

Sustainable forest management and coppice forest: insights from the legacy of past management trials



Final workshop of the project LIFE FutureForCoppiceS-
LIFE14 ENV/IT/000514

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Coppice... Cedue



Coppice (Coppicing): Traditional forest management

- broadleaf
- vegetative regeneration (shoots / suckers)
- multi-stem trees
- grow vigorously
- short rotation cycles
- small sized timber
- sustainable



Unrau (University of Freiburg)

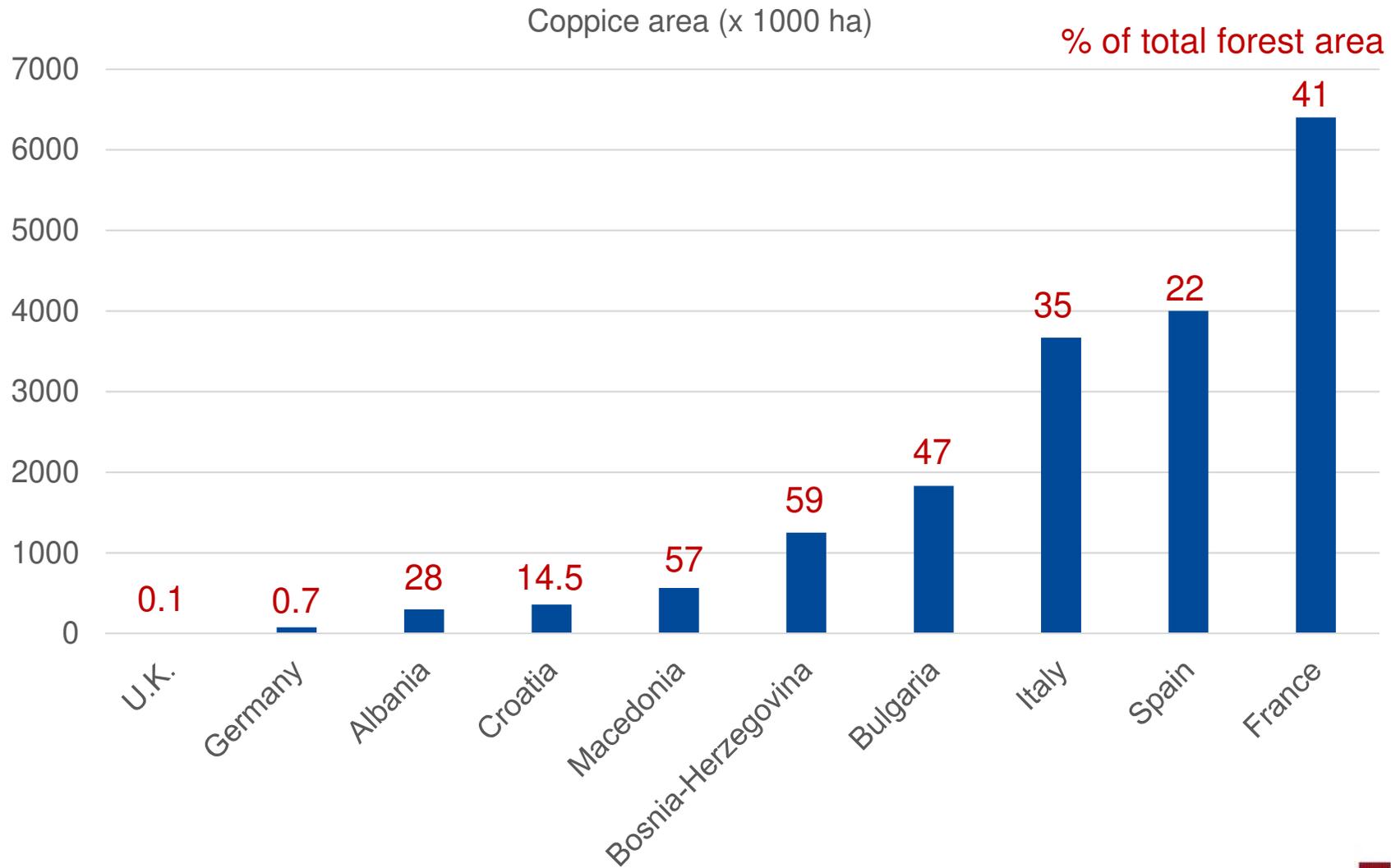


Suchomel (University of Freiburg)

