EVOLTREE

EVOLution of TREEs as drivers of terrestrial biodiversity

Linking genomics and ecology to understand the evolution of diversity in terrestrial ecosystems

http://www.evoltree.eu/

EVOLTREE

A Network of Excellence under the
EC 6th framework programme for research

Focus: Assessing and forecasting changes in biodiversity, structure, function and dynamics of ecosystems and their services

EVOLTREE

A Network of Excellence under the
EC 6th framework programme for research

Coordinator: Antoine Kremer (INRA)

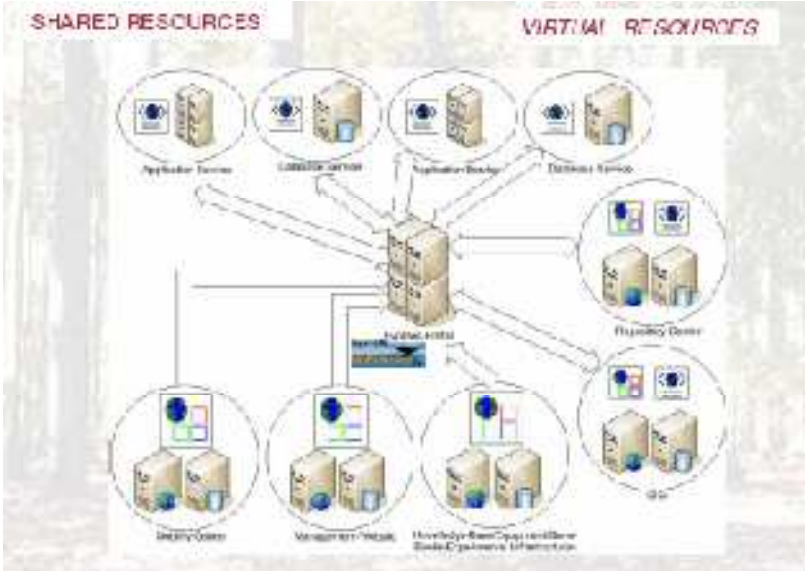
Consortium of 25 institutions in 15 countries

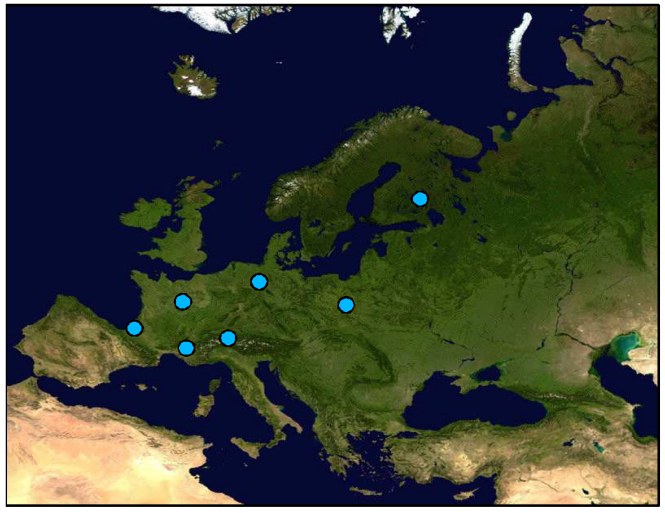
EC contribution: 14.3 million euros

Starting date: 1 April 2006 (end Sept 2010)

