FunDivEUROPE

Functional significance of forest biodiversity in Europe (FP7 – Large-scale Integrating project; 2010 – 2014)

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Scientific Objectives

- to quantify the functional significance of tree diversity for element cycling (carbon, nutrients, water) and multitrophic interactions in forests in different bioclimatic regions of Europe

- to produce recommendations to take up new biodiversity-function related indicators to the ICP/FutMon monitoring activities, and contributing to the development of the European Long Term Ecological Research Network.

Policy relevant objectives

- to help forest owners and forestry organizations developing guidelines for the management of mixed species forests;
- to support climate change mitigation policies by producing a quantitative insight into C-sequestration and potential climate feedbacks as affected by forest biodiversity;
- to support EU and international policies related to forest ecosystems and environmental change (MCPFE, EU Forest Action Plan, CBD, UNFCCC);
- to contribute to the global science-policy interface, e.g. within IPCC and IPBES.

Scientific approaches

- A single approach to study the functional significance of biodiversity is not sufficient, especially in forest ecosystems with their complex structure and longevity.

➢ FunDivEUROPE combines the strengths of experimental, observational and modelling approaches, implementing three Research Platforms.

Experimental Platform

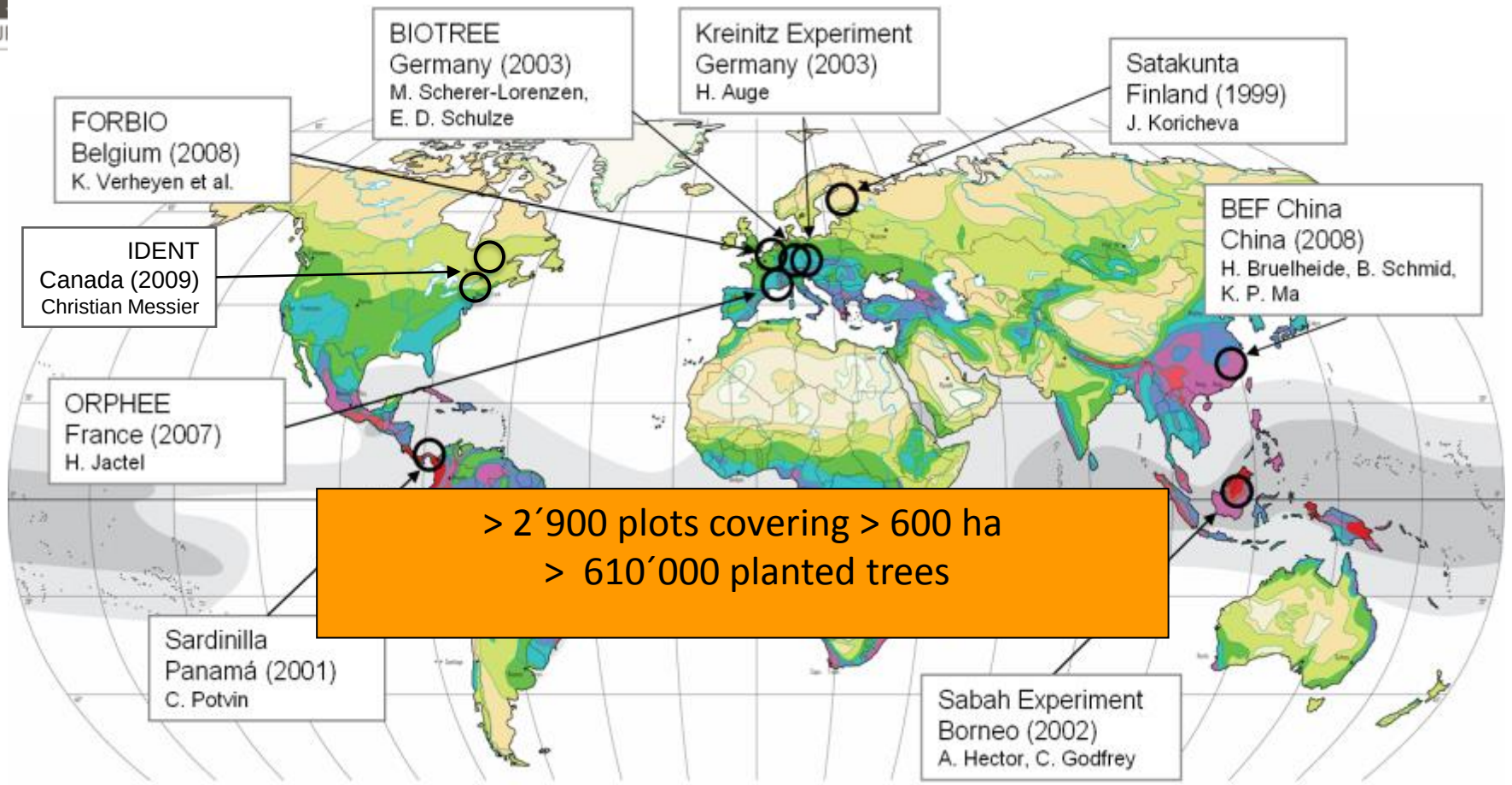
- The European sites of the world largest infrastructure of functional biodiversity research (TreeDiv_Net):
  - plantations differing in tree diversity





