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

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Published by:
Albert Ludwig University Freiburg
Chair of Forest Utilization
Werthmannstr. 6
D-79085 Freiburg
Germany
www.uni-freiburg.de

Printed by: Albert Ludwig University Freiburg Printing Press

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eurocoppice@fob.uni-freiburg.de
0049 (0)761 203 3789

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ISBN 978-3-9817340-2-7

Recommended citations:

For the full volume: Unrau, A., Becker, G., Spinelli, R., Lazdina, D., Magagnotti, N., Nicolescu, V.N., Buckley, P., Bartlett, D., Kofman, P.D. (Eds.) (2018). *Coppice Forests in Europe*. Freiburg i. Br., Germany: Albert Ludwig University of Freiburg.

For individual chapters/articles: List of author(s) with surname(s) and initial(s). (2018). Chapter/article title. In A. Unrau, G. Becker, R. Spinelli, D. Lazdina, N. Magagnotti, V.N. Nicolescu, P. Buckley, D. Bartlett, P.D. Kofman (Eds.), *Coppice Forests in Europe* (pp. xx-xx). Freiburg i. Br., Germany: Albert Ludwig University of Freiburg.

The articles in this volume were developed within the context of COST Action FP1301 EuroCoppice (2013-2017). Numerous contributions were published as single, independent booklets during the course of the Action; they were subsequently reviewed and updated for this volume. A digital version of this volume, further results and more are available on the website: www.eurocoppice.uni-freiburg.de

Design, layout & formatting: Alicia Unrau

Coppice image acknowledgements: Simple coppice (grey) based on a drawing by João Carvalho (pp. 46); Leaf vector originals designed by www.freepik.com (modified)

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Freiburg im Breisgau, Germany

2018

Foreword

Coppicing represents the oldest form of systematic and sustainable management and utilization of forests. It is a very flexible management system that requires a low input and has been adapted and modified throughout Europe and beyond according to the needs of rural societies, to whom coppice forests deliver small size wood primarily for energy, agriculture and small scale businesses. Despite the reduction of coppice forest area, there are still over 20 million hectare of forests throughout Europe that originate from coppice. They characterize our landscapes, especially in mountainous areas of central, east and southern of Europe. Due to rural migration and technical and economic restrictions, most of these coppice forests are today neglected or even abandoned, representing a significantly underused natural resource.

Furthermore, current European ecological research reveals that coppice forests protect and stabilize critical slopes and contribute in a unique way to biodiversity conservation. Due to their inherent ecological features they are appreciated as resilient ecosystems, also in the context of climate change adaptation.

The COST Action FP1301 EuroCoppice was set up in 2013 to explore options and to propose practical ways and means to make better use of existing European coppice forest resources for the economy, environment and society. More than 150 scientists and experts from 35 COST Member Countries addressed in five Working Groups a wide array of coppice-related issues ranging from history and ecology to harvesting and utilization techniques, environmental protection and rural employment. During four years of activities, national and regional knowledge from both literature and collective sources was compiled, analyzed, documented and published. Research gaps were identified and cooperative strategies to close them were developed. A number of congresses and workshops were organized to discuss and share the common findings and views with the scientific community and with practitioners from forestry, wood industry and environmental agencies. Five COST Training Schools and 42 Short Term Scientific Missions were organized in different member countries, primarily for young researchers to increase their knowledge and expertise on several coppice related issues, as well as to promote personal networking. Major results of the Action and a call to take action were communicated to national and European actors and stakeholders. To facilitate further scientific activities after the lifetime of the Action, material, results and databases were transferred to the International Organization of Forest Research Institutions (IUFRO), where a permanent Unit dedicated to traditional coppice forestry was established.

With all of these activities and achievements, EuroCoppice is an excellent example showing that substantial added value for science, economy and policy can be achieved by bringing together the expertise and views from various European regions and institutions. The coordinators together with the great number of participating scientists have used the EU format COST effectively to enhance knowledge and to raise attention of the multiple benefits and future opportunities of traditional coppicing.

The results of this COST Action are also highly relevant in the context of the EU Forest Strategy and the growing recognition of the importance of forests for several EU policies and initiatives, such as energy and climate, rural development, environment and bioeconomy.

As former research programme officer in the European Commission responsible for COST forestry actions, I want to express my recognition and warmest thanks for the excellent work of all persons involved, and I strongly recommend this book to all people interested and involved in forest and nature conservation issues throughout Europe.

Ignacio Seoane

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Preface

The work on this volume first began in 2012 with the preparation of a project proposal on coppice forest management to the EU-funded organisation COST (European Cooperation in Science and Technology). The idea for such a European project came to one of the editors, Gero Becker, in the years prior to his (semi-) retirement as Professor of the Chair of Forest Utilization, Faculty of Environment and Natural Resources, Albert Ludwig University of Freiburg. Along with a group of professors and researchers at the faculty, he had already explored the subject on a national level in the state of Rhineland-Palatinate from 2008-2012 with much success and recognised the need and potential for collaboration following a similar angle, but on a much wider, international scale.

Having connected with many of the leading international experts on the topic, his idea became reality in November of 2013 with the kick-off of 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", of which he became Chair. Within months, the number of countries grew to 35 from within Europe and beyond, involving 150 researchers and practitioners, a testimony to the timeliness and demand for such an undertaking. Action Members came from a large variety of fields, from history and ecology, to conservation, protection, governance and, particularly, silviculture and utilisation, so that cooperation in and between five Working Groups ensured a broad perspective on the topic of coppice forest management.

