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

ForestValue

ERA-NET Cofund – Innovating the forest-based bioeconomy

Project NOBEL is supported under the umbrella of ERA-NET Cofund ForestValue by BMLFUW (AT), ANR (FR), FNR (DE), Vinnova/Formas/SWEA (SE), MINECO-AEI (ES), RCN (NO) and FCT (PT).

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Challenges in Forest Management for Providing Forest Ecosystem Services

- demand for timber, non-timber products and ecosystem services is increasing due to growing populations and socio-economic changes
- many important services have no direct monetary value
- forest management often favour timber production over other services
- changing environmental and socio-economic conditions cause uncertainties
- need for policy recommendation and economic incentives

protection recreation biomass timber services biodiversity



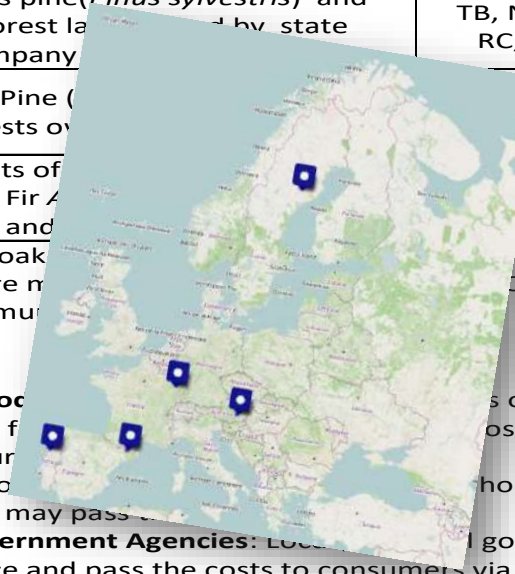



Project objectives of NOBEL

- Design **innovative methodologies** for assessing the economic, social and environmental **values of forest products and services** at regional and national scale
- **develop business models, mechanisms** and **novel public policies** to internalise the socio-economic value of non-market forest ecosystem services
- combine business models with public policy instruments for **implementing PES** and deduct trade-offs in pilot demonstrations
- demonstrate and **compare alternative PES schemes**, including an innovative **web-based auction platform**

Pilot demonstrations

Nr.	Region	Short characterisation	FES considered	Business Modell
PD1	ZIF_VS Northwest Portugal	pure and mixed mediterranean forests of eucalypt (*E. globulus*) and maritime pine (*P. pinaster*), land owned by communities, private and non-industrial owners	TB, CB BD, RC, NHR	BM1, BM2, BM3, BM4
PD2	Käringberget, Västerbotten, Boreal zone, Sweden	Boreal forest dominated by Scots pine(*Pinus sylvestris*) and Norway spruce (*Picea abies*), forest la… …d by state owned company	TB, NTFP, RC, CB	BM1, BM2, BM3, BM4
PD3	Cerdanya, Pyrenees, Catalonia in northeast Spain	mixed mediterranean forests of Pine (… *uncinata)* and fir*(Abies alba)* forests ov…	…FP, …, RC, …NHR	BM1, BM2, BM4
PD4	Ennstaler Alpen, Styria, Austria	Montane to subalpine mixed forests of … E. Beech (*Fagus sylvatica*), Silver Fir *A*… (*Larix decidua*) private and…	…TFP, …, NHR	BM1, BM2, BM3, BM4
PD5	Lorraine, Northeast France,	Forests are dominated by sessile oak… beech (Fagus silvatica), forests are m… third is owned by mu…	…CB, RC	BM1, BM2, BM3, BM4



Forest ecosystem services:
TP : timber production
NTFP : non-timber forest products
CB: carbon sequestration
RC: recreation (sports, hunting)
BD: biodiversity conservation
WSR: water, soil and nutrient regulation
NHR: natural hazard regulation

