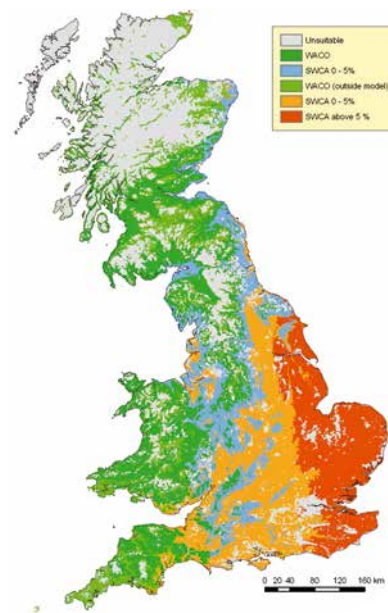# TREES 4 FUTURE

Designing Trees for the Future

Your access to forest research resources in Europe

TREES4FUTURE IN BRIEF

Theme: Research infrastructures for forestry research

Duration: 1.11.2011 – 31.10.2015

Budget: 9.06 million EUR

Funder: EU 7th Framework Programme (FP7)

Partners: 28 organisations from AT, BE, DE, ES, FI, FR, IT, NL, PL, PT, RO, SE, UK

Trees4Future is an Integrative European Research Infrastructure project that aims to integrate, develop and improve major forest genetics and forestry research infrastructures.

TREES 4 FUTURE

SEVENTH FRAMEWORK PROGRAMME

Mella / Erkki Oksanen; Forest Research

Transnational Accesses

Trees4Future is a dynamic platform, offering access to research facilities that can help the European forestry and wood industries develop sustainable solutions for the future in the context of climate change.

The forest research community, and the forest-wood chain and other industries based in Europe, can gain free access to a wide range of specialized forest research infrastructures from the molecular to the forest landscape level. The 28 state-of-the-art facilities on offer across Europe focus on genetics and genomics, tree breeding, wood technology and modelling/data analysis. They include genetic databanks, biobanks, laboratories, models and decision-support systems.
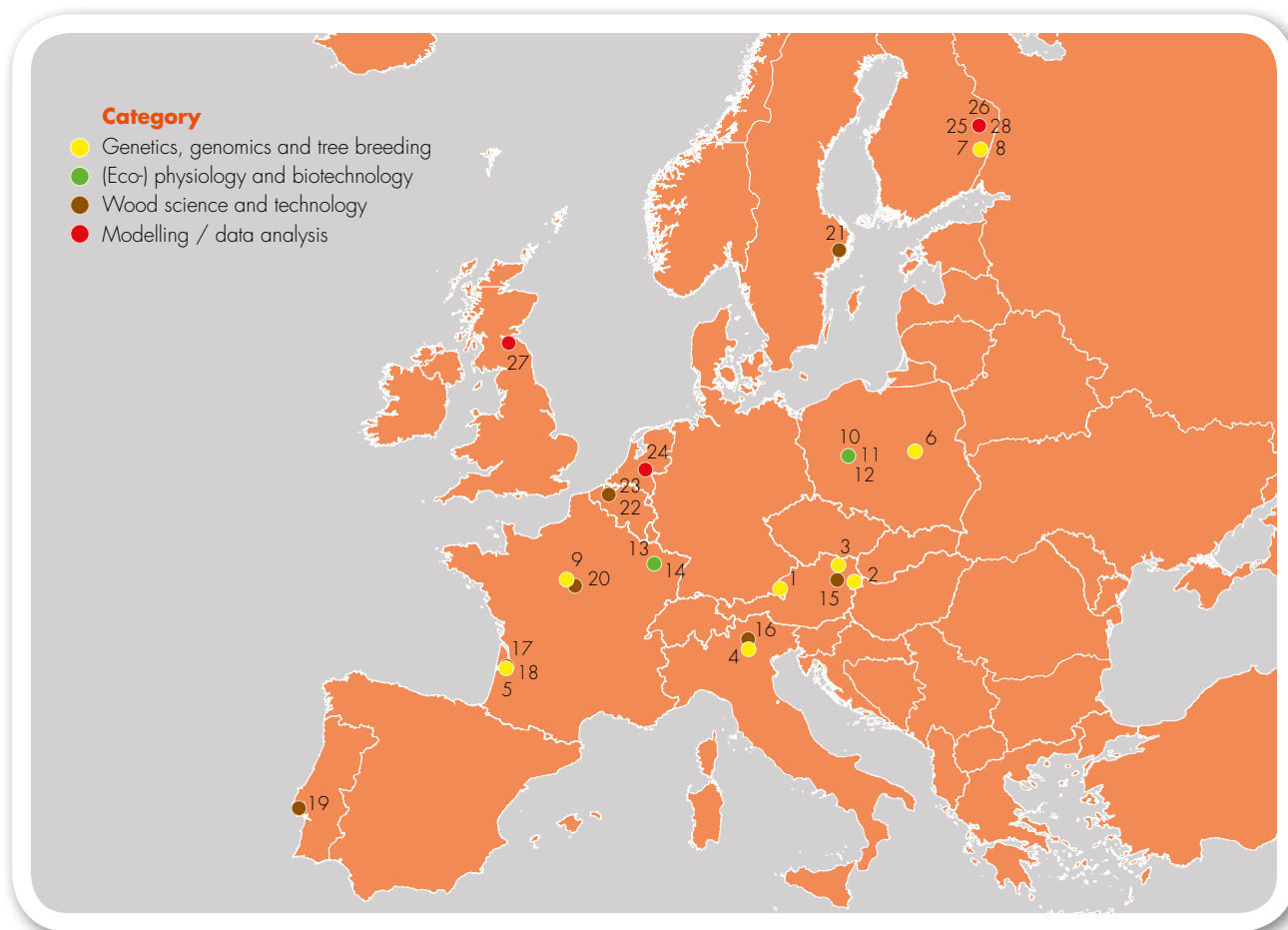
The Call for Access for Trees4Future facilities opened in June 2012, and will remain open until 2015. Successful applicants will receive a contribution of up to 450 € to their travel costs, and a daily subsistence allowance.

