successful work on the <u>Forest Risk Facility</u> providing guidance to adapt Europe's forests to climate change.

Webinar description

Format, language, duration and date: Online, English, 2h webinar, 15 April 10:00 - 12:00 CEST.

Audience: Presentations open to interested public (online streaming and chat).

Contents: We aim to provide forest managers and policy makers with an understanding of the genetics underlying drought adaptation. To guarantee healthy forests and their potential for adaptation a high level of genetic diversity is essential. Why it matters and how to get there!

During this webinar we will learn what happens to a tree under drought and how drought is affecting European forests. How does drought stress vary among species, among populations, among individual trees and how do we understand the genetic bases of such variation? Why does it matter and how can this knowledge be applied in practice?





Agenda

Presentation title	Speaker
General Introduction, Background of the Webinar - FOREST EUROPE, FoRISK	Julia Haas, FOREST EUROPE
Welcome and introduction on the importance of the topic from FORGENIUS	Ivan Scotti, INRAE (France)
1.Presentation: What happens to trees during and after drought events?	Maurizio Mencuccini, CREAF (Spain)
2. Presentation: Genetic bases of drought response in Mediterranean pines: why variation among populations and individuals matter?	Delphine Grivet, Aida Solé-Medina, Institute of Forest Sciences, INIA- CSIC (Spain)
3. Presentation: Epigenetics: what's in it for tree adaptation?	Stéphane Maury, University of Orléans (France)
4. Presentation: Genetic Research in Türkiye	Iskender Demirtas, General Directorate of Combating Desertification and Erosion (Türkiye)
Panel Discussion with guided questions	
Q&A public audience	
Summary of take-home messages Good bye	Julia Haas + Ivan Scotti