Regional variation:

- species
- eco-physical conditions
- historic development
- socio-economic framework

Coppice in Europe ~ 30 Mio ha (15 %)



Problems: Definition of coppice, inconsistent NFI methods, outdated statistics...⁴

Coppice in European Policy and Legislation Documents

Search for Coppice in 35 Forest and Forest-related Policy Documents

- European Forest Convention
- The Oslo Ministerial Decision: European Forests 2020
- Rovaniemi Action Plan for the Forest Sector in a Green Economy
- State of Europe`s Forests 2011 & 2015
-

**** (Brief) mentions of traditional coppice in only **2 of the 35** documents ****

→ State of Europe`s Forests 2011 & 2015

COST Action FP1301 EuroCoppice

“European Cooperation in Science & Technology”

4 years: Nov 2013 – Oct 2017

35 countries

150+ researchers and experts

5 Working Groups (WGs)

5 International Conferences

5 Training Schools

43 Short term scientific missions

Scientific publications

Dissemination material

→ www.eurocoppice.uni-freiburg.de



EuroCoppice Working Groups

WG1 Definitions, History and Typology

WG2 Ecology and silvicultural management

WG3 Utilization and products

WG4 Services, protection and nature conservation

WG5 Coppice forests ownership and governance

Results

COST Action FP1301 EuroCoppice

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

Coppice Forests in Europe

Editors

Alicia Unrau, Gero Becker, Raffaele Spinelli, Dagnija Lazdina, Natascia Magagnotti, Valeriu-Norocel Nicolescu, Peter Buckley, Debbie Bartlett and Pieter D. Kofman



- 388 pages
- Tables, pictures, literature

- Typology, vegetation types, EEA, 2007
- Glossary
- Silvicultural guidelines
- Utilisation: harvesting and products
- Nature conservation (Natura 2000)
- Governance including legal review
- 35 Country reports, statistical summary
- Policy paper

Download for free:

<https://www.eurocoppice.uni-freiburg.de/coppice-forests-in-europe>

Summary for Policy Makers

Coppice forests in Europe: A valuable and sustainable natural resource

Executive Summary

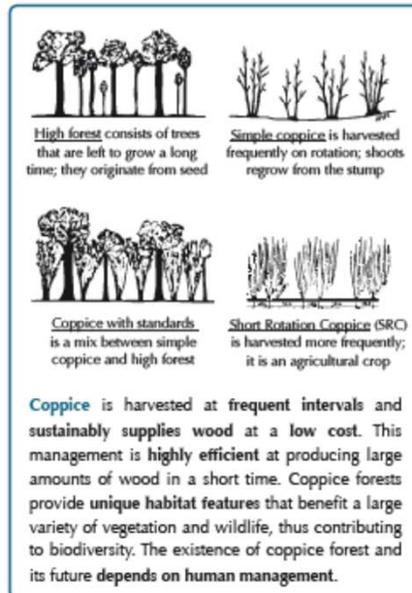
Coppice is the oldest form of sustainable forest management and is still abundant throughout Europe today. Its unique characteristics contribute to rural livelihoods, the bio-economy, environment and cultural heritage. Coppice forests have become neglected in recent history, leaving an enormous untapped potential. Experts from 35 countries, involved in COST Action FP1301 “EuroCoppice”, urge EU policy-makers to seize this opportunity by specifically addressing and supporting coppice within EU strategy, policy, R&D programmes, and structural funds.

Coppice Forests in Europe

Over 20 million hectares across Europe are managed as coppice, while a much larger area originates from past coppice management. It is the **oldest form of systematic and sustainable forest management** and was developed to supply rural communities and early industries with wood, mainly for fuel.

In the early 20th century the prevailing concept for the management of forests shifted to “high forest”. This was mainly due to a rise in the use of fossil energies, through which fuelwood became less important. Another factor was an increased need for large dimension construction wood, which is more easily produced in high forests. Consequently, many coppice forests were converted to high forests or abandoned. The rate and intensity of these changes depended on the local conditions of industrial development and market demand.

Thus, today a large regional variation of coppice forests exists in terms of distribution, structure, legal status and management. Likewise, diverse products and services are supplied by coppice.



