



Special Issue Reprint

## Genetic Resources and Adaptive Management of Conifers in a Changing World

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Climatic change causes a mismatch between tree populations on sites they currently occupy and the climate to which they have adapted in the past. The maintenance of productivity and of ecological and societal services requires resilient populations and ecosystems, particularly close to the vulnerable trailing (xeric) range limits. The studies confirm the selective effect of diverse habitat/climate conditions across the species ranges. Soil conditions may mask climate effects and should be considered separately.

The unique potential of provenance tests is illustrated by growth response projections that may be less dramatic than provided by usual inventory data analyses. Assisted migration appears to be a feasible management action to compensate for climatic warming. However, the choice of populations needs special care under extreme conditions and outside the limits of current natural distribution ranges. The proper differentiation of measures according to the present and future adaptive challenges require the continuation of long-term analyses and the establishment of better focused field trials in disparate climates that contain populations from a representative range of habitats. The studies present results obtained from diverse regions of the temperate forest zone, from Central and Northwestern Europe, the Mediterranean, Russia, China, North and Central America.



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