Business Models:
BM 1 Value-Added Good… …s or business companies directly pay f… …osystem services embedded (e.g. ecotour…
BM 2 Voluntary PES: vo… …holds or business companies, companies may pass …
BM 3 Selling ES to Government Agencies: Loc… …l government pays FES providers for the service and pass the costs to consumers via taxes or fees fees
BM 4 Business as usual: FES providers are selling timber and non timber forest products on the market

Design innovative forest management plans

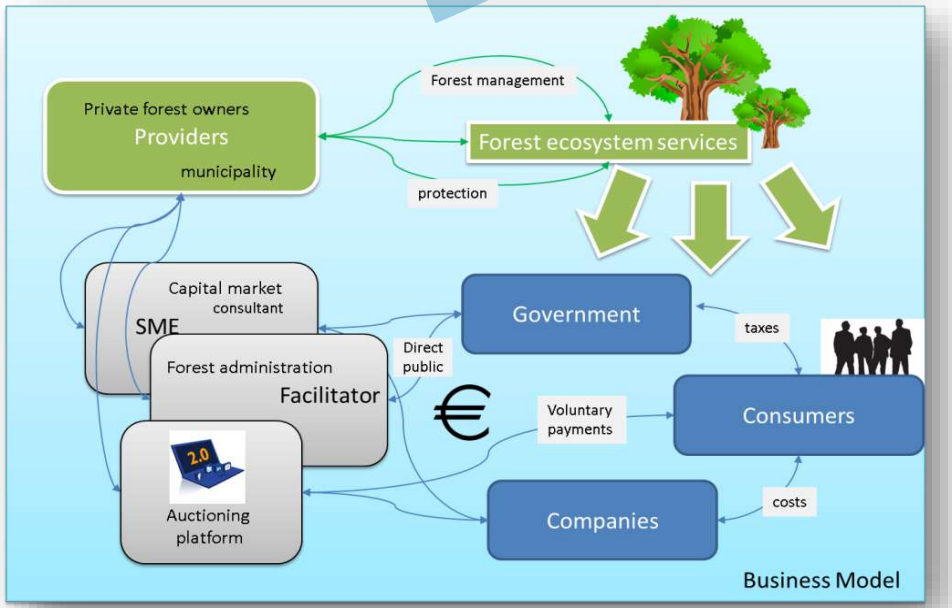
Predict effects of forest management with ecosystem models

