

Socio-Economic Factors Influencing Coppice Management in Europe

Debbie Bartlett, Rubén Laina, Nenad Petrović,
Giulio Sperandio, Alicia Unrau and Miljenko Županić

The data compiled to produce this fact sheet comes from six countries that have been used as case studies and, while not necessarily representative, these provide a wide perspective on the issues influencing decisions regarding coppice management and the alternative approaches adopted. This was agreed as the common understanding of the term governance for the purpose of this fact sheet. The focus is on traditional coppice rather than short

rotation coppice (SRC) on agricultural land. The term forest has been used throughout although it should be noted that in British English the appropriate word would be woodland; forest has a rather different meaning and would not be used in the context of coppice.

In each country, coppice must be considered within the context of the national forest resource, illustrated in Table 1.

Table 1. Forest area

	Croatia	England	Germany	Italy	Serbia	Spain
Forest area in ha	2,580,000	1,294,000	11,419,124	10,467,533	2,252,400	18,600,000
Percentage of land area	46%	9.9%	32%	35%	29.1%	37%
Proportion of: conifer	7%	34%	56%	11.2%	9.3%	35%
mixed	31%			15.7%	2.4%	20%
broadleaf	62%	66%	44%	56.8%	88.3%	45%
other forested land				16.3%		
Coppice as percentage of total forest	39 %	No data	0.7%	41%	64.7%	11.8%

References: England: National Inventory of Woodland and Trees (2014); Germany: Thünen-Institut (2014) - National Forest Inventory BWI3; Italy: National Inventory of Forests and forest Carbon pools (2005)

International and European Policy Context

Coppice forest management is very rarely mentioned in international and European forest policy documents. In 34 key documents, traditional coppice is only mentioned in one, 'State of Europe's Forests 2011: Status and trends in sustainable forest management', in the context of (a) regeneration types and (b) cultural and spiritual values. This document also mentions SRC, as do a number of others.

Corresponding Author: Debbie Bartlett, d.bartlett@gre.ac.uk

While the forest area is around a third in most countries, except England, the figure for coppice varies considerably. In Croatia, Italy and Serbia most of the broadleaf forests are coppice, while in Germany very little is managed in this way. In many countries there is no legal definition of coppice, but it is generally agreed to be trees/ woodland/forest originating from shoots from stumps or roots; this may be combined with standard trees. Italy and Germany have official

definitions in their National Inventories. The German inventory defines coppice as less than 40 years old.

The policy context is set nationally in Croatia, England, Italy and Serbia, but is devolved in Germany and Spain. Most of the forest related national policy documents do not mention coppice; the most important documents that include specific references to coppice are listed in Table 2.

Table 2. National policy documents specifically mentioning coppice

Croatia	<ul style="list-style-type: none"> • The Forest Act (2005) is the most important policy document affecting coppice • Coppice is mentioned in subordinate regulations e.g. Ordinance for making forest management plans (2015), which defines silviculture and rotation periods
England	<ul style="list-style-type: none"> • Forestry Commission England's Corporate Plan 2014-15 mentions coppice. • The UK Forestry Standard: The Governments' Approach to Sustainable Forestry (2011) refers to both traditional and SRC. • The Woodfuel Strategy for England (2006) included traditional coppice and SRC
Germany	<ul style="list-style-type: none"> • Forest Strategy 2020 (2011) and the National Strategy on Biological Diversity (2007) both mention traditional coppice positively in the context of biodiversity, nature conservation, and recreation. However, the former also states that coppice does not play a noteworthy role in forest regeneration methods. • Forest Report of the Federal Government (2009) and Energy for Tomorrow Opportunities for Rural Areas (2009) both mention SRC
Italy	<ul style="list-style-type: none"> • The Framework Programme for the Forest Sector (2008) identifies priorities, including maintaining and preserving the social and environmental functions of the forest, as well as the economic aspects • FPFS (2008) refers to the conversion of coppice into high forest • The National Strategy on Biodiversity (2010) Industry Plan 2012-2014 • Bioenergy Sector Plan (2014) SRC Wood
Serbia	<ul style="list-style-type: none"> • The Law on Forests (2010) ensures the resources are available for priorities including conversion of coppice to high forest • Forestry Development Strategy (2006) identifies the unfavourable condition of coppice forests • National Strategy for Sustainable Development (2008) • Biomass Action Plan 2010-2012 SRC
Spain	<ul style="list-style-type: none"> • The Spanish Forestry Plan (2003-2032) suggests transformation of coppice into high forest • Energy crops are mentioned in Renewable Electricity Laws, but coppice is not