What are the Benefits of Coppice?

Coppice forests have unique characteristics that make a valuable contribution to society, economy and the environment:

- **Rural livelihoods** – regular income, sustainable employment and resources
- **Low-carbon bioeconomy** – renewable, sustainable, environmentally friendly biomaterials & fuels
- **Protective function** – mitigates soil erosion, rockfall, landslides and avalanches
- **Sharing economy** – community use & recreation
- **Provision** – timber and non-timber forest products
- **Enrichment** – biodiversity and cultural landscapes

What is the Issue?

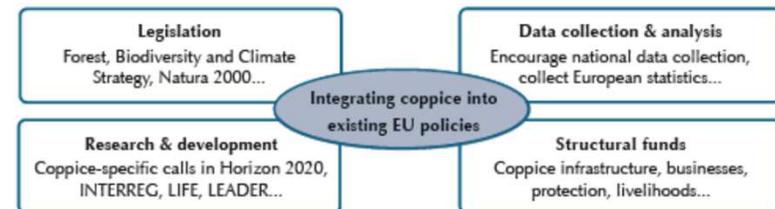
Coppice is hardly recognised or addressed in EU policy. It is also neglected and even opposed in many national policies. In consequence, reliable data on coppice is scarce and knowledge on coppice is diminishing in both science and practice.

The continued neglect of the coppice resource is a lost opportunity for European development.

Policy Recommendations

A European approach and harmonised action is essential to unlock this potential!

To achieve this aim, coppice must be reinstated at an EU level:



Awareness for and implementation of the policies are the responsibility of EU Officials, national forest-related organisations and NGOs; particularly those related to the following European Commission DGs:

- Agriculture and Rural Development
- Climate Action
- Employment, Social Affairs and Inclusion
- Energy
- Environment
- Eurostat – European statistics

Policy makers and environmental professionals are urged to seize this opportunity and reinstate coppice forest management at both national and European level.

Coppice in Europe:

Lessons from the past – guidelines for the future



Spinelli (IVALSA)

Historic starting point

- Rural communities
- Fuel wood
- Community / private / public ownership



Harvesting simple coppice in Germany



Year 1903. Photo taken by Anders Beer Wilse; copy - of the original belonging to Norsk Folkemuseum, Hardanger, Hordaland, Norway

Early industries

Metal and coal mining, bricks, porcelain, glass, salt, leather...



Unrau (Uni Freiburg)



Porcelain in Limoges, France,
Museum "Four des Casseaux"

... Resulting situation



Spinelli (IVALSA)

Conversion - Croatia

Successive conversion of helm oak using the uniform shelterwood system



2003



2008



2011



2014 *Dubravac (Sumins)*

Modern coppice management



All photos: Spinelli (IVALSA)



utureForCoppiceS-



Nature conservation, protection functions, biodiversity...



Barti (University of Brasov)



Hornea (University Timisoara)



Suchomel (University of Freiburg)



