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FOREST REPRODUCTIVE MATERIAL IS VITAL TO SECURE EUROPE'S FORESTS

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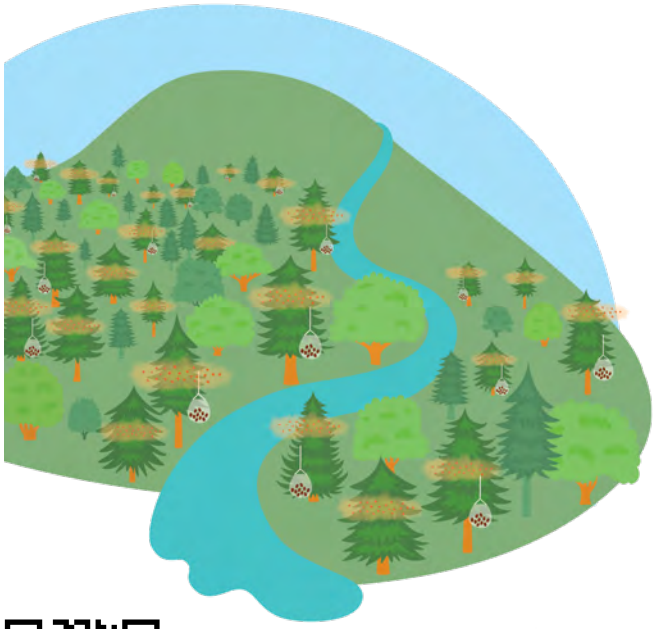
POLICY**BRIEF** OCTOBER 2023

What is at stake?

Forests cover more than a third of Europe's land surface and provide a multitude of ecosystem services and socioeconomic functions. They are vital for meeting climate targets, for human wellbeing, and for the transition to a sustainable, circular bioeconomy. However, climate change itself presents an acute threat to European forests, bringing with it a host of potentially devastating impacts, as well as uncertainties.



Download the full report:
Genetic aspects linked to production and use of forest reproductive material (FRM)
euforgen.org/FRM-Report

The role of forest reproductive material

Rapid climate change is outstripping the ability of tree populations to adapt solely by natural evolutionary processes. Forest management must therefore be oriented towards building resilience by increasing genetic diversity and accelerating genetic adaptation. In addition to promoting natural regeneration, this can require the introduction of forest reproductive material (FRM)[1] —some of which may need to be transferred from other localities.

Use of inappropriate FRM can be catastrophic

FRM must be genetically suitable for the site in which it is planted, as well as of good quality. However, the unintentional use of inappropriate planting material is commonplace. Over time, this leads to forest instability, a reduction in forest cover, and major losses to forest goods and services. Large plantations with very narrow genetic diversity between trees are at particularly high risk.

Provenance trials demonstrate the suitability of material for specific site conditions. Maintaining existing trials and establishing new ones is vital to support practitioners' decision-making on the use of appropriate FRM, particularly important under climate change scenarios.

[1] Seeds, seedlings or cuttings of trees and shrubs important for forestry, as well as for non-forestry purposes.

Why does this happen?

FRM production involves a complex chain of actions, from the approval, establishment and management of basic materials, through seed collection, processing, storage, and propagation, to certification, trade, and transportation to end users. Deficient practices, insufficient regulation, and inappropriate policies can result in the marketing and use of suboptimal material.

PIVOTAL AREAS FOR CHANGE

01. **Develop science-based decision support tools for the transfer of FRM** taking into account regional and pan-European predicted future climate scenarios to provide a sound basis for the use of non-local FRM.

02. **Allow the regulated movement of FRM** to enable the use of provenances fit for future climatic conditions.

03. **Promote long-term record-keeping** of FRM origin and performance in deployment stands.

04. **Provide data and regularly reporting updates to FOREMATIS** (EU Forest Reproductive Material Information System), ensuring that data can be trusted and used as a basis for making decisions about the use of FRM.

05. **Undertake expert reviews of national regulations relevant to FRM production and use** to identify potential constraints and options for enhancement—e.g., by permitting forest managers to have the option of diversifying forest stands using artificial regeneration techniques.

The forest reproductive material production and use chain