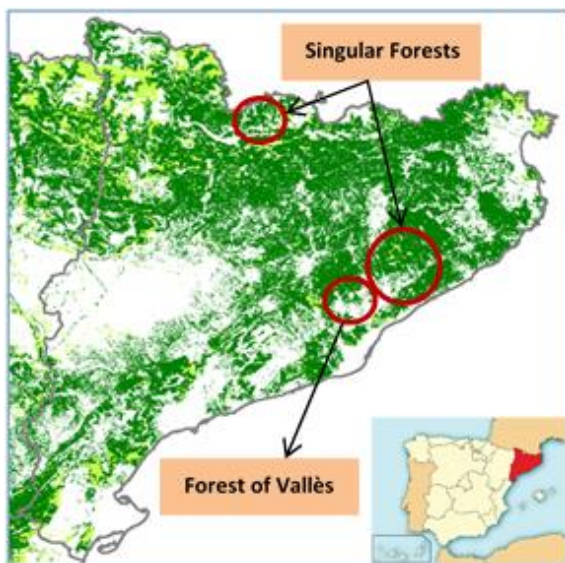


Focus on Catalonia

Background

Catalonia is an autonomous community of Spain located in the northeastern corner of the country. The total land area is 3.1 million ha and the population is 7 million (226/km²). More than 30% of the land area is protected. The total area of forests and other wooded land is more than 1.3 million hectares, of which 0.48 million ha is productive forest (15% of total land area). One million ha of the total forest area and 0.38 million ha (80%) of the productive forest area are privately owned. In general, the forest area is located on the steeper slopes and stonier soils and subject to water stress in summer. Consequently most of the forest area has low productivity (about half of the forest area has an annual productivity of <math><2\text{m}^3/\text{ha}</math>) and is at high risk of fire.



Distribution of forest in Catalonia: dark green—forest; light green—other forest land (mainly shrubs and grassland).

Catalonia has a varied topography with elevations ranging from sea level to more than 3000 m a.s.l. in the Pyrenees. The Mediterranean coast is characterised by mild winters and dry and warm summers, while mountain areas have wetter and cooler summers and harsher winters.

The distribution of tree species follows a climatic gradient: the southern and coastal forest areas are dominated by Mediterranean species like holm oak (*Quercus ilex*), cork oak (*Q. suber*) and Aleppo pine (*Pinus halepensis*); Spanish black pine (*P. nigra* subsp. *salzmannii* var. *salzmannii*) and downy oak (*Q. pubescens*) are present in mid-altitude sub-Mediterranean areas, with beech (*Fagus sylvatica*), Scots pine (*Pinus sylvestris*) and sessile oak (*Q. petraea*) occurring in cooler and wetter areas; at the higher altitudes, mountain pine (*P. uncinata*) and silver fir (*Abies alba*) are dominant.

The main barriers to increased wood mobilisation are:

- fragmented ownership – there are 222 000 non-industrial private forest (NIPF) owners with more than half of these owning less than 1 ha and only about 10 500 owning >25 ha – the average size of private forest holdings is 7 ha;
- lack of organisation of forest owners;
- weak forest products industry;
- lack of investment in road infrastructure;
- lack of investment in machinery;
- high risk of investments due to low forest productivity and high fire risk.

However, there are also opportunities:

- the growing stock in Catalonian forests is accumulating by 2 million m³ per year and so there is a large underutilised potential – perhaps up to 1 million m³ per year;
- new forest machinery could enable the harvesting and extraction of timber on steep slopes;
- collaborative initiatives to jointly manage private forests could improve profitability;
- development of the pellet industry could push prices lead to improved profitability of private forests.

SIMWOOD's work in Catalonia

Before selecting the pilot projects, a compilation and characterisation of the most relevant and recent experiences in wood mobilisation in Catalonia was conducted. With the help of different stakeholders and regional partners (forest ownership center, forest owner associations, forest research institutes, land stewardship network, biomass cluster, local forest SMEs, forest consortium of Catalonia, forestry and biodiversity technicians of Catalonia government departments and Barcelona County Council), we identified 23 interesting initiatives with objectives such as: (i) promoting a model of integrated management of public forests; (ii) creating a network of production, storage and distribution of forest biomass for energy purposes; (iii) supporting the commercialisation and mobilisation of wood products; (iv) promoting forest biomass as a source of renewable thermal locally-produced energy; and (v) improving the design and width of rides, secondary roads and timber yards.

Analysis of the experiences indicated that:

- there has been an increase in wood mobilisation for energy purposes and the price of woodchips and pellets is expected to rise because current demand is growing compared to other uses;
- wood mobilisation has increased over the past two years because of increased wood harvesting from public forests;
- new forest management strategies are increasingly taking into account their compatibility with forest conservation.

