



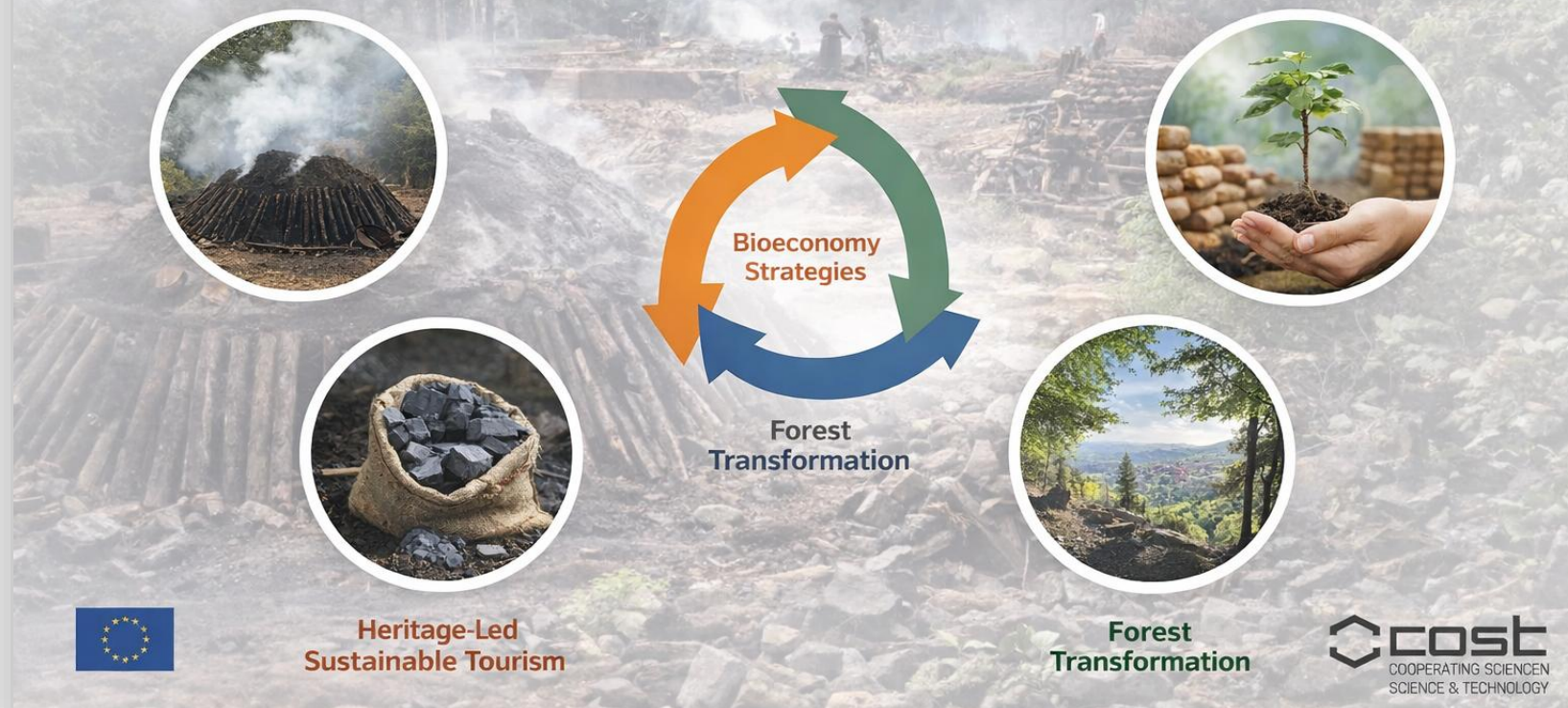
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EU-PoTaRCh as a Policy Bridge

Traditional Charcoal Landscapes for Bioeconomy Strategies,
Forest Transformation, and Heritage-led Sustainable Tourism



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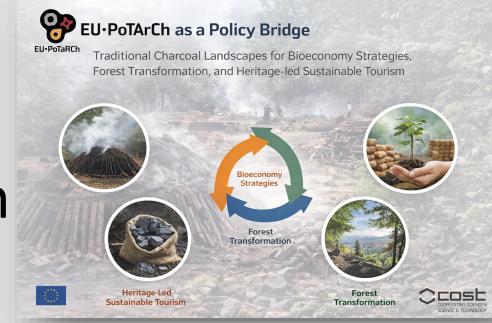
Forest
Transformation

Heritage-Led
Sustainable Tourism

Forest
Transformation



EU- PoTaRCh as a Policy Bridge: Traditional Charcoal Landscapes for Bioeconomy Strategies, Forest Transformation, and Heritage-Led Sustainable Tourism