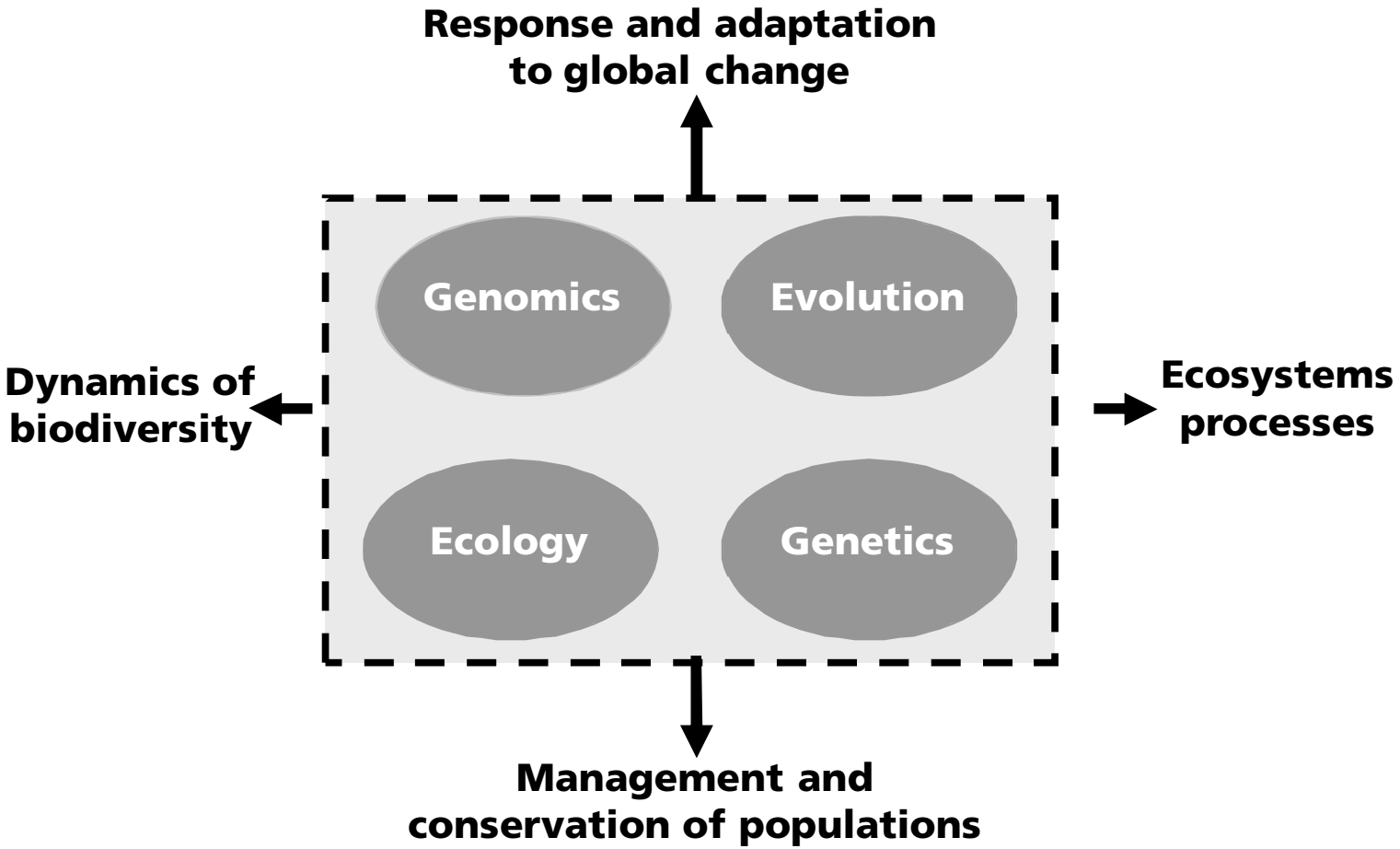
Duration: 4 years (+ 6 month no-cost extension)

Integration





EVOLTREE: disciplines



The Repository Centre

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- **Central material & data access point**
- Automated **management and supply** of plant-genes & gDNA
- centralized and standardized **resources**
- Online access to distributed information
- embedded in an European **research network (NoE)**

13.09.10, Vienna

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Forest 'gene resources'

- Material available
  - Leaf tissue (37.000)
  - gDNA (21.000)
  - BACs (60.000)
  - ESTs (400.000)
- From Gene Banks & Intensive Study Sites (ISS)
- Data base, LIMS, web portal
- *Objective:* Distribution of forest 'gene resources' for ecosystem research

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ISS-material sampled

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	Blizyn	Landes	Loire	Punkaharju	Solling	Valais	Ventoux	Koralm	Roudsea	Veluwe	Total
Abies alba	500						1800				2300
Abies, Fagus, Pinus							200				200
Alnus	50										50
Betula	50										50
Fagus sylvatica	200				629		1400			150	2379
Fagus, Pinus, Quercus							190				190
Larix	50										50
Picea abies	50			500	200			720			1470
Pinus cembra								720			720
Pinus mugo								720			720
Pinus sylvestris	500			770		800					2070
Populus nigra			400								400
Quercus sp.	100	1500		50	500	800	500		500		3950
Total	1500	1500	400	1320	1329	1600	4090	2160	500	150	**14549**

