



**SUPERB**  
Upscaling Forest Restoration

## LIFE Platform Meeting, Brasov

3<sup>rd</sup> of June 2025

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SUPERB Coordinator



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funding from the European  
Union's Horizon 2020  
research and innovation  
programme under grant  
agreement No 101036849.

*EU Nature Restoration Law and  
EU Forests -  
Systemic solutions for upscaling  
of urgent ecosystem restoration  
for forest related biodiversity  
and ecosystem services*



# Project opening by HM Charles III Sibiu, RO, 2023



## Overall goal

SUPERB aims to restore forest landscapes across Europe by creating an **enabling environment** for the implementation of **forward-looking** forest restoration and **management** at different scales.

### Project scope

#UpscalingForestRestoration



0.6M ha  
completed  
or initiated  
restoration



4 years  
(started in  
12.2021)



36  
Partners  
led by EFI



16  
European  
countries



€20M  
EU funds



€90M  
External  
resources





SUPERB collects **practical** and expands **scientific knowledge** on successful forest restoration and **synthesises it for action.**



#### Practical & scientific knowledge



Support forest restoration by ensuring that policy and societal demands are known and considered in practice. Also, map the demands of ecosystem services by landowners, managers, and society, on a local and European scale.

## Transformative change through:



1

Demonstrating and test successful restoration approaches in 12 large-scale demonstration areas



2

Improving societal support for restoration and benefits from restoration



3

Delivering evidence-based practical and latest scientific knowledge



4

Delivering a stakeholder targeted multi-language Forest Knowledge Gateway



5

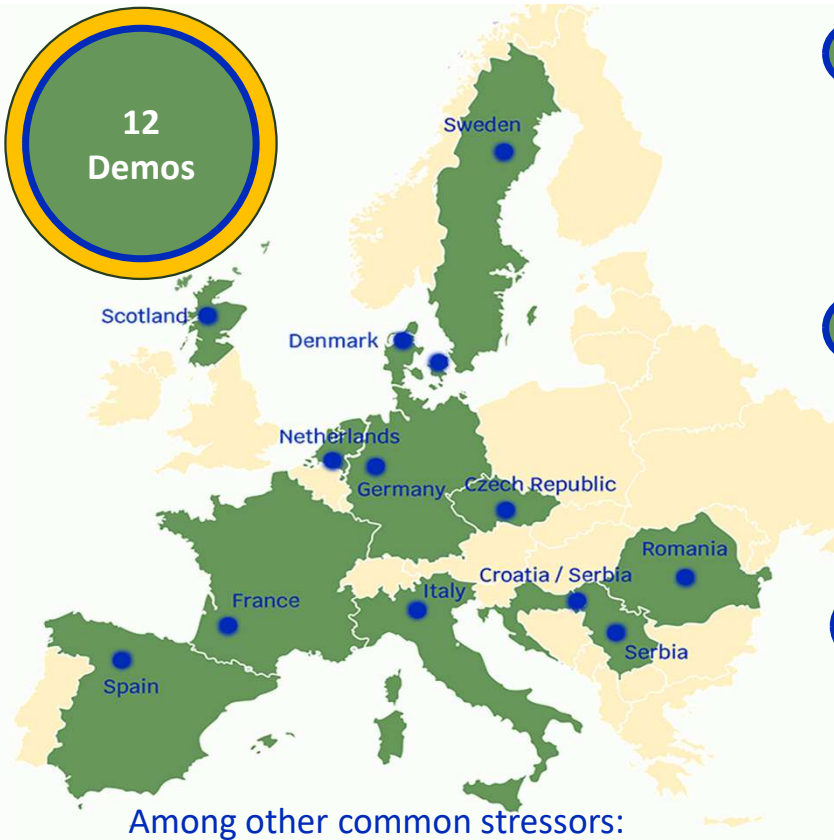
Launching an interactive online Marketplace



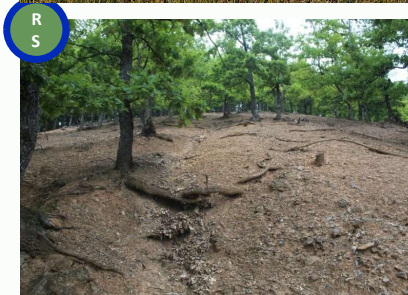
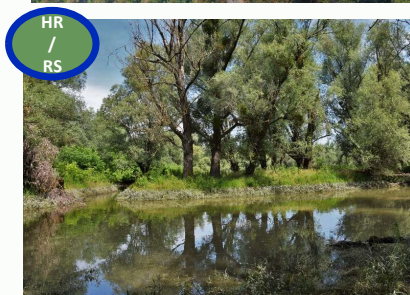
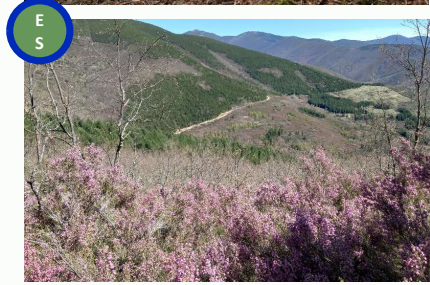
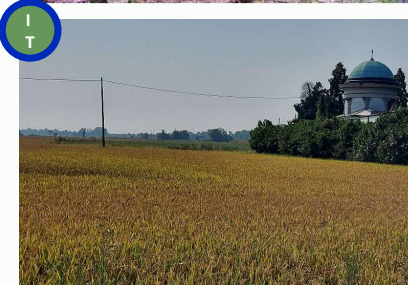
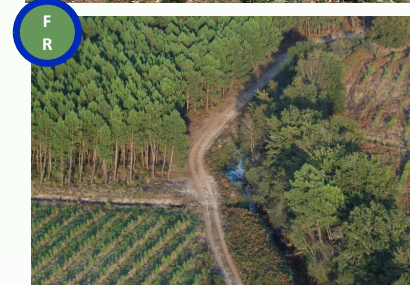
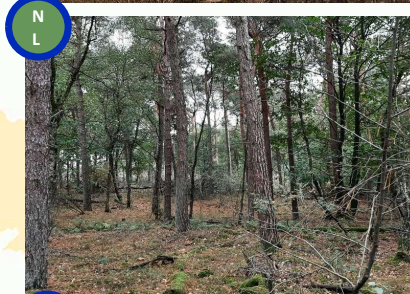