During the four years of the Action, from 2013-2017, Action Members collected, analysed and harmonised data and information, in addition to supporting and implementing numerous events for young researchers, the scientific community and policy makers. A list of the main EuroCoppice activities and all of its members can be found in the Annex of this volume, while a wealth of further information and details can be accessed on the website (www.eurocoppice.uni-freiburg.de).

The articles in this volume are the fruits of extensive efforts over the course of those years, involving experts from both within and outside of EuroCoppice. Although the COST framework offers optimal assistance for activities such as scientific exchanges, training and conferences, it does not provide compensation for labour, which means that much of this work has been done in the authors' own time – a sign of their dedication to the topic and vision of the EuroCoppice. Many of the articles were first published as single booklets in 2017. Following the end of the Action, the articles went through a thorough review and were harmonised to achieve the volume's current form; the publication is supported by COST in the form of a "Final Action Dissemination".

For this first attempt at gathering a truly European-wide group of researchers on coppice forests, COST was the perfect vehicle to build a network of experts, explore such a relatively under-reported field and lay the foundation for further cooperation. Within this context, we are pleased to highlight the new IUFRO Unit 1.03.01 on traditional coppice, which provides a global scientific platform for coppice topics and is open to any interested parties; please see the Annex for details.

Although this volume is quite comprehensive and provides a strong basis for information and knowledge on coppice forests in Europe, it is only a beginning: We hope to look forward to a future full of collaborations and knowledge-exchange on coppice forest management.

Freiburg, August 2018,

Alicia Unrau, *on behalf of all editors*

Acknowledgements

This publication is based upon work from COST Action FP1301 EuroCoppice, supported by COST (European Cooperation in Science and Technology). We are particularly grateful to the Scientific Officer of the Action, Federica Ortelli, as well as the Administrative Officers Cassia Azevedo and Andrea Tortajada for their friendly assistance throughout the four years.

COST Action FP1301 was provided with additional funds by the Eva Mayr-Stihl Stiftung, which greatly improved the quality of the outputs; we very appreciative of this kind support.

Countless researchers, practitioners and administrative staff, from within and outside of the Action, engaged in the many, many COST Action FP1301 activities, providing valuable time and further resources.

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Funded by the Horizon 2020 Framework Programme of the European Union

EVA MAYR-STIHL STIFTUNG

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**.

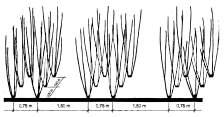
In the early 20th century the prevailing concept for the management of forests **shifted to "high forest"**. This was mainly due to a rise in the use of fossil energies, through which fuelwood became less important. Another factor was an increased need for large dimension construction wood, which is 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.

High forest consists of trees that are left to grow a long time; they originate from seed

Simple coppice is harvested frequently on rotation; shoots regrow from the stump

Coppice with standards is a mix between simple coppice and high forest



Short Rotation Coppice (SRC) is harvested more frequently; it is an agricultural crop

Coppice is harvested at **frequent intervals** and **sustainably supplies wood** at a **low cost**. This management is **highly efficient** at producing large amounts of wood in a short time. Coppice forests provide **unique habitat features** that benefit a large variety of vegetation and wildlife, thus contributing to biodiversity. The existence of coppice forest and its future **depends on human management**.

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?

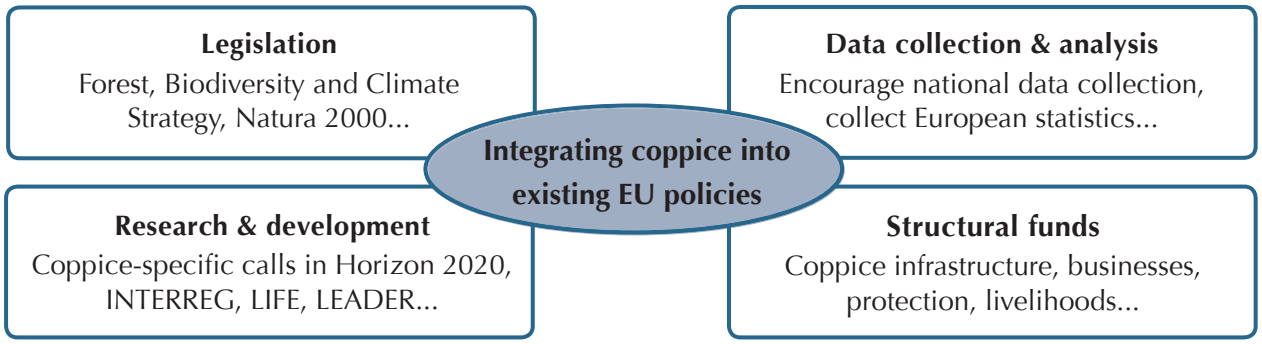
Coppice is hardly recognised or addressed in EU policy. It is also neglected and even opposed in many national policies. In consequence, reliable data on coppice is scarce and knowledge on coppice is diminishing in both science and practice.

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
- Employment, Social Affairs and Inclusion
- Environment
- Climate Action
- Energy
- 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.