Gene Bank Network

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28 mapping populations (9500 genotypes)

★ **Centres of maintenance** *(referenced Jan2008)*
(Pedigrees + Association populations)

Fagaceae :
- ***4*** *Quercus,*
- ***1*** *Fagus,*
- ***1*** *Castanea*

Pinaceae: ***5*** *P.pinaster,*
- ***2*** *P. sylvestris,*
- ***5*** *Picea abies,*
- ***2*** *Larix,*
- ***1*** *Cedrus*

Salicaceae:
- ***6*** *Populus sp.*
- ***2*** *Salix*

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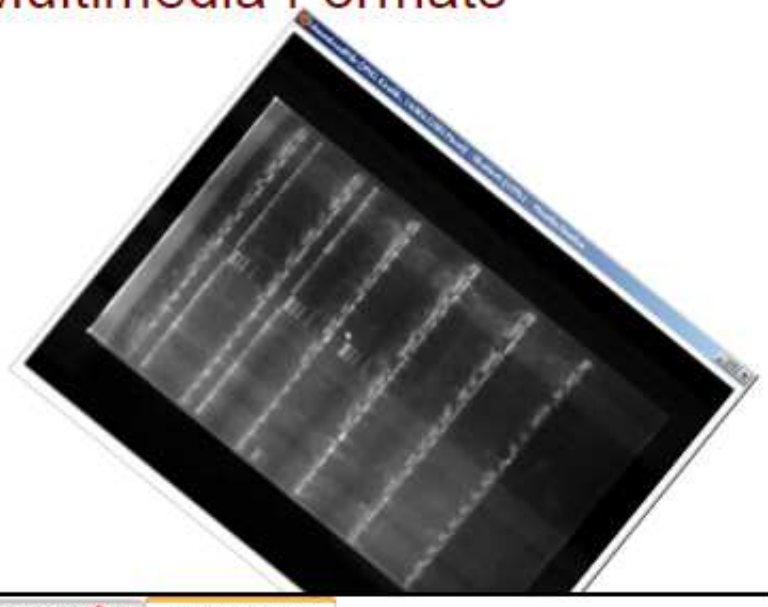
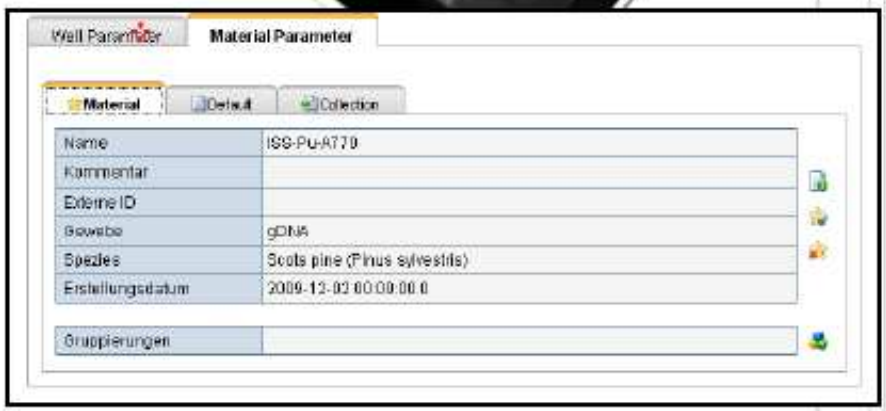
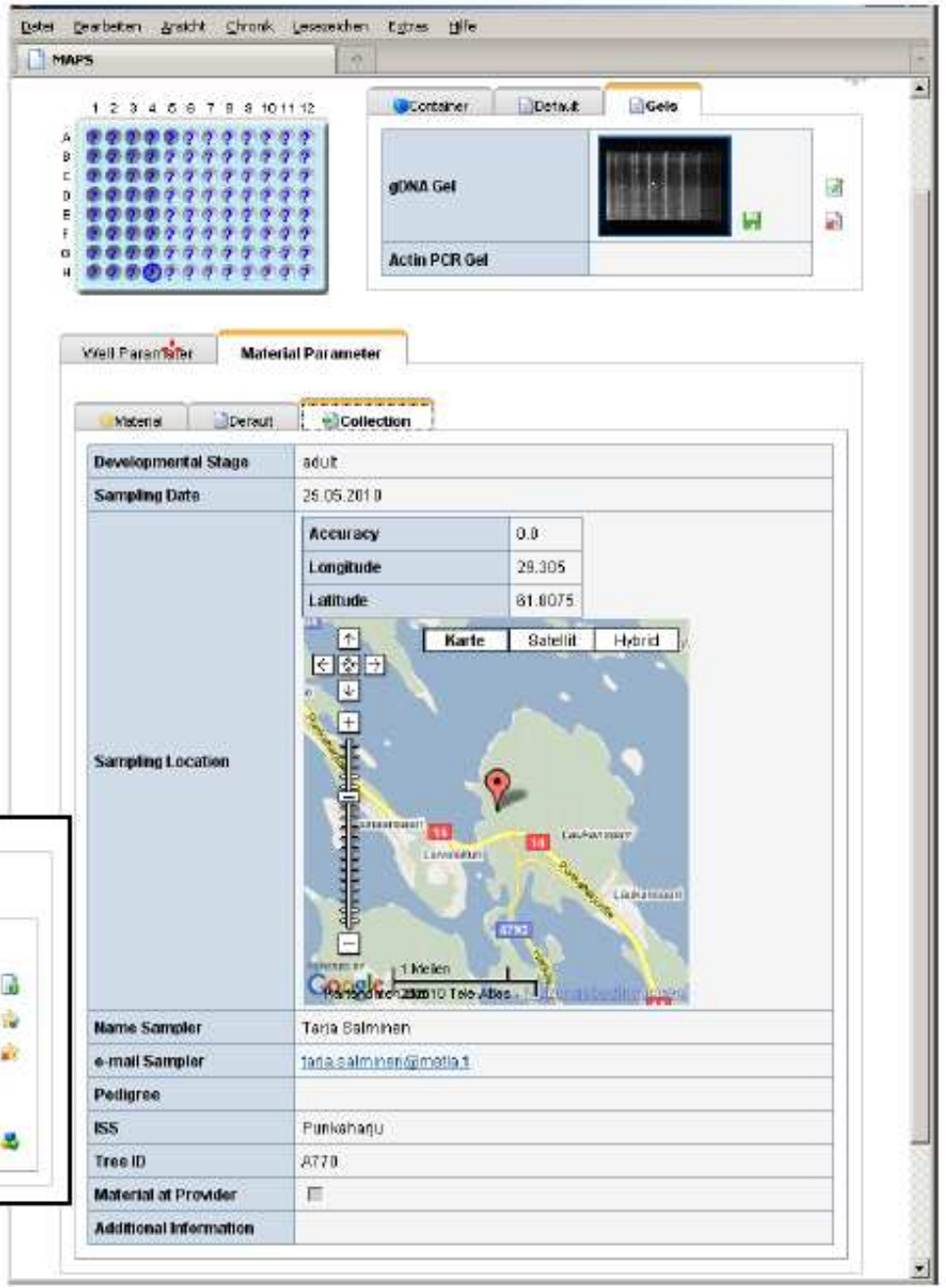
Documentation DBs:

Georeferenced Data

Multimedia Formats







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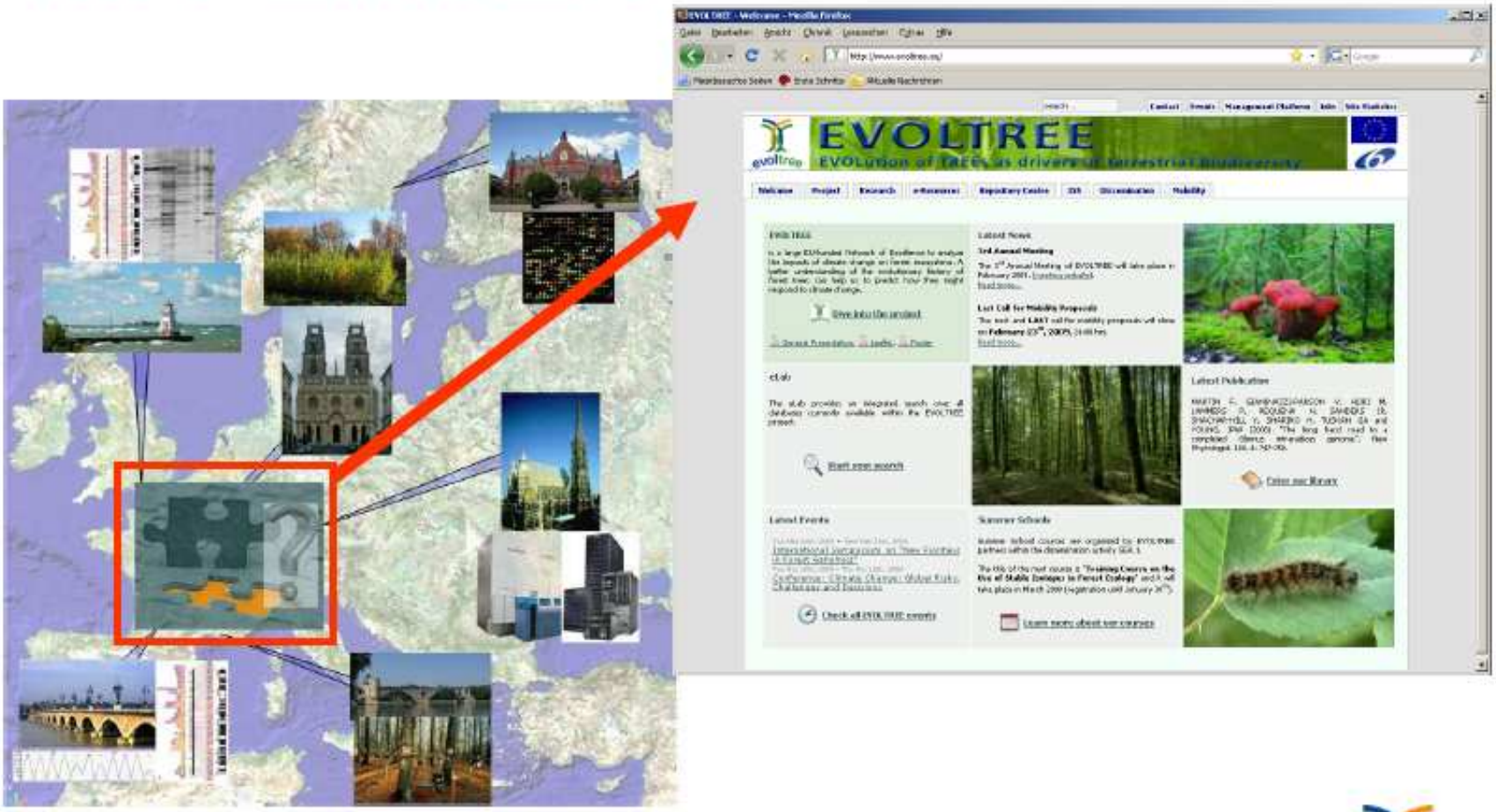
Integration: Distributed data sets & data access



