

## SmallFOREST – Biodiversity and ecosystem services of small forest fragments in European landscapes



### Partners:

Jules Verne University of Picardie, Amiens, FRANCE, *coordinator*  
 Bremen University, GERMANY  
 Centre Tecnologic Forestal de Catalunya, Solsona, SPAIN  
 INRA of Toulouse, FRANCE  
 SLU Alnarp, Lund, SWEDEN  
 Stockholm University, SWEDEN  
 Swedish Environmental Research Institute Ltd., Stockholm, SWEDEN  
 Tartu University, ESTONIA  
 University of Freiburg, GERMANY  
 ZALF Müncheberg, GERMANY  
 KU Leuven, BELGIUM, (self-financed)  
 University of Ghent, BELGIUM, (self-financed)

**Duration: 2012-01-01 2014-12-31**

**Total grant: €1 103 888**

**Further information: Guillaume Decocq**

**e-mail: guillaume.decocq**

**@u-picardie.fr**

**www.u-picardie.fr/smallforest/uk**

In many parts of Europe, the original forest cover has strongly reduced and forests presently occur as small fragments, often embedded in an intensively used agricultural matrix. Despite their small size, these forest patches often act as refugia for biodiversity and may provide a wide range of ecosystem services (ES) to human society. Biodiversity and ES of small forest fragments are mutually dependent as they are determined by a similar set of drivers. However, the nature and strength of the relationships between biodiversity and ES will vary, depending on the taxonomic group and ES under consideration, and on the landscape context including the type and intensity of the surrounding land-use and the land-use history. Moreover, the value attributed to an ES will differ between different regions. All these sources of variation remain largely unknown and their effects on human perception, hence on decisions about management, planning and policy, is poorly understood.

Therefore, the main objectives of SmallFOREST are to:

- quantify ES and biodiversity in small forest fragments among agricultural landscapes and across different regions in Europe,
- analyse how their mutual relationships vary between landscapes and regions, and
- assess the extent to which ES are valued differently.

The project is built on a unique database covering ~650 forest patches in sixteen 5 km x 5 km landscape sampling windows in southern France, northern France, Belgium, northwestern Germany, northeastern Germany, southern Sweden, central Sweden and Estonia (2 windows per region). This sample design covers the entire European temperate forest biome through a SW-NE transect. For each patch standardized data are already available on the occurring vascular plant species, its history, the surrounding land cover, and its spatial characteristics. During the project, additional data are collected to quantify the structural, functional and taxonomic biodiversity and to determine a well-chosen set of ES (including provisioning, regulating and cultural services) delivered by the patches. The valuation of the ES considered is assessed through a combination of local data collection and benefit transfer approaches, using innovative tools such as cognitive mapping.

To achieve their goals, FarmLand partners will rely on interviews and workshops with key agricultural stakeholders (farmers, and farming organisations). They will implement a strong dissemination plan to convert results into socially acceptable and economically feasible policies that benefit biodiversity and ecosystem services.