From Heritage Evidence to Sustainable European Futures

1. **Framing the Policy Bridge** EU-PoTaRCh beyond heritage: strategic positioning
2. **Why It Matters Now** Alignment with EU Bioeconomy, Forest & Restoration strategies
3. **Charcoal Landscapes as Socio-Ecological Systems** Long-term intelligence for forest governance
4. **Bioeconomy: Learning from Pre-Fossil Europe** Circularity Before the Word Existed
5. **Forest Transformation & Restoration Interface** Governance tools and restoration alignment
6. **Heritage-Led Sustainable Tourism** Cultural routes, local clusters, inclusive development
7. **EU-PoTaRCh as a European Reference Network** Strategic legacy and institutional bridge
8. **From COST Action to PASP** Sustainable continuation models

1. Framing the Policy Bridge EU-PoTaRCh beyond heritage: strategic positioning



EU-PoTaRCh is more than a heritage network. It is a transdisciplinary platform that connects Europe’s long history of forest by-product production — potash, tar, resin, charcoal — with today’s urgent transitions: circular bioeconomy, forest restoration, carbon governance, and rural regeneration. The Action can operate as a policy bridge, translating deep historical and landscape knowledge into actionable insights for contemporary EU strategies.



Europe's Green Transition Needs Long-Term Intelligence

Europe is simultaneously advancing:

- **The EU Bioeconomy Strategy**

Promotes a sustainable, circular bioeconomy based on renewable biological resources, requiring ecosystem protection, local stakeholder engagement, and resilient value chains.

- **The EU Forest Strategy for 2030**

Calls for resilient, multifunctional forests balancing biodiversity, climate mitigation, and socio-economic functions across Member States.

- **The EU Biodiversity Strategy**

Seeks ecosystem restoration, protection of degraded landscapes, and stronger integration of biodiversity into economic activity.

- **The Nature Restoration Regulation**

Introduces binding restoration targets, requiring Member States to develop national plans integrating ecological, social, and economic dimensions.

- **Climate neutrality and carbon removal pathways**

2. Why It Matters Now Alignment with EU Bioeconomy, Forest & Restoration strategies

EU-PoTaRCh offers something rare: long-term socio-ecological evidence embedded in living heritage systems.

Europe's Green Transition Needs Long-Term Intelligence

Europe is simultaneously advancing:

- The **EU Bioeconomy Strategy**
- The **EU Forest Strategy for 2030**
- The **EU Biodiversity Strategy**
- The **Nature Restoration Regulation**

All of these strategies require three things:

- ✓ *Evidence on sustainable biomass governance*
- ✓ *Models of balancing extraction and regeneration*
- ✓ *Local stakeholder legitimacy*
- ✓ *Charcoal landscapes already represent centuries of experimentation in exactly these domains.*

3. Charcoal Landscapes as Socio-Ecological Systems Long-term intelligence for forest governance



More than Production Sites

Charcoal landscapes are not isolated kiln sites. They represent integrated socio-ecological systems: extraction regimes, labour organisation, trade routes, technological innovation, gendered work patterns, forest transformation, and biodiversity impacts. They are material evidence of how Europe managed biomass before fossil fuels — and what happened when extraction intensified. This long memory is precisely what today's forest transition debates often lack.

“If we want to design sustainable forest transformation today, we must understand how previous extraction regimes unfolded.”

4. Bioeconomy: Learning from Pre-Fossil Europe Circularity Before the Word Existed

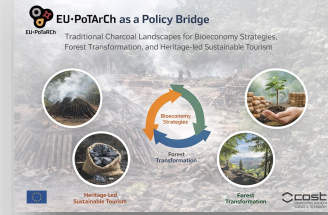
Traditional PoTaRCh systems demonstrate:

- multi-use forest management
- full valorisation of by-products
- local value chains
- renewable chemical production (resin, tar)
- biomass-based metallurgy (charcoal)

EU-PoTaRCh can practically support the **Bioeconomy Strategy** by:

- ✓ Providing comparative historical case studies of sustainable vs. unsustainable intensification
- ✓ Identifying transferable production logics
- ✓ Informing circular value chain design
- ✓ Contributing to bio-based innovation narratives grounded in evidence

“Bioeconomy is not new — what is new is our scale and speed. EU-PoTaRCh allows us to compare sustainable and unsustainable trajectories.”



4. Bioeconomy: Learning from Pre-Fossil Europe Circularity Before the Word Existed

Bioeconomy – From Evidence to Implementation

Science → Policy → Impact Initiatives

1. Comparative Bio-based Value Chain Briefs

Short policy briefs mapping historical PoTaRCh production logics to modern circular bioeconomy models.

2. Sustainability Threshold Framework

Identification of historical overexploitation tipping points to inform biomass extraction guidelines.

