EU•PoTaRCh

General Meeting & Conference

of COST Action 22155

Poznań, Poland / March 19-21 2025

Programme and abstracts

cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

Funded by
the European Union

COST Action overview

CA22155
Network for forest by-products
charcoal, resin, tar, potash (EU-PoTaRCh)

EU-PoTaRCh-establishes a network for the past, present and future of use of major non-timber forest raw materials and products in Europe and beyond. Whilst it focuses on forest by-products mainly Potash, Tar, Resin and Charcoal (PoTaRCh) as representatives of traditional forest exploitation heritage, it touches upon other forest by-products (tannins, pitches).

The scholarly vision is to enlighten the relevance of these products in history, especially their role in industrialization. The goal is to identify and assess production changes and their social and environmental impacts on sustainable development, and based on their heritage, to draw lessons for the future.

The Action supports stakeholders who know these products and are interested in them, as they use them in the production, education, and promotion of heritage. Due to the participation of stakeholders with significantly different activity profiles (museums, state forests, associations, etc.), hence high diversity of needs is to be answered by this Action.

Last but not least, the Action helps to find ways to sustainable forest use and transfer knowledge to better methods and products in the bioeconomy.

CA22155 structure and leadership

Action Chair: Prof. Magdalena Zborowska
Action Vice-Chair: Prof. Jeannette Jacqueline Lucejko
Science Communication Coordinator: Dr. Jakub Brózdowski
Grant Awarding Coordinator: Dr. Katja Tikka

Working Group 1 „Heritage“
Dr. Jakob Starlander (Leader), Dr. Jiří Woitsch (Co-Leader)
Working Group 2 „Analytical Characterization“
Prof. Jeannette Jacqueline Lucejko (Leader),
Prof. Magdalena Zborowska (Co-Leader)
Working Group 3 „Archaeology“
Dr. Oliver Nelle (Leader), Prof. Koen Deforce (Co-Leader)
Working Group 4 „Environmental History“
Dr. Anna Varga (Leader), Dr. Péter Szabó (Co-Leader)
Working Group 5 „Future Perspectives“
Dr. Elena Badea (Leader), Prof. Christoph Pfeifer (Co-Leader)

CA22155 Contacts and Information

Eu-PoTaRCh
COST page

Eu-PoTaRCh
official page

Eu-PoTaRCh
official mailbox

Official Website of 2nd General Meeting and Conference

March 19 — CONFERENCE DAY, hybrid

MS Teams link (valid all the day)

9.00 - 10.00	Registration	
10.00 - 11.00	**Conference Session I** **Welcome and Program Introduction** • **Wellcome Speech - prof. dr hab. Piotr Goliński**, Vice-rector of Poznań University of Life Science, Legal Representative of EU-PoTaRCh • **COST Action 22155 Status Update and Conference Concept - prof. dr hab. Magdalena Zborowska**, Chair of Action EU-PoTaRCh • **Opening Lecture,** Low-intensity production of charcoal and wood-tar in the 18th-century Białowieża Primeval Forest, Poland - **dr hab. Tomasz Samojlik,** The Mammal Research Institute Polish Academy of Sciences (PAS), Białowieża	**Kolegium Rungego,** ul. Wojska Polskiego 52 60-627 Poznań
11.00 - 11.30	Coffee break	
11.30 - 13.00	**Conference Session II** **A Stakeholder's Perspective on PoTaRCh** • **Josef Gilch**, The European Charcoal Burners Association – the umbrella organisation of charcoal and tar makers since 1997 • **Dejan Verhovšek**, Pyroproducts mobile pyrolysis unit technology for biochar and wood vinegar production • **Thibaut Antoine, Sophie Lasserre,** The Legacy of Tar: A Journey Through Its History, Production, and Cultural Significance in Europe	
13.00 - 14.30	Lunch (for those who want; you pay for yourself)	**Ogród Smaku** ul. Wojska Polskiego 52 60-627 Poznań
14.30 - 15.45	**Conference Session III** **Production and Use of PoTaRCh in...** • **Renata Costa, Ana Brandão, Koldo Monchet, Sofia Henriques**, The Interwoven Historical, Technological, and Economic Perspectives on Tar and Pine Resin Derivatives in Portugal • **Aleksandra Fostikov, Branko Glavonjić, Nataša Jović-Jovičić, Zorica Mojović, Jelena Rafailović**, A brief itinerary of manufacture and use of charcoal in Serbia. Country report • **Maryam Ghalibaf,** Black is the New Green - Charcoal and Future Perspective in Finland • **Zoë Hazell, Christopher Atkinson,** Charcoal in England: now and then • **Rene Herrera José-Miguel, Lana-Berasain, Francisco Javier Yuste Córdoba,** PoTaRCh Products and Technologies Database Specification. Product Card: Spain	**Kolegium Rungego,** ul. Wojska Polskiego 52 60-627 Poznań
15.45 - 16.15	Coffee break	