Experimental Platform

www.treedivnet.ugent.be

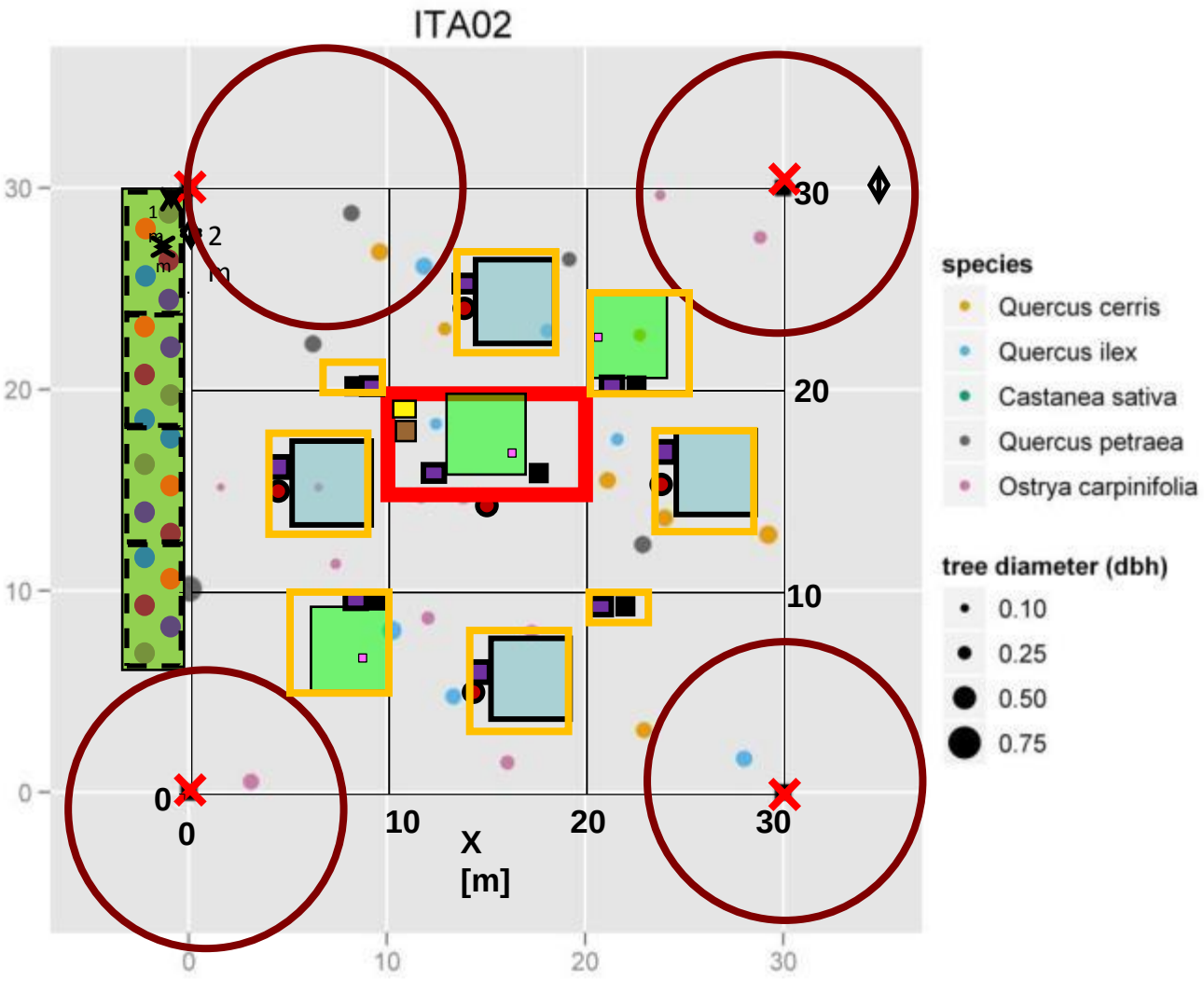


Background map: map of vascular plant diversity, Barthlott et al. 2005

Exploratory Platform

- A specifically designed European network of > 200 plots in natural forests:
  - replicated across wide gradients of tree diversity, keeping abiotic conditions as constant as possible,
  - design allows to distinguish between species diversity and species identity effects,
  - allowing for experimental manipulations.

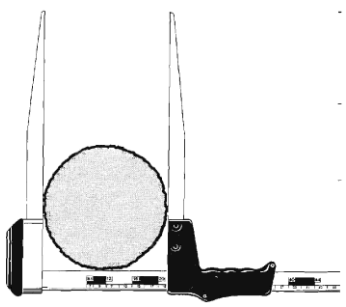
Exploratory Platform



Inventory Platform

- Datasets from national forest inventories and existing monitoring networks:
  - analysed for potential diversity signals,
  - extending the scope to larger spatial and temporal scales.