3. Biochar Contextualisation Report

Evidence-based assessment of long-term charcoal soil and biodiversity impacts.

4. Rural Bioeconomy Case Studies

Pilot documentation of regions where heritage-based forest use aligns with modern bioeconomy strategies.

Avoiding Historical Repetition

The EU Forest Strategy and Nature Restoration Regulation aim to restore resilience, biodiversity, and multifunctionality. Charcoal landscapes show where forest use crossed sustainability thresholds and how ecosystems responded over time. EU-PoTaRCh can contribute to forest transformation debates by integrating archaeological evidence, environmental history, and living tradition knowledge into discussions on harvest intensity, landscape fragmentation, and socio-economic dependency on biomass. Restoration planning benefits from knowing what happened before.

Policy bridge: “Restoration plans benefit from knowing how landscapes degraded — and how they recovered.” EU-PoTaRCh integrates archaeology, environmental history, and living knowledge into governance discussions.

5. Forest Transformation & Restoration Interface Governance tools and restoration alignment



Current Forest Governance Debates

- Multifunctionality vs. biomass intensification
- Sustainable harvest thresholds
- Biodiversity corridors & fragmentation
- Carbon storage and substitution

What Charcoal Landscapes Show

Long-term charcoal regions demonstrate:

- How harvest thresholds were exceeded
- How monocultures replaced diverse forests
- How biodiversity patterns shifted
- How rural economies became biomass-dependent

Policy Bridge

Charcoal landscapes function as:

- Historical test cases for biomass governance
- Empirical evidence for threshold-setting
- Lessons for balancing extraction and regeneration
- Models for integrating socio-economic dependency into restoration planning

Policy bridge function: grounding climate innovation in historical evidence

Forest Transformation – Governance Interface

Science → Policy → Impact Initiatives

1. Charcoal Landscape Restoration Guidelines

Mapping historical production sites within restoration planning frameworks.

2. Biocultural Indicators for Forest Planning

Integration of heritage variables into forest management and restoration indicators.

3. National Restoration Plan Inputs

Country-specific syntheses supporting implementation of the Nature Restoration Regulation.

4. Forest Governance Roundtables

Structured dialogue between researchers, forest authorities, and local communities.



From Kilns to Cultural Routes

The Action's work on tradition bearers, educational trails, and heritage safeguarding is not peripheral — it is economic strategy. Heritage-led tourism anchored in charcoal landscapes can support rural communities, create identity-based value chains, and align conservation with development.

By standardising documentation, connecting museums, and mapping production sites across Europe, EU-PoTaRCh can help transform dispersed heritage into coherent, transnational cultural routes that support sustainable tourism.

“Conservation and development do not need to be opposites.”

6. Heritage-Led Sustainable Tourism Cultural routes, local clusters, inclusive development



Heritage is development infrastructure.

Charcoal landscapes can support:

- educational trails
- museum networks
- living heritage demonstrations
- cross-border cultural routes

Tourism can:

- support rural economies
- preserve knowledge
- strengthen identity

Shift to positive economic regeneration.

Heritage-Led Sustainable Tourism

EU-PoTaRCh can:

- Standardise site documentation
- Create interoperable educational trail modules
- Support ITCs with scalable tourism models

Impact chain:

Documentation → Network formation → Cultural route design → Regional economic activation.

Heritage-Led Sustainable Tourism

Science → Policy → Impact Initiatives

1. European Charcoal Cultural Route Concept

Transnational thematic route aligned with sustainable tourism frameworks.

2. Heritage Certification Toolkit

Standardised documentation and interpretation model for charcoal sites and tradition bearers.

3. Museum & Living Heritage Network Model

Operational blueprint for connecting museums, practitioners, and tourism operators.

4. Local Development Pilot Clusters

Small-scale demonstration regions linking heritage, tourism, and forest sustainability narratives.

7. EU-PoTaRCh as a European Reference Network Strategic legacy and institutional bridge



EU-PoTaRCh bridges three temporal layers:

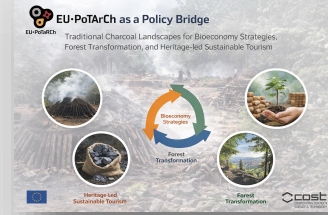
The **past**: long-term socio-ecological evidence

The **present**: interdisciplinary coordination and stakeholder activation

The **future**: circular bioeconomy, forest restoration, and sustainable rural economies

By translating heritage knowledge into structured, comparative, and policy-relevant insights, the Action contributes to Europe's systemic transition — not as nostalgia, but as informed transformation.

“If Europe wants a bioeconomy and forest transition that are ecologically responsible and socially legitimate, it must learn from its own landscapes. EU-PoTaRCh is uniquely positioned to facilitate that learning.”