16.15 - 17.45	**Conference Session IV** **Production and Use of PoTaRCh in...** • **Maria Legut-Pintal, Joachim Popek, Magdalena Zborowska, Alicja Młynarczuk, Monika Bartkowiak**, Tar production in Poland: from a common craft to a fading tradition • **Dorina Moullou, George Mantanis**, Ancient and Traditional Production Methods of Pine Tar and Resin in Greece • **Mojca Ramšak,** Traditional conifer resin collection and its medicinal use in Slovenia • **Derya Ustaömer, Bilge Yilmaz, Elif Topaloğlu,** Resin Production in Türkiye: Historical Development, Modern Techniques, and Industrial Applications • **Anna Varga,** "Even the priest was a charcoal burner" Overview and changes of the charcoal burning during the 20th and 21st Century in Hungary • **Jiri Woitsch,** Potash production in the Czech lands and Central Europe in the 16th-19th centuries	**Kolegium Rungego,** ul. Wojska Polskiego 52 60-627 Poznań
18.30 - 22.00	Conference Dinner	**Żuk,** ul. Warmińska 1 60-622 Poznań

March 20 WORKING GROUP (WG) MEETINGS

9.00 - 10.30	**WG Meetings, Session I** **All WGs meeting** • **POSTER SESSION**, Database of PoTaRCh products and technologies • **"European vocabulary of PoTaRCh"** Catalogue of production maps, archives, photos, etc. of human and non-human actors/social-ecological systems incl.	**Kolegium Rungego,** ul. Wojska Polskiego 52 60-627 Poznań
10.30 - 11.00	Coffee break	
11.00 - 12.30	**WG Meetings, Session II** • **WGs 1, 4 and 5 meeting**, White paper for policy makers, international organizations about PoTaRCh relations to bio-economy strategy and forest transformation • **WG 3 meeting** Best-practice guide for identifying and excavating PoTaRCh sites	**Faculty of Forestry and Wood Technology,** ul. Wojska Polskiego 38/42 60-627 Poznań Lecture halls E and F (first floor)
12.30 - 14.00	Lunch (for those who want; you pay for yourself)	**Ogród Smaku** ul. Wojska Polskiego 52 60-627 Poznań
14.00 - 15.00	**WG Meetings, Session III** **Other Topics Related to PoTaRCh** • **Aleksandra Fostikov and Zoran Levic**, Potarch and Museums • **Volker Haag,** The European Charcoal Trade Project 2026	**Faculty of Forestry and Wood Technology,** ul. Wojska Polskiego 38/42 60-627 Poznań Lecture halls F (first floor)
15.00 - 18.30	**Tour of Poznań,** first by public transport, then on foot with a guide Please remember to wear comfortable shoes	