Identify business relations

quantification of FES with indicators

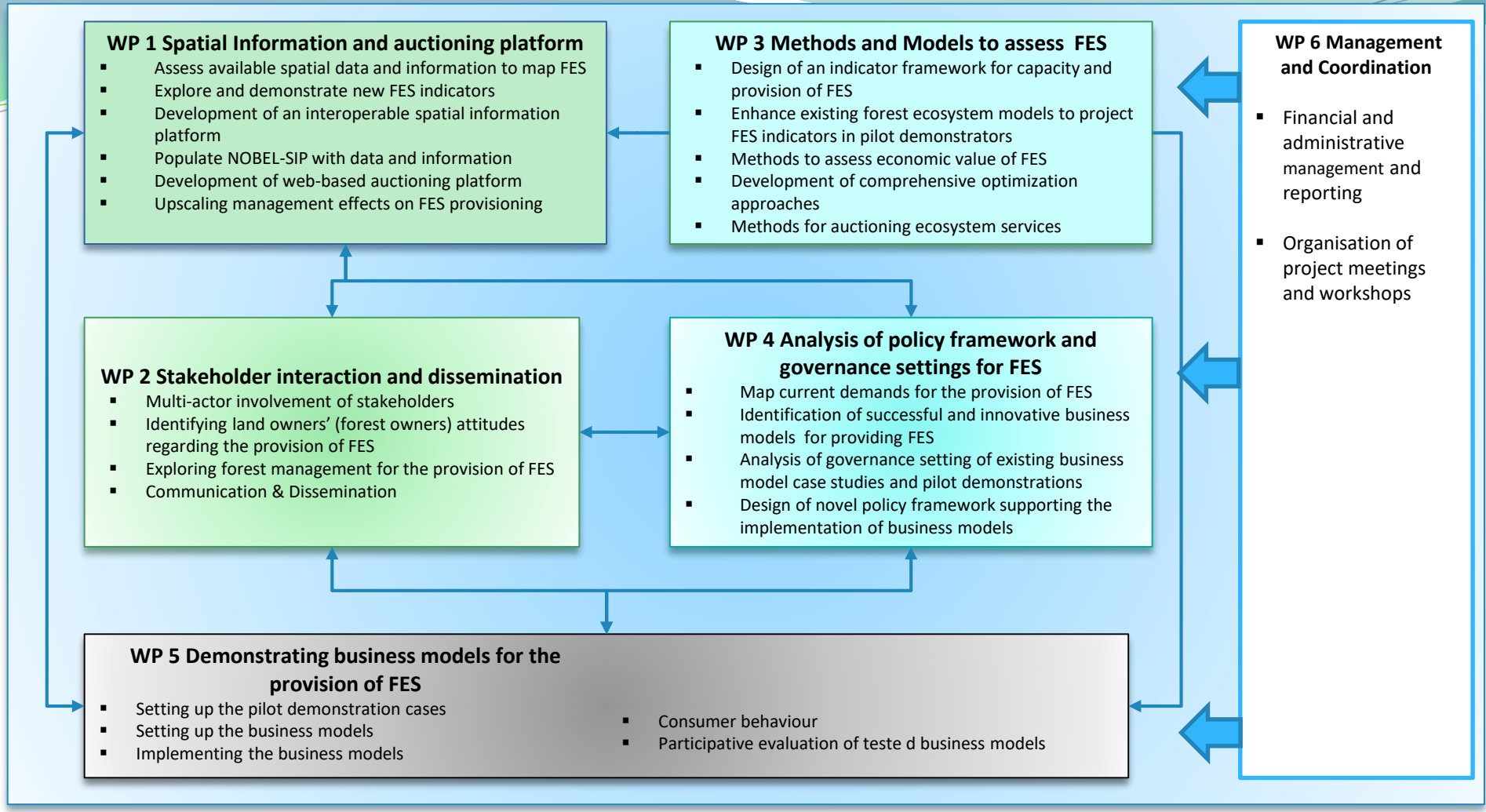
assess economic value of FES

quantify acceptable value trade-offs with optimization tools



methods and mechanisms for web-based auctioning

implement business models


WP 1 Spatial Information and auctioning platform
Assess available spatial data and information to map FES
Explore and demonstrate new FES indicators
Development of an interoperable spatial information platform
Populate NOBEL-SIP with data and information
Development of web-based auctioning platform
Upscaling management effects on FES provisioning
WP 3 Methods and Models to assess FES
Design of an indicator framework for capacity and provision of FES
Enhance existing forest ecosystem models to project FES indicators in pilot demonstrators
Methods to assess economic value of FES
Development of comprehensive optimization approaches
Methods for auctioning ecosystem services
WP 6 Management and Coordination
Financial and administrative management and reporting
Organisation of project meetings and workshops
WP 2 Stakeholder interaction and dissemination
Multi-actor involvement of stakeholders
Identifying land owners' (forest owners) attitudes regarding the provision of FES
Exploring forest management for the provision of FES
Communication & Dissemination
WP 4 Analysis of policy framework and governance settings for FES
Map current demands for the provision of FES
Identification of successful and innovative business models for providing FES
Analysis of governance setting of existing business model case studies and pilot demonstrations
Design of novel policy framework supporting the implementation of business models
WP 5 Demonstrating business models for the provision of FES
Setting up the pilot demonstration cases
Setting up the business models
Implementing the business models
Consumer behaviour
Participative evaluation of teste d business models

Partners

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