Apply now!

Access is open to researchers and other experts from EU-member and associated countries. Proposals can be submitted via the Trees4Future website in a simple, two-step process.

For more information on the facilities offered, the Call for Access, and how to apply, please visit www.trees4future.eu/transnational-accesses.html

Inga Nielsen / www.fotolia.com

Category

- 🟡 Genetics, genomics and tree breeding
- 🟢 (Eco-) physiology and biotechnology
- 🟤 Wood science and technology
- 🔴 Modelling / data analysis

Genetics, Genomics and Tree Breeding

(1) ASP Traceability of Forest Reproductive Material
Bavarian Office for Forest Seeding and Planting
Teisendorf, Germany

(2) BFW Department of Genetics molecular laboratory
Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft
Vienna, Austria

(3) EVOLTREE Plant Gene Repository Centre and Web Portal (AIT)
Austrian Institute of Technology GmbH
Tulln, Austria

(4) FEM Sequencing and Genotyping Platform
Fondazione Edmund Mach
San Michele all'Adige, Italy

(5) INRA Genomics-Transcriptomics Facility (GTF)
Institut national de la recherche agronomique
Bordeaux, France

(6) IBL In vitro plant breeding
Instytut Badawczy Leśnictwa
Sękocin Stary, Poland

(7) METLA Cryopreservation laboratory
Metsäntutkimuslaitos
Punkaharju, Finland

(8) METLA Vegetative propagation laboratory
Metsäntutkimuslaitos
Punkaharju, Finland

(9) Treebreedex forest genetic databases (INRA)
Institut national de la recherche agronomique

(Eco-) Physiology and Biotechnology

(10) IDPAN Ecophys CHA Lab – Carbohydrate Analysis Laboratory
Instytut Dendrologii Polskiej Akademii Nauk
Kórnik, Poland

(11) IDPAN Ecophys Dendro Lab – Dendrochronology Laboratory
Instytut Dendrologii Polskiej Akademii Nauk
Kórnik, Poland

(12) IDPAN Ecophys Root Lab – Root Analysis Laboratory
Instytut Dendrologii Polskiej Akademii Nauk
Kórnik, Poland

