EVOLTREE PARTNERS

P1 French National Institute for Agricultural Research, France
P2 Alterra - Wageningen University and Research, the Netherlands
P3 Austrian Research Centers GmbH - ARC, Austria
P4 Federal Research Centre for Forestry and Forest Products Hamburg, Germany
P5 National Research Council, Italy
P6 Flanders Interuniversity Institute for Biotechnology, Belgium
P7 Geological Survey of Denmark and Greenland, Denmark
P8 Georg-August Universität Göttingen, Germany
P9 INRA Transfert, France
P10 Bioversity International, Italy
P11 Natural Environment Research Council - CEH, United Kingdom
P12 Phillips University of Marburg, Germany
P13 Swiss Federal Research Institute WSL, Switzerland
P14 Technical University in Zvolen, Slovak Republic
P15 Technical University of Munich, Germany
P16 National Institute for Agriculture and Food Research and Technology, Spain
P17 University of Udine, Italy
P18 National Research Centre of Scientific Research, France
P19 Umeå Plant Science Centre, Sweden
P20 University of Bydgoszcz, Poland
P21 University of Oulu, Finland
P22 University of Southampton, United Kingdom
P23 University of West Hungary, Hungary
P24 Uppsala University, Sweden
P25 Max Planck Institute, Germany

EVOLTREE brings together 25 research groups from 15 European countries in different disciplines from forest ecology to genomics, contributing to the emergence of a new discipline, 'ecosystem genomics', which combines genetics, genomics, ecology and evolutionary biology to study gene-level responses to biotic and abiotic pressures on forests.

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Photos by: Barbara Vinceti (Bioversity International), Francis Martin (INRA-Nancy), Birgit Ziegenhagen (Philipps-Universität Marburg).

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EUROPEAN PROJECT ON FOREST BIODIVERSITY

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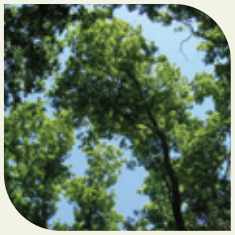
EVOLUTION OF TREES AS DRIVERS OF TERRESTRIAL BIODIVERSITY

IS A LARGE EU–FUNDED NETWORK OF EXCELLENCE LAUNCHED IN APRIL 2006 TO ANALYZE THE IMPACTS OF CLIMATE CHANGE ON FOREST ECOSYSTEMS FROM AN EVOLUTIONARY PERSPECTIVE.

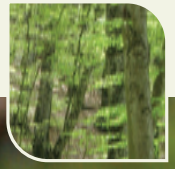
A BETTER UNDERSTANDING OF THE EVOLUTIONARY history of forest trees can help us to predict how they might respond to climate change. Forests are complex ecosystems and subsequently forest research needs to apply different approaches to gain a better understanding of how they function. The European forest research community has carried out numerous important studies on forest biodiversity. However, many institutes maintain overlapping research infrastructures and often carry out similar studies without coordination.

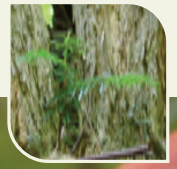


EVOLTREE WILL LAST FOUR YEARS and will create a Network of Excellence to integrate European research infrastructures and resources to study the adaptive capacity of tree species using sophisticated genomic tools and modeling methods, and to engage the scientific community into a dialogue with policy-makers and other stakeholders.

EVOLTREE ACTIVITIES

EVOLTREE WILL LINK FOUR MAJOR DISCIPLINES (genomics, genetics, ecology and evolutionary studies) to improve understanding of forest ecosystems structures, dynamics and processes, by investigating their adaptive diversity, their role in structuring the diversity of associated species (insects and mycorrhizal fungi) and their evolution in response to environmental changes.





THE NETWORK IS FOSTERING INTEGRATION through interdisciplinary research. The genomic activities will be conducted within a 'laboratory without walls' where techniques will be integrated and applied to a wide range of trees and associated species, starting with model species. EVOLTREE will install and enhance the necessary integrated experimental infrastructures, information systems and bioinformatics resources for common use by the partners. Large data sets will be compiled and made accessible for the analysis of geographic and temporal distribution of genetic diversity.

EVOLTREE WILL SPREAD ITS KNOWLEDGE and expertise for the purpose of education, biodiversity monitoring, and conservation. The network will develop training capacities and facilitate mobility opportunities throughout Europe.

SYNERGIES WILL BE ACHIEVED through facilitating the implementation of large-scale genomic projects, by integrating different groups into multidisciplinary research teams, working in intensively studied plots.

EVOLTREE ACTIVITIES		
INTEGRATION	**RESEARCH**	**DISSEMINATION**
MAIN ACHIEVEMENTS		
Virtual Laboratory Research infrastructure	Adaptive diversity Intraspecific and ecological processes	Training Technology transfer International cooperation
MAIN IMPACTS		
Harmonization Synergy Excellence reinforced	New discipline: Ecosystem genomics	Spreading excellence Competitiveness EU policies and regulations Cooperation
STAKEHOLDERS		
POLICY-MAKERS, SCIENTIFIC COMMUNITY, NGOs, CONSERVATION AGENCIES, LAND MANAGERS, NURSERIES, FOREST AGENCIES, SEED COMPANIES, WOOD INDUSTRIES, CERTIFICATION AGENCIES, BIOTECHNOLOGICAL COMPANIES		

DISSEMINATION TO THE STAKEHOLDERS

EVOLTREE WILL FACILITATE DISSEMINATION of knowledge through a continuous dialogue with various stakeholders. This will ensure that research findings influence policies and will contribute to sustainable use of forests and their genetic resources. Countries and organizations participating in the Ministerial Conference on the Protection of Forests in Europe (MCPFE) are key stakeholders of EVOLTREE. Another important stakeholder is the European Forest Genetic Resources Programme (EUFORGEN).

LOCATION OF THE **EVOLTREE INTENSIVE STUDY SITES** IN DIFFERENT **FOREST ECOSYSTEMS**

- **Boreal:** Punkaharju (Finland)
- **Temperate:** Solling (Germany)
- **Untouched:** Puszcza Świętokrzyska (Poland)
- **Riparian:** Loire (France)
- **Alpine:** Valais (Switzerland)
- **Intensively managed:** Landes (France)
- **Mediterranean:** Ventoux (France)