March 21 WORKING GROUP (WG) MEETINGS AND EXCURSION

8.00	**Meeting before the bus trip to the Archaeological Museum in Biskupin** Please remember to wear comfortable shoes	**Faculty of Forestry and Wood Technology,** ul. Wojska Polskiego 38/42 60-627 Poznań In front of building
10.30 - 11.30	**WG Meetings, Session I** • **WG 1, 3, 4 meeting,** Education trail across Europe • **WG 2, 5 meeting,** **Maria P. Colombini, Vasiliki Kamperidou , Bilge Yilmaz, Anne M. Van Hilst, Catalina Ionescu,** Analytical protocol allowed identification of PoTaRCh materials – reviews	**Archaeological Museum** Biskupin
11.30 - 12.00	Coffee break	
12.00 - 13.00	**WG Meetings, Session II** • **All WGs meeting,** Report of WGs leaders and Conclusions	
13.00 - 14.00	Lunch (for those who want; you pay for yourself)	
14.00 - 16.00	Visit to the Archaeological Museum in Biskupin	
16.00 - 18.00	Transport back to Poznań	

List of Abstracts

Stakeholders:

Production and Use of PoTaRCh in...

Other Topics Related to PoTaRCh

List of Posters

Abstracts (keynotes & conference presentations)

STAKEHOLDERS

Tomasz Samojlik
Instytut Biologii Ssaków PAN, Białowieża, Poland
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Low-intensity production of charcoal and wood-tar in the 18th-century Białowieża Primeval Forest, Poland

Despite being one of the best-preserved temperate forests of European lowlands, the Białowieża Primeval Forest (eastern Poland) has a long history of human use. On the background of a variety of traditional forest uses, we describe the areal extent and habitat features related to 18th century charcoal and wood-tar production in this forest. On the basis of anthracological analysis of charcoal samples collected in production sites, we determined the tree taxa used in production and discussed the possible impact of this exploitation on tree stands.

Josef Gilch
European Charcoal Burners Association, Germany
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The European Charcoal Burners Association – the umbrella organisation of charcoal and tar makers since 1997

The immense historical importance of charcoal and tar for the cultural and technical development of humankind contrasts nowadays knowledge and awareness. Fewer people know about the techniques of production, and hardly anyone would answer, being questioned about it, that tar was of uttermost relevance for ship construction. Therefore, in the 1990s, people from traditional charcoal burners regions discussed and eventually founded the European Charcoal Burners Association, with the aim of bringing together active practitioners, professionals, and supporters of the old craft to keep alive and foster the tradition of charcoal and tar making in Europe. Founded in 1997, the association now has more than 4000 members. The umbrella association is built upon 51 local associations and groups, three municipalities, and 90 single members, plus five promoting organisations/members, from 12 countries, passing national borders and connecting regions of traditional charcoal making. The non-profit association is organised with a general member assembly as the highest ranking decision committee, which elects a steering committee of 14 persons each 4 years. Every two years an European Charcoal Burner Meeting is organised for several days, where up to 400 participants from all over Europe encounter, exchange and celebrate. This year, it will be in Ebermannsdorf (Bavaria/Germany). For more information, see the webpage www.europkoehler.com. A member magazine „Der Köhlerbote“ (the charcoal burner messenger) with photographs and reports of activities of members and technical papers is sent out each year. In addition, a free series with now 19 issues is published, with contributions on the themes of charcoal and tar making, forestry and forest

Renata Costa[1,2*], Ana Brandão[1], Koldo Monchet[3], Sofia Henriques[2]
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The Interwoven Historical, Technological, and Economic Perspectives on Tar and Pine Resin Derivatives in Portugal

Portugal has a long and intricate history of production of tar and pine resin derivatives, which is deeply rooted in its maritime sphere. This presentation explores the evolution of tar production in Portugal from its early traditional methods to its decline in the modern era, highlighting technological and economic advances. Historically, tar and its derivatives, such as turpentine (aguarrás), pitch (pixe), and rosin (breu), were essential for shipbuilding, waterproofing, adhesives, varnishes, and even medicinal applications. Early production techniques relied on the dry distillation of resinous wood using rudimentary kilns, such as the Ragusan furnaces and later cylindrical tar kilns, significantly improving efficiency. The Leiria Pine Forest (Pinhal de Leiria) emerged as a key production site, supplying the Portuguese Navy and other industries. By the 18th and 19th centuries, the Industrial Revolution introduced large-scale production, but competition from coal-tar and petroleum-based alternatives gradually led to the tar production decline.