(13) INRA Platform for phenotyping tree-water relations
Institut national de la recherche agronomique
Champenoux, France

(14) INRA Technical Platform For Functional Ecology (PTEF)
Institut national de la recherche agronomique
Champenoux, France

Wood Science and Technology

(15) BOKU Wood quality and tree physiology platform
Universität für Bodenkultur Wien
Vienna, Austria

(16) CNR-IVALSA Wood quality laboratory
Consiglio Nazionale delle Ricerche
San Michele all'Adige (Trento), Italy

(17) FCBA Fungi and insects collections
Institut Technologique Forêt Cellulose Bois-construction Ameublement
Bordeaux, France

(18) FCBA Physics laboratory
Institut Technologique Forêt Cellulose Bois-construction Ameublement
Bordeaux, France

(19) FLOR – Forestry and Forest Products Research Unit (IICT)
Instituto de Investigação Científica Tropical
Lisbon, Portugal

(20) INRA GENOBOIS Wood analysis technical platform
Institut national de la recherche agronomique
Orleans and Bordeaux, France

(21) SilviScan – efficient instrument for detailed characterization of wood and fibre properties
Innventia AB
Stockholm, Sweden

(22) UGent Coupled Differential Scanning Calorimetry and Thermogravimetric Analyzer (DSC-TGA)
Universiteit Gent
Ghent, Belgium

(23) UGent Nanowood Multi-resolution X-ray CT scanner
Universiteit Gent
Ghent, Belgium

Modelling / Data Analysis

(24) Alt-For models (Alterra)
Stichting Dienst Landbouwkundig Onderzoek
Wageningen, The Netherlands

(25) EFI Virtual Library of information services on forest resources in Europe
European Forest Institute

(26) EFISCEN – European Forest Information SCENario model (EFI)
European Forest Institute
Joensuu, Finland

(27) FR Spatial modelling of species suitability to sites and climate projections
Forest Research
Roslin (near Edinburgh), United Kingdom

(28) ToSIA – Tool for Sustainability Impact Assessment (EFI)
European Forest Institute
Joensuu, Finland

Trees4Future research:
better analytic, monitoring and prediction research tools for preparing forests of the future

The project partners of Trees4Future represent a wide range of expertise from the tree/population scale to the forestry landscape scale. Trees4Future will develop new integrated facilities and research tools, in addition to providing access to their research infrastructures. The results of their joint research effort will help the European forestry sector respond in a sustainable manner to increasing demands for wood products and services (including the preservation of forest biodiversity) in the context of changing climatic conditions.

The project will develop:

- **A user-friendly analytical platform for statistical and genetic data analysis**
  This will be a novel and unique platform in Europe that will enable forest researchers to have free access to a wider, better performing and integrated way of analysing their datasets, coupled with a data-mining tool.
- **A platform for molecular analysis**
  The platform will collect and provide a set of genetic markers and standardised laboratory protocols for genetic identification and fingerprinting of forest resources from several species. It will support the development of a pan-European traceability system for example for forest reproductive material.

- **A GIS-based decision making tool for better matching forest tree species and varieties to environmental conditions across Europe, in particular in the context of climate change.** This tool will also enable breeders to delineate pan-European breeding zones and deployment zones in the frame of collaborative tree improvement programmes.
- **A clearinghouse with GIS functionality**
  The research data from national and EU environmental and genetic databases, plots and resources will help improve existing data sources and provide a common reference point to access the data via geo-enabled web services.
- **Integrated compatible modelling tools for prediction of forest wood resources and services**
  These tools will be interconnected and enriched by integrating genetic information as well as wood quality models in order to better assess forest goods and services and their sustainability in relation to management practices and changes in environment. They will help with evaluating adaptation and mitigation strategies for European forests.
- **High-throughput phenotyping methodologies**
  For some key-traits linked to tree adaptation and wood properties, improved or innovative assessment methods or tools will be developed to increase phenotyping capacity, compatible with new needs in genetic studies and genomic selection for example.

FOR MORE INFORMATION, CONTACT

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