From Fragmented Knowledge to Policy-Relevant Intelligence

What EU-PoTaRCh Can Deliver

Practical contributions include:

- Harmonised vocabularies and catalogues of production types
- Comparative European datasets on sites and practices
- Cross-country synthesis of environmental impacts
- Policy-oriented white papers on bioeconomy and forest transformation
- Educational and tourism-ready heritage frameworks

Not advocacy — evidence synthesis.

“EU-PoTaRCh could evolve into a reference network for historical biomass intelligence.”



From COST Action to European Reference Network

A Sustainable Legacy

EU-PoTaRCh can evolve into:

- A recognised European knowledge hub for non-timber forest products
- A reference network for heritage-based bioeconomy
- A strategic contributor to forest transformation dialogues
- A cross-border cultural route infrastructure



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EU- PoTaRCh as a Policy Bridge

8. From COST Action to PASP Sustainable continuation models



1 Bioeconomy → post-Action Sustainability Project (PASP) Evolution

Form 1: European Forest By-Products Observatory

A lightweight coordination platform that:

- Maintains datasets & harmonised vocabularies
- Publishes annual policy briefs
- Tracks bio-based innovation developments related to EU-PoTaRCh

Sustainability Model

Hosted by a university consortium

Linked to bioeconomy clusters

Possible Horizon Europe or Interreg extension

Form 2: Policy Intelligence & Advisory Cell

Small expert group that:

- Responds to consultations (Forest Strategy updates, Bioeconomy reviews)
- Provides thematic position papers
- Organises annual policy roundtables

This is low-cost, highly strategic.

It builds legitimacy without heavy infrastructure.



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8. From COST Action to PASP Sustainable continuation models



2 Forest Transformation → PASP Form

Form 3: Biocultural Forest Landscapes Network

A structured European network of:

- Charcoal landscapes
- Archaeological forest production sites
- Restoration-relevant heritage zones

Deliverables

- Restoration-compatible heritage mapping toolkit
- Governance case studies
- Advisory support to Member States

Sustainability Model

- Linked to Nature Restoration Regulation implementation
- Partnership with forestry agencies

Form 4: Restoration & Heritage Integration Toolkit

A formal methodological package:

- How to integrate heritage into restoration planning
- Indicators for socio-ecological legacy assessment
- Practical templates for national authorities

This can become:

- A downloadable toolkit
- A consultancy framework
- A Horizon Europe follow-up proposal seed



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3 Heritage-Led Tourism → PASP Evolution

Form 5: European Charcoal Cultural Route

Potential long-term ambition:

- Alignment with Council of Europe Cultural Routes framework
- Cross-border tourism narrative
- Standardised documentation & interpretation model

Sustainability Model

- Membership-based network
- Co-financed by participating regions
- Tourism-driven revenue streams

Form 6: Living Heritage Clusters

Pilot regions where:

- Museums
- Tradition bearers
- Forest authorities
- Tourism operators

operate under a shared framework.

This could attract:

- Interreg funding
- Regional development funds
- Rural innovation programmes



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8. From COST Action to PASP Sustainable continuation models

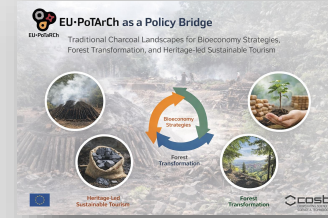
Cross-Cutting PASP Model

Form 7: The EU-PoTaRCh Policy & Practice Platform

A hybrid post-Action structure combining:

- Observatory (data & briefs)
- Heritage network
- Annual thematic forum
- Policy dialogue

Low bureaucracy, high visibility.



From COST Action to Sustainable Legacy

PASP Evolution Pathways

Bioeconomy → Observatory & Policy Advisory

Forest Transformation → Biocultural Landscape Network

Heritage Tourism → European Cultural Route & Living Clusters

“If we design our science-to-policy mechanisms carefully, they naturally evolve into a post-Action sustainability structure. The PASP is not an add-on — it is the maturation of the policy bridge.”



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EU- PoTaRCh as a Policy Bridge

8. From COST Action to PASP Sustainable continuation models



What This Means for Us as EU- PoTaRCh Members

- Our research becomes policy-relevant without losing academic depth
- Our datasets gain strategic visibility beyond academic circles and inform real governance discussions
- Our heritage expertise informs forest and bioeconomy debates and shapes forest and bioeconomy narratives
- Our outputs translate into practical tools and regional opportunities
- Our network remains active and visible beyond COST funding through a structured PASP

EU-PoTaRCh does not redefine what we do — it strengthens the impact, visibility, and longevity of what we already do.



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Theo Zacharis
EU-PoTaRCh WG 5 Member

EU-PoTaRCh: A Policy Bridge in Practice



Thank you for building this bridge together.