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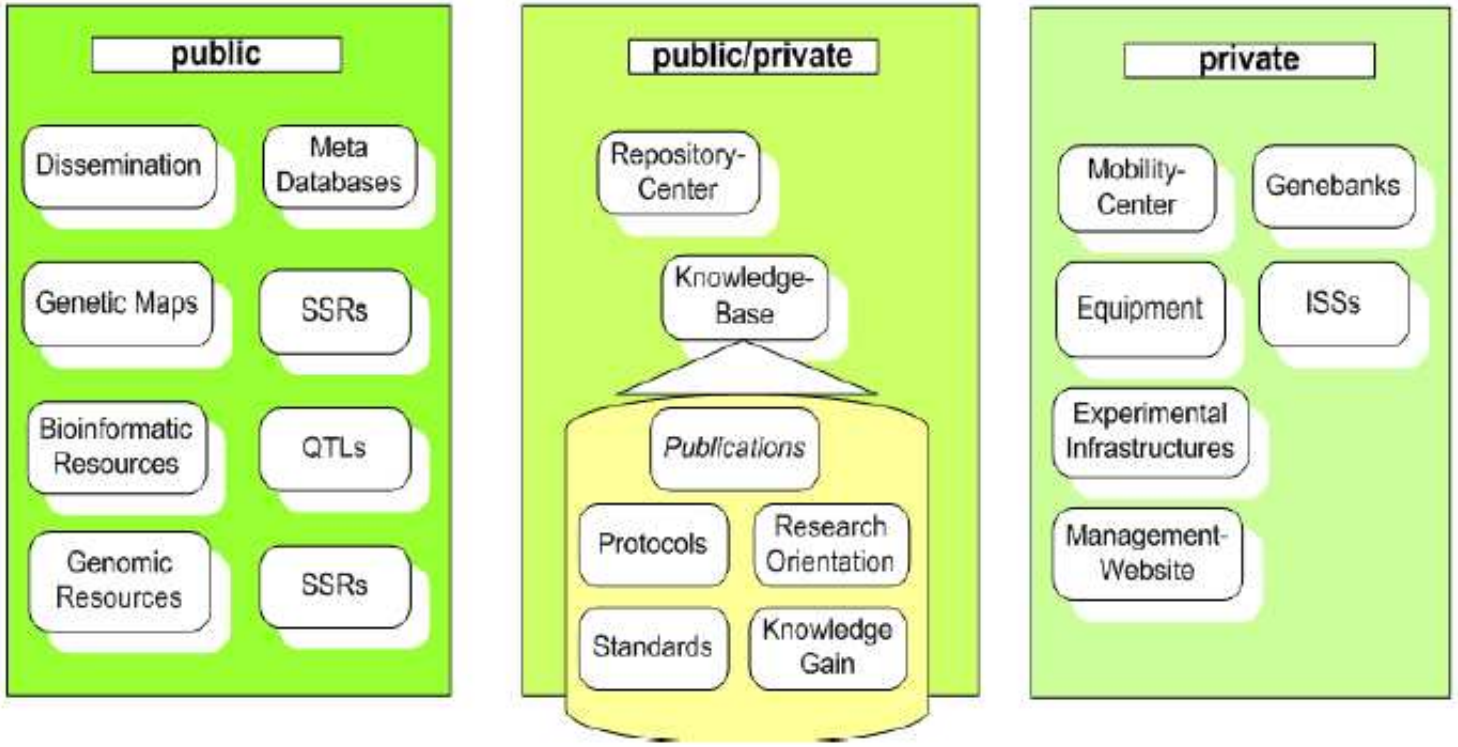
Evoltree Portal: Access to data via web-site



Sequencing-Pipeline

Microarray-Pipeline

Modelling-Platform

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Jointly executed research activities

- Identify genes of adaptive significance in regards to global change in three model species of trees (*Pinus,* *Populus* and *Quercus*), phytophagous insects (*Limantria*) and mycorrhizal fungi (*Laccaria* and *Glomus*)

- Assess the level and distribution of nucleotide diversity in genes of adaptive significance in trees, insects and mycorrhizal fungi

- Assess the impact of trees on the composition of communities by studying interactions between trees and their associated species

- Investigate the evolutionary processes in trees by reconstructing their past history and predicting their future response to global change

Dissemination

Results ted at an international scientific conferences on “Forest Ecosystem Genomics and Adaptaion” (Spain, June 2010), organzied by EVOLTREE

Establishment of an EVOLTREE Stakeholder Group (science-policy interface)

Science-based contributions to policy processes (MCPFE, PEBLDS)

Public awareness campaign and products

Evoltree continuation

Network will be carried as a new research programme within the European Forestry Institute (EFI)

The following networking activities will be maintained and supported by either cash or in kind contributions of the EVOLTREE partners:

1. maintenance and upgrading of EVOLTREE Portal and databases,
2. maintenance and access to common infrastructures and resources established,
3. dissemination (newsletters and others dissemination products),
4. training (organization of 4 to 6 summer schools or workshops per year),
5. coordination of activities

Evoltree continuation

Different levels of membership have been defined, based on a governance model to allow for the different levels of financial and in-kind

Research activities per se will be continued only if funds for collaborative projects are available (either FP7 or FP8 projects, ERA-NETs or other international funding opportunities)

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