The detailed analysis of these 23 initiatives allowed us to better define the two SIMWOOD pilot projects in Catalonia.

Pilot Project: Singular Forest

In Catalonia, CREAF carried out the 'Singular Forest Inventory' which was aimed at identifying the forests with the highest conservation values in the region. These forests, which represent a small

percentage of the total forest area, are not currently protected by any specific legal entity even though large parts of them are included within protected areas (including Natura 2000). Many of these 'Singular Forests', both public and private, have a forest management plan which allows for timber harvesting. Property rights are becoming a controversial issue in these forests, with questions being raised about whether timber harvesting puts the conservation value of these forests at risk. The aim of the pilot project is to establish a protocol for collaborative, mutually-agreed management of these sensitive forests that reconciles high conservation values with increased wood mobilisation.

In order to elaborate the basis of this protocol, three case studies representing forests with expected wood harvesting and included in 'Singular Forest Inventory' were chosen: an oak forest (Maçanet de la Selva), a chestnut forest with beech trees (in the Montseny Natural Park) and a silver fir forest (in the Cadi-Moixeró Natural Park).



Reconciling high conservation values with wood mobilisation.

Throughout 2015, several field visits and Regional Learning Labs (RLLs) related to these three forests were organised with representative groups of stakeholders with different points of view. The objective was to characterise accurately the different viewpoints and interests that may potentially become a source of conflict when trying to mobilise wood in these forests.

In 2016 different RLLs and workshops were conducted:

- In-depth study of some issues that were jointly identified (with the same profile of stakeholders as in the previous meetings) as significant in order to clarify the future of the pilot project. These issues were related to:
 - the multiple values underlying each forest;
 - legal security for owners and conservationists;
 - implications of leaving the forest to develop on its own;
 - clos(er)-to-nature forest management.
- Discussions about the compatibility of wood mobilisation and maintenance of high conservation values and contrasting the main arguments on a scientific basis.

During the first RLL, stakeholders involved in timber production identified the nature protection policies (more than 30% of the land area in Catalonia is protected) as one of the main barriers to increased wood mobilisation.

Currently, we are writing the protocol and evaluating whether the process could be a useful approach to avoiding conflicts and enabling more timber to be sustainably mobilised in protected areas.

Pilot Project - Forest of Vallès

The objective of this pilot project was to reinforce the buying and selling chains for woodchips via the promotion of local consumption of primary forest biomass for heat production for the local community. "Forest del Vallès" pilot project takes place in the county of Vallès Occidental (a region including 19 municipalities in the Barcelona Metropolitan Area). The forests (almost 19 000 ha) are dominated by Aleppo pine and are mostly private.

This undermanaged area has relatively low productivity (half of the forest area in Catalonia has an annual productivity of <math><2\text{m}^3/\text{ha}</math>) and is

vulnerable to climate change and wildfires. In this context, this pilot project aimed to reactivate forest management and wood mobilisation by preferentially acting in those areas where the fire risk is higher and involving most of the stakeholders of the entire wood chain of Vallès Occidental. The pilot project aimed to reinforce the links between forest owners (most of them living very far from forests), wood dealers, forestry services companies, woodchip manufacturers, equipment installers and energy providers.



Stakeholder workshop – Forest of Vallès

The pilot project was aligned with the *Strategy to Promote the Use for Energy of Forests and Agricultural Biomass (February 2014)* and the *General Forest Policy Plan (2014–2024)* developed by the Government of Catalonia. However, for an optimal implementation it also considered the recently approved *Action Plan for Improving Air Quality (2015-2020)*, which affects special areas for the protection of the atmospheric environment in several municipalities of the county of Vallès Occidental.

In order to implement this pilot project, CREAM and the Consell Comarcal del Vallès Occidental (CCVOC, the county governing body) signed an agreement which expires in 2017. Within the frame of this agreement, a number of RLLs, seminars and field trips were organised with a wide range of stakeholders during 2015 and 2016. During the events, barriers to increased wood mobilisation were discussed and analysed. Field trips were also organised to introduce municipal

technical staff to timber harvesting and forest fire prevention techniques.

Currently, the construction of a logistics center for the production and supply of local forest woodchips is coming to an end. Once finished, the center will supply woodchips to two large boilers promoted by the CCVOC. The annual consumption of woodchips is expected to be around 3000 tons. This will provide a sustained market for woodchips and provide a boost to the local wood sector.

This pilot project could provide a good example for other Mediterranean areas on how to integrate wood mobilisation, forest management practices and prevention of fire.

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