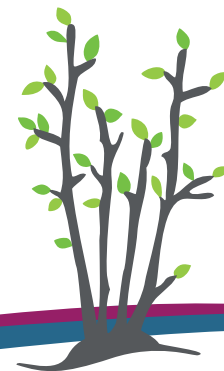


# Typology of European Coppice Forests



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## COST Action FP1301 EuroCoppice

Innovative management and multifunctional utilisation of traditional coppice forests – an answer to future ecological, economic & social challenges in the European forestry sector

Coppice forests are an important component of European woodlands, with over 20 million ha of the productive forests in Europe being managed as coppice (UN/ECE-FAO, 2000, cited in Zlatanov and Lexer, 2009). Over millennia, the development of coppice forests has been influenced by many factors, such as regional climate, eco-physical conditions, wood market requirements and owners' interests. This has led to a very large variety of coppice forests in terms of their distribution, structure, legal status and management.

This document describes the basic types of coppice in Europe: simple coppice, coppice with standards, selection coppice, pollarding, and short rotation coppice (Figures 1 to 5), while the latter is a more recent phenomenon. It is important to note that the above-mentioned diversity of coppice in Europe can never be captured in a categorisation. In practice, there are no distinct boundaries between types and within each type there are exceptions to each described element. Nevertheless, *coppice* is a common denominator of all these types, and there are typical “trends” to be found across Europe.

*The five coppice types and their most important characteristics are summarised in the following figures and table.*



Figure 1. Simple coppice of sweet chestnut (Photo: D. Rossney)



Figure 2. Coppice with standards (Photo: V.N. Nicolescu)

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Table 1. Typology of European coppice forests

	<b>Simple coppice</b> (fig. 1)	<b>Coppice-with-standards</b> (fig. 2)	<b>Coppice selection</b> (fig. 3)	<b>Pollarding</b> (fig. 4)	<b>Short rotation coppice</b> (fig. 5)
<b>Definition</b>	A coppice system in which all shoots in a stand are cut at each felling (Nieuwenhuis 2000)	A coppice system in which selected stems are retained as standards at each felling to form an uneven-aged overstorey which is removed selectively on a rotation constituting some multiple of the coppice rotation (Burley et al. 2004)	A coppice system in which only selected shoots of merchantable size are cut at each felling (Nieuwenhuis 2000)	A coppice system in which the crowns of trees are cut back, in a more or less systematic fashion, with the object of producing close heads of shoots (pollards) (Burley et al. 2004, modified)	Production of woody biomass, generally on agricultural land, by regenerating new stems from the stump or roots after harvesting and relying on rapid growth, generally over a 1 to 5 year cycle (ISO EN 16559)
<b>Regeneration method</b>	Stool shoots, root suckers	Stool shoots and seeds	Stool shoots	Stem shoots (at various heights)	Cuttings (willow, poplar) or seedlings (eucalypt, black locust) followed by stool shoots
<b>Structure</b>	Even-aged	Uneven-aged	Uneven-aged	Even-aged	Even-aged
<b>Species</b>	Most broadleaved species: oaks, sweet chestnut, hornbeam, linden, eucalypts, ash, alders, black locust, poplars, birch, European beech, hazel	<i>Upper storey</i> (standards): oaks, elms, ash, sycamore, Norway maple, wild cherry, wild service tree, service tree, black walnut, pines, larches <i>Lower storey</i> (coppice): hornbeam, field maple, European beech, linden, sweet chestnut, hazel	European beech, holm oak	Poplars, willows, ash, plane-trees, beech, chestnut, mulberry, oaks, linden, elms, black locust, maples, hornbeam, hazel	Willows, poplars, black locust, eucalypts

(Table 1 continued)

	<b>Simple coppice</b> (fig. 1)	<b>Coppice-with-standards</b> (fig. 2)	<b>Coppice selection</b> (fig. 3)	<b>Pollarding</b> (fig. 4)	<b>Short rotation coppice</b> (fig. 5)
<b>Typical rotation period</b>	15 – 30 years	15 – 30 years (coppice)	15 – 30 years	1 – 5 years (up to 25)	1 - 5 years
<b>Potentially occurring in the forest vegetation types... (according to EEA, 2007)</b>	4. Acidophilous oak and oak-birch forest (types 4.1 and 4.2) 5. Mesophytic deciduous forest (types 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7) 6. Beech forest (types 6.2, 6.5, 6.6, 6.7) 7. Mountainous beech forest (types 7.1 and 7.8) 8. Thermophilous deciduous forest (types 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8) 9. Broadleaved evergreen forest (type 9.1), 14. Plantations and self-sown exotic forest (type 14.2)				Not applicable; mostly on agricultural land
<b>Size of product</b>	Small-sized roundwood	Small-sized roundwood and timber	Roundwood of different sizes	Small-sized roundwood	Small-sized (whole) stems
<b>Wood products</b>	Firewood, charcoal, industrial roundwood, basketry, pea and bean sticks, hoops, fascines, fencing, poles, tool handles, tannin	See simple coppice + timber	See simple coppice + timber	See simple coppice + sometimes timber (historically used as fodder)	Wood chips, pulp, basketry, fencing
<b>Management options</b>	Commercial exploitation Conversion Restoration Maintenance for biodiversity and as landscape and cultural elements				Commercial exploitation



Figure 3. Coppice selection with European beech  
(Photo: O. Cardoso)



Figure 4. Pollard of white willow  
(Photo: V.N. Nicolescu)



Figure 5. Willow clone treated as short rotation coppice (Photo: V.N. Nicolescu)

## References

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**EuroCoppice - COST Action FP1301 (2013 - 2017)** brought together over 150 experts, researchers and practitioners from 35 European and partner countries to collect and analyse information on coppice forests and their management. Special emphasis was given to technical and economic methods that provide ecological services and sustainable products from coppice forests, all the while considering the effects on rural development, growth and job creation.

For more information visit: [www.eurocoppice.uni-freiburg.de](http://www.eurocoppice.uni-freiburg.de)

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