THE CURRENT SITUATION FOR COPPICE IN EACH OF THE CASE STUDY COUNTRIES

In many countries physical and biological variation combined with land use result in forest – and therefore the potential for coppice management – being regionalised. There is a divergence of opinion as to whether rotational coppice, or what is referred to as ‘close to nature’ high forest is the best option for combining commercial productivity and wildlife protection. This is likely to be context specific. Sustainable forest management requires a diversity of both species composition and age structure. If forest areas are large enough it is possible to achieve this with high forest management: however, where

areas are small and widely dispersed, these criteria can only be met by rotational management such as coppicing. This is the situation in countries such as the UK. In much of Europe there is a policy of converting coppice to high forest. In cases where coppice is locally important for social, environmental and economic reasons then it may be permitted to remain. Realistically, conversion is a labour intensive process and is not likely to be achieved without significant investment and the availability of subsidies.

Croatia Traditional coppice management was linked mostly to rural areas where indigenous tree species, such as oaks, chestnut, hornbeam, and beech, are tolerant of coppice management. This also applies to some introduced species, for example black locust. Wood products from coppice were primarily used for private purposes and rarely marketed. Traditional products from coppice were used in agriculture and for firewood. With rural emigration and the appearance of new materials, intensive coppice management ceased. As a result of abandoning coppice forest management combined with the general opinion that high forest has higher biodiversity, the focus of national and European funds for subsidies strongly support conversion of coppice to high forest of mixed native species.

England Historically the majority of England’s woodland was broadleaf. Until the introduction of motor manual felling, the smallest diameter material possible was harvested due to the amount of effort involved. This has resulted in ancient coppice stools still producing poles that, until recently, supplied the lucrative markets for hop poles and mining bars. In south and south east England coppices have remained as they are effectively far more profitable than alternative land uses (i.e. clearance for agriculture or high forest). As a silvicultural system they require virtually no input and continue to yield profit, at the low end from firewood and at the higher from chestnut fencing products. The coppice industry is mostly ‘under the radar’ of the forestry authorities as, due to small stem size, no permission is usually required for harvesting and national forestry surveys do not accurately include it. The workers, particularly in the chestnut sector, tend to be from a family tradition of coppice work and the same can be said of many of the larger landowners as a significant quantity of coppice is on large estates. Coppice woodland is valued not merely for profit, when the right to cut is sold annually, but also in terms of rural livelihoods, the landscape, recreation, cultural heritage and for wildlife and game. Woodland management, which includes coppice, is more widely taught than forestry, a subject found in very few Universities in England / the UK.

Germany Coppice forest management was previously of major importance in terms of personal use, rural livelihoods and industry, but only very few areas are currently under active coppice management. Main factors for this change include the widespread availability of other forms of energy or materials, a lessened dependence of individuals on rural resources, as well as the currently dominant view and corresponding legislation in which ‘close to nature high forest’ is proclaimed as most desirable. However, with its continuing decline there has been an increased interest in the services or value provided by coppice outside of the provision of materials, such as biodiversity, erosion protection, recreation and cultural heritage.

Serbia Coppice forest and coppice with standards are the most dominant category in small scale private forests. This form of management is the best way to meet the needs of private forest owners for a regular supply of fuel wood for their households as well as saw logs for local marketing to improve cash flow in budget deficit situations. One of the main policies in the country relating to coppice forest is to support both public and private owners to begin conversion of coppice to high forest. During recent decades a movement of young private forest owners from rural areas to cities or abroad has been recorded. This has changed the approach from fuelwood production to more selling of the right to cut standing wood or lack of harvesting in recent years.

Spain Coppice was a very important source of firewood for the rural population and small industries in past centuries. There were strict and detailed rules in some places, regulating firewood logging because of the high demand. Today coppice is mainly abandoned because of a decreasing demand for firewood (rural migration and the appearance of fuel alternatives). Currently, coppice is only the topic of some silvicultural research and forest management plans. This concept has disappeared from the National Forest Inventory and other national data bases. Owner associations and logging companies do not have a strong interest in maintaining or transforming coppice.

The current paradigm of good silviculture is the conversion treatment. In 2006 renewable energy had a strong impact on forest policy makers; they thought coppice could be productive again. However, following electricity fee cutbacks (2012) this powerful driver has disappeared. The firewood logging that remains is performed by small logging companies or non-professionals for their own use. Coppice does remain in Spain, but the trend is for it to decrease.