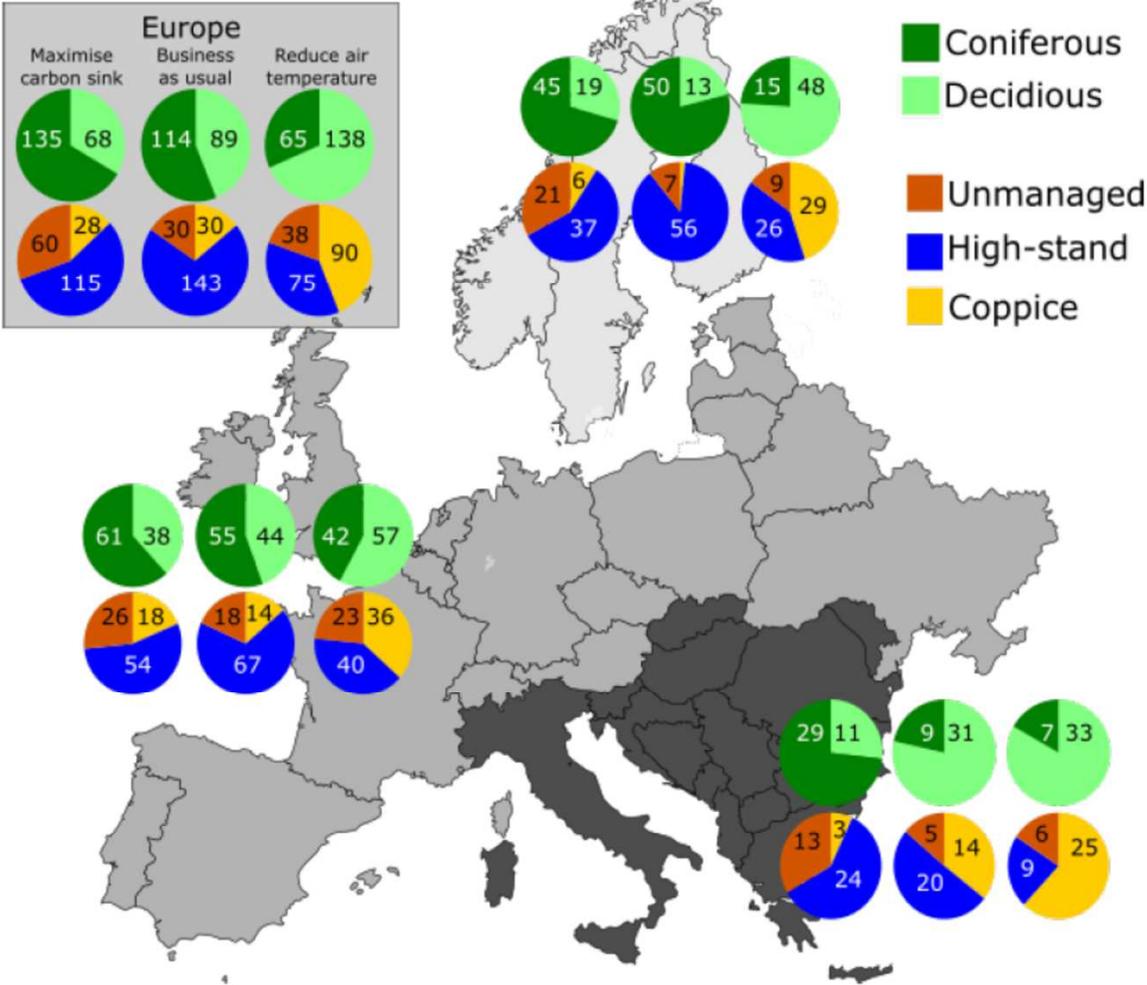
Suchomel (University of Freiburg)



Suchomel (University of Freiburg)

Coppice and climate change

How to achieve the Paris agreement?



Coppice and climate change

”When managing the carbon balance of a forest, unintended but unavoidable changes in surface properties and behavior occur. These should be accounted for when assessing the climate impact of forest management.

Carbon-management and climate-management should not be used interchangeable” *Luyssaert 2019-*

Compare to high forest (esp. conifers) coppice have a lower carbon storage capacity, but smaller radiation back to atmosphere, and therefore a positive effect on temperature.

Consequences for future coppice strategies

1. Regions with active rural private landowners
→ information, infrastructure and incentives for a “modern”
small scale rural coppicing
2. Regions with large underused/abandoned coppice forests
→ “**zoning**” according to site quality, terrain and ownership;
conversion (only if future high forest is very productive) /
“**industrial coppice concepts**” / **protection**
3. Regions with little remaining coppice
→ **protect and re-activate** as part of nature conservation
(conflicts to “Natura 2000 concept” must be solved)

Research gaps

- Definitions and statistics
- Ecology and silviculture (rotation cycle, size of coupes, resprouting of old stools, growth and yield tables)
- Biodiversity, compared to high forest
- Climate change (carbon balance, radiation, resilience)
- Protection functions (infrastructure)
- Adapted harvesting systems, “modern” products
- Contribution to rural economies
- Stakeholder’s connotation (negative / positive)
- Role in forest legislation
- Short rotation coppice: similarities and differences

... And expand coppice knowledge globally



Hornea (University Timisoara)



Pollard trees
in Romania

IUFRO Unit 1.03.01
Traditional coppice:
ecology, silviculture and
socioeconomic aspects.

IUFRO World Congress
Curitiba 2019
Session C1i



Alder pollards in North-East India
(slash & burn; shifting cultivation)

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... Thank you!

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