Economically, Portugal initially relied on imports of tar-related products, mainly from Biscay and the Canary Islands. However, the increased demand during Portugal's maritime expansion incentivised domestic production, leading to advances in resin extraction and processing. Despite its decline, Portugal's legacy of tar and "breu" production remains significant. The historical methods and knowledge associated with resin extraction and distillation are still preserved in archival records, memories, local traditions, and the built heritage of former production sites. The Pinhal de Leiria, once a cornerstone of tar production and an essential source of raw resinous materials, is still a testament to Portugal's early innovations in forestry management and resource utilisation.

Revisiting historical production methods and adapting them to contemporary sustainable frameworks has relevant aspects of its once-thriving tar/resin (sub-products) production, offering alternative economic and environmental benefits while preserving a key element of its industrial and cultural history. This presentation also aims to contextualise the historical importance of tar and pine resin derivatives production in Portugal, evaluating its technological evolution and economic shifts while reflecting on its cultural legacy and potential sustainable applications in contemporary industries.

Aleksandra Fostikov[1], Branko Glavonjić[2], Nataša Jović-Jovičić[3], Zorica Mojović[3], Jelena Rafailović[4]
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2. University of Belgrade-Faculty of Forestry, Serbia
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A brief itinerary of manufacture and use of charcoal in Serbia. Country report.

The production of charcoal in Serbia can be traced continuously from the arrival of the Slavs in the Balkans to the present day. After their arrival, on the basis of the remaining sources, charcoal was initially produced by blacksmiths for their own needs, just as it was in much of Central Europe. With the rise of mining, which was initiated by the arrival of the Sasi (saxon miners), we can also see the beginnings of a more organised production of charcoal. A more detailed insight into the production methods comes from Turkish sources, from which not only the types of wood used can be seen, but also information on its applications. Finally, after Serbia's liberation, based on available data and descriptions, we gain insight into the traditional production methods that remained active in the 19th and 20th centuries. Today, charcoal producers can be divided into those who use traditional and modern methods. Since charcoal producers in Serbia are not registered as traditional craftsmen, nor do they have an association, based on the data gathered so far, we can only emphasise that such research is necessary and needs to be conducted in greater detail. The main purpose of this short lecture is to show the brief itinerary of the manufacture and use of charcoal in Serbia.

Maryam Ghalibaf
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Black is the New Green- Charcoal and Future Perspective in Finland

Biochar is defined by the International Biochar Initiative as a "solid material obtained from the thermochemical conversion of biomass in an oxygen-limited environment." It is a type of charcoal, sometimes modified, designed for organic use, such as improving soil.

In Finland, professional burners were employed in towns and castles during the 16th century to meet the growing demand for charcoal. This demand increased significantly with the establishment of ironworks in southwestern Finland. Charcoal was traditionally produced in horizontal and vertical pits, with horizontal pits primarily used for domestic purposes, while vertical pits – which were probably introduced to Finland by professional burners – were used for ironworks. By the 1820s and 1830s, ironworks began to construct charcoal ovens.

As a precursor to biochar, charcoal has been intertwined with human civilisation since the Paleolithic era, particularly in practices such as slash-and-burn agriculture. Entering the twenty-first century, biochar has become a focal point of multidisciplinary research due to its unique properties, wide-ranging applications, and potential for future development. Research into