Italy Over the past 80 years, the coppice surface in Italy has remained practically unchanged, whereas the total forest surface has increased due to the abandonment of agricultural activity. The average age of coppice has increased so that now more than 50% is over 30 years old. The main reasons for the extent of coppice is, on one side, the strong relationship with agriculture (e.g., chestnut poles for vineyards, firewood for rural communities and for cooking in typical restaurants in the cities, the distribution of the seasonal workforce), and on the other, social factors (e.g. property: 75% of coppice is privately owned), climate and territorial characteristics (e.g., Mediterranean climate and forest species, distribution of forests in mountain regions).

Although the current paradigm for efficient and sustainable forest management favours conversion of coppice into high forest to increase certain ecosystem services, the observed trend is the slow “natural” evolution of coppices through ageing on less favourable sites. However, on more favourable sites utilisation continues and can, in some cases, lead to over-exploitation. Current legislation tends to emphasize the landscape and environmental aspects of forests, thus stimulating innovation in management and utilisation systems, including coppice.

COPPICE IN MANAGEMENT PLANS

Some countries have landscape scale management plans that cover forest, but the majority have plans that specifically focus on wooded/forested areas. While larger owners and public forests are likely to have management plans, the situation for privately owned forest is more complex. In Croatia and Serbia these plans are compulsory for all ownerships. In Spain, if the forest is recognised as having a protective function, it must have a management plan, and in England these are essential if subsidies are being sought. All plans are formulated according to national and regional legislation, and in most cases must be formally approved. In Croatia and England the process has a participatory element. Coppice, if present, may be covered by these plans.

In Croatia, England and Germany, the owner has freedom of choice regarding the management aims for their forest. Permission is required to cut trees managed as coppice, except in England and Germany. In Croatia and Serbia coppice must be marked by an authorised person before it can be cut. There are restrictions on the size

of the area cut at any one time, although in Spain all species on rotations of less than 20 years can be cut without a specific management plan. In England no felling license is required for material less than 15cm dbh (diameter at breast height). In Italy a specific number of trees must be retained per ha.

Other areas managed as coppice include energy SRC that has been extensively planted in Italy. In northern Spain, eucalypts managed on a 12-year rotation for paper pulp have increased. In England native trees planted as screens on transport corridors are managed as coppice. In all countries naturally regenerating woody broadleaved material under power lines, along rivers and roadsides are regularly cut and are effectively coppiced.

A significant management issue in many countries is deer browsing, which prevents regeneration of coppice and can necessitate capital expenditure on fencing and/or control if coppice is to persist.

COPPICE OWNERSHIP

In general coppice is more frequent in private ownership. Many of the forests, particularly those in private ownership, are small (see FACESMAP for details). These tend to be a mix of traditional rural/farming and non-farming/new rural landowners, particularly in England. Owners get advice from a variety of sources such as State/Regional forestry advisory service, private land managers, websites and peer groups. In England farming associations such as the National Farmers Union and the Country

Landowners Association¹ include woodland; there is also the Small Woodland Owners Group (SWOG) representing the non-farming faction and the Royal Forestry Society (RFS). In other countries there are specific forestry owners' groups. In Croatia, Germany, Italy, Serbia and Spain there are multiple owner associations, most of which have national umbrella federations enabling them to contribute the Confederation of European Forest Owners.

¹ Still commonly known by this name although the full name is the Country Land and Business Association

None are specific to coppice and membership is apparently low, which restricts effective communication. In some countries there is a tradition of common ownership of some areas of coppice with a formal system of allocating harvesting rights to different people. In Germany this is now in decline as the entitlement, if not used, ceases to exist and there is no automatic transfer of rights. In Serbia, while some regional private forest owners associations exist their activities and the support they provide for private forest owners are very limited. Most were established externally, with international project money, and so do not reflect the interests of owners in the region.

In Croatia, England and Serbia, most small scale owners have some coppice; in Germany and Italy the proportion is very low and in Spain the picture is not clear. There is little data on the gender balance of owners although it is generally thought that the majority are male. Research carried out in Western Serbia corroborated this, revealing 82.4% of owners to be men. In Bavaria, Germany, 8% of owners were found to be women and it has been estimated for Germany as a whole that 20% are female (FACESMAP Germany Country Report).

In some countries, such as Croatia, Italy and Spain, there are significant areas of forest, including coppice, with unknown ownership as a result of split inheritance and rural emigration; abandonment can contribute to fire risk. Fragmentation is recognised as a problem for cohesive management and in some countries incentives are offered for consolidation, combining small parcels into a single ownership. Conversely, in southern England the persistence of large estates, with a long tradition of family ownership, significantly influences the persistence of coppice management.

In the past, the management of coppice forests under common ownership was important in some countries, such as Germany. Examples can still be found, but most have been converted to another form of ownership and frequently to another forest type. Systems of common ownership regulated harvesting and use of the coppice area, and often included unique local customs for allocating harvesting rights. One specific regulation, found in several German examples, is that the right is lost if not used and a federal law forbids the transfer of these rights.

OTHER ISSUES AFFECTING COPPICE MANAGEMENT

Traditionally coppice existed to provide small diameter roundwood for a variety of markets. Many of these are now met by alternatives, or have disappeared, although coppice is still valued for multiple reasons. The current issues affecting coppice are outlined in the following section.

Markets for Coppice Products

The main influences for continuation of coppice management include demand for fuel wood, biomass, landscape, natural and cultural heritage and recreation. While profit from coppice is limited, it is low input and can make a positive contribution to rural livelihoods. Although firewood markets are generally

good in some countries coppice biomass is not economically viable without subsidies.

- There are some specific markets driving coppice management, for example the demand for small diameter chestnut for fencing and poles. There are a wide range of other products produced from coppice serving local niche markets.

- Some markets require products to be certified, and coppice can be certified. This requirement may be stipulated in purchasing policies, particularly those of public authorities and larger companies. Certification is less important for local markets, such as firewood. The cost of certification may be an issue for small scale owners.
- The price of forest managed as coppice is low in comparison to agricultural land or high forest. The exception is where it is sold in small plots for recreational use, for example in the UK.

The Coppice Workforce

Where there is coppice, with ownership willing to manage it, and demand for the product, this will only be realised if there are workers available to carry out the necessary tasks.

- In most countries forestry contractors cut coppice as part of their job, these contractors may be State owned or private companies of various sizes. They may be members of Forestry Contracting Associations; in Italy there are workers co-operatives.
 - In England many coppice workers work alone or in small, often family, groups; this structure contributes to the burden of overheads. The product from these workers may be collected and sold on via a coppice merchant who acts as the intermediary between the workers and the market place. There is at least one co-operative specifically representing coppice workers.
 - Where seasonal restrictions are limiting, for nature conservation considerations, linked to the hunting season, or fire risk, then agricultural or landscape alternatives may be taken during the summer months. For some workers there is a move to processing or moving material cut in winter to market.
- Small scale owners, particularly those who are farmers, produce firewood for personal consumption and local markets during the winter. This may include those with common ownership rights and, in some cases, coppicing may be undertaken by volunteers.
 - A lack of skilled coppice workers has been identified, specifically in England and Germany. Various training schemes have been considered in England, but with limited success. This may be due to this sector being less attractive than larger scale forestry.
 - Capital investment in this sector is probably limited to national rural development programmes, for example for firewood processing equipment. In England there are coppice specific subsidies available to land-owners in some areas.
 - It can be difficult to harvest coppice on steep slopes. Access may be difficult, for example on water retentive soils, where forest is fragmented and surrounded by farmland or where, as in Germany, the paradigm is conversion to high forest when land is productive, effectively marginalising coppice to less favourable areas where mechanisation is not possible.



Coppice in the UK (Photo: Debbie Bartlett)

CONCLUSIONS

The research undertaken to produce this factsheet has highlighted that coppice generally falls outside strategic forestry frameworks at international and national levels, other than where there is an explicit policy for conversion to high forest. It has also revealed a variety of governance approaches at regional and local levels and that there are significant areas of uncertainty, not least the lack of valid statistics on the area of coppice and the extent of active management.

In order to determine the place for traditional coppice management in addressing future ecological, economic and social challenges for the European forest sector it is suggested that the following questions will need to be considered:

- Will the prevalence of the policy to convert to high forest impact on small scale private owners as well as public ones?
- To what extent will this trend towards conversion be influenced by the availability of funding?
- Does the apparent lack of coppice specific policy at national level originate in the regional, rather than general, distribution of coppice?
- How significant is the demand for fire/fuel wood and specialist products?
- What effects do nature conservation, landscape, amenity and ecosystem service provision agendas have?
- What effects will the increasing interest in ecosystem services at international/national and local levels have on coppice?
- How effective are the knowledge transfer networks, for example between owners, coppice workers, extension services and the end market?

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www.eurocoppice.uni-freiburg.de
eurocoppice@fob.uni-freiburg.de
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Editors: Alicia Unrau, Gero Becker, Raffaele Spinelli, Dagnija Lazdina, Natascia Magagnotti, Valeriu-Norocel Nicolescu, Peter Buckley, Debbie Bartlett and Pieter D. Kofman

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