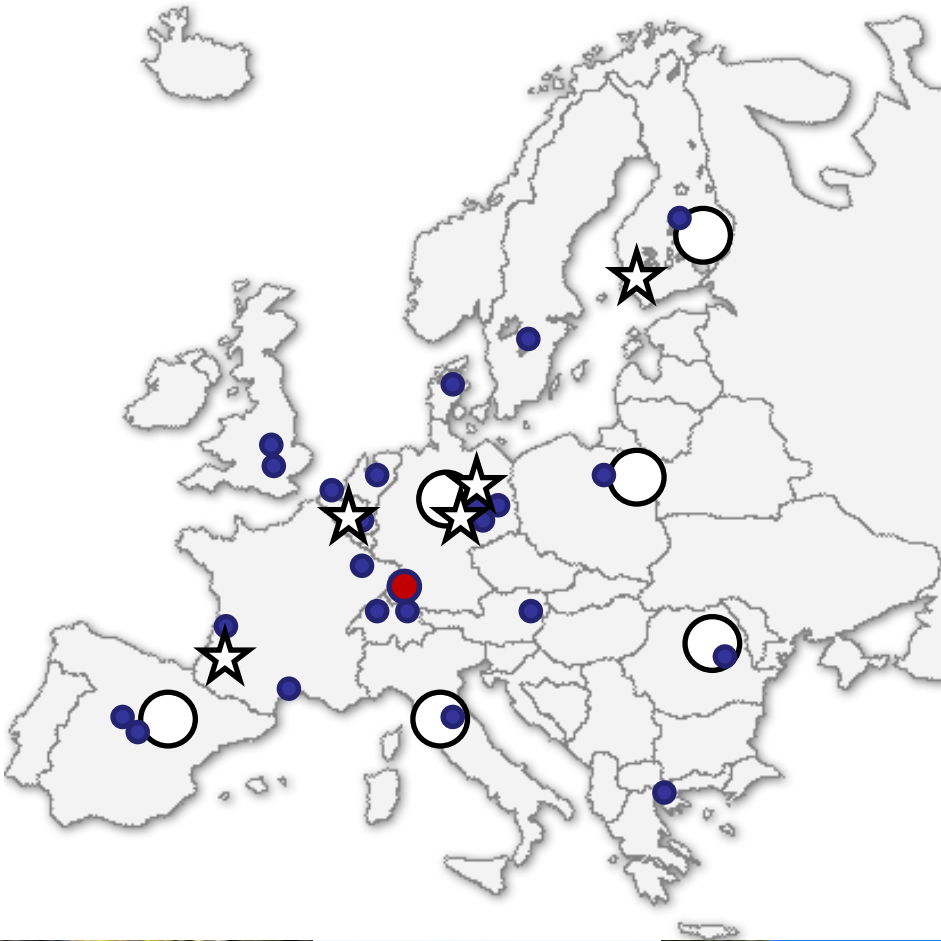


European dimension

Exploratory Platform

Experimental Platform

Partner Institutions



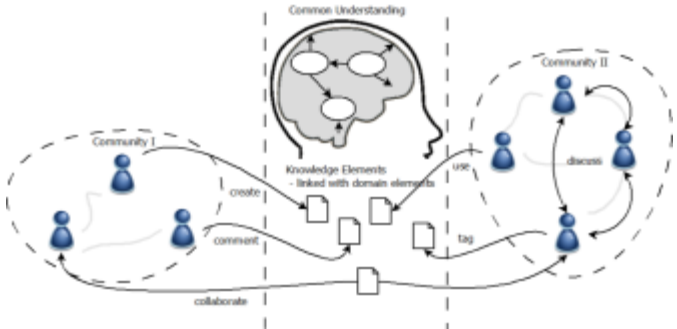
Research concept

- Focus on multifunctionality
  - "All measurements on all plots"
    - All participants will work on the same plots
  - Fast proxy measurements, characterising ecosystem properties, functions and services,
  - between highly instrumented case-studies and large-scale monitoring schemes.

Knowledge Transfer Platform

FunDivEUROPE aims at the development of a web-based Knowledge Transfer Tool (KTT)

- **KTT will utilize various sources of information**
  - Explicit knowledge: **Graphics/Tables, Maps, Deliverables, Fact Sheets, Scientific papers, Reports, model outcomes, Ontology,…**
  - Implicit knowledge: **Experts, scientists, stakeholders**,…
- **KTT will allow**
  - searching for **statements** (policy briefs, maps, fact sheets)
  - **explorative analysis** of available information (Queries / FAQs)
  - **getting help** to identify user problems (applying specific tools)
  - **Interactive assessment** of options (evaluation tools)



Thank you very much!

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