



## NOBEL - Novel business models and mechanisms for the sustainable supply of and payment for forest ecosystem services

### Program

Forest Value ERA-NET Cofund  
Thematic research area: Innovative sustainable management of multifunctional forests

### Title

Novel business models and mechanisms for the sustainable supply of and payment for forest ecosystem services (NOBEL)

### Partners

- ✓ University of Natural Resources and Life Sciences, Austria
- ✓ Forest Sciences and Technology Centre of Catalonia, Spain
- ✓ French National Institute for Agricultural Research, France
- ✓ Norwegian University of Life Sciences, Norway
- ✓ School of Agriculture / Instituto Superior de Agronomia, Portugal
- ✓ Swedish University of Agricultural Sciences, Sweden
- ✓ Technical University of Munich, Germany

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(36 months)

### Budget:

Total Cost: 1,476,988 €  
ERA-NET Contribution: 1,450,188 €

### Idea

European forests provide a range of goods and services. Some are valued by existing markets (i.e. **wood and non-wood products**), and others like "**public goods**" (i.e. they are non-excludable - everyone benefits from them like carbon sequestration - and they are not subject to consumption rivalry) or "**common-pool resources**" (i.e. they are non-excludable goods like recreation or water supply, but subject to competition in use) not. The regulatory framework of European forest policies and forest-related policies (e.g. EU 2020 Biodiversity Strategy, EU 2030 Climate and Energy Policy Framework) influences the provision of forest goods and services. However, forest ecosystem services in Europe are often non-marketed public goods or common pool resources and land owners are not rewarded for its provision by the markets. In recent years, there have been several initiatives to increase society's awareness of ecosystem services and to discuss mechanisms to pay for sustaining them. **Payments for Ecosystem Services (PES)** have been identified as an important mechanism to close the gap between the demands of the society and the service providers. The number of PES mechanisms increases while two main approaches can be seen: (i) Paying to maintain or enhance the services that an ecosystem provides, (ii) Paying to rescue those services at risk, or prevent a change of land-use with potential negative impacts. Whichever mechanism or business model is adopted, an important element for a functioning PES approach is, that those who pay are aware that they are paying for an ecosystem service that is valuable to them and those who receive the payments engage in management activities that secure the supply of ecosystem services.

### Objectives

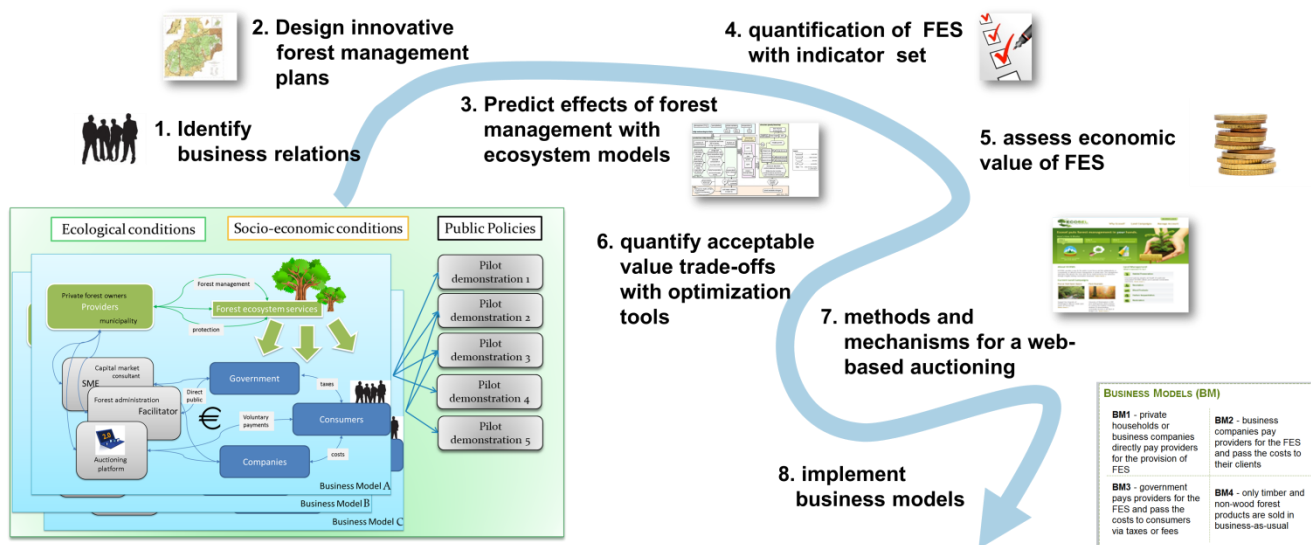
The general objectives of NOBEL are to assess the current and future role of marketable and non-marketable forest functions, goods and services and to **develop strategies and mechanisms for their sustainable provision**. For this purpose NOBEL will apply economic valuation methods (e.g. Cost based and preference based methods) to assess the costs and benefits of important forest ecosystem services (FES) in Europe. The costs for the provision and the societal benefits will be assessed for current and future conditions by using regional case studies (pilot demonstrations) from five different European regions. NOBEL will **analyse public and private financing mechanisms** for the enhanced provision of these forest externalities in Europe, develop options for market-based mechanisms, present best practice examples, and prepare strategies and guidelines for policy-makers in order to implement new mechanisms and to foster the provisioning of these FES.

## Project objectives

- ❖ assess **marketable and non-marketable forest goods and services** and develop strategies for their sustainable provision
- ❖ develop **business models and mechanisms** to internalise the socio-economic value of forest ecosystems
- ❖ combine public policy tools with business models for **implementing payments for forest ecosystem services (FES)** at multiple levels of forest management and administration
- ❖ demonstrate and compare alternative approaches for payments in **5 pilot demonstrations in Europe**

## Key highlights

- ❖ explore spatial information for the development of business models with data from pan-European programs such as **COPERNICUS**
- ❖ identify **suitable business models** for a given socio-economic, ecological and political situation
- ❖ involvement of **stakeholders** at European and regional level
- ❖ operationalize the payment for forest ecosystem services with **web-based auctioning platform**
- ❖ enhance available **forest ecosystem models** for predicting outcomes of forest ecosystem services
- ❖ quantify FES with indicators and enhance available **optimization tools** to generate forest plans



- Analysis of spatial information requirements for the development of business models
- develop an open-source spatial information platform for forest ES
- Exploration of the European political framework and governance settings

- map current demands for the provision of forest ES resulting from existing policies
- analyze the governance settings of national case studies
- Explore stakeholder needs and consumer behaviour
- analyze management practices needed to provide specific levels of forest ES

- use forest ecosystem simulation models to estimate effect of forest management
- Evaluate cost and preference based methods to estimate the value of forest ES
- explore different kind of business models including a web-based auctioning platform
- Implement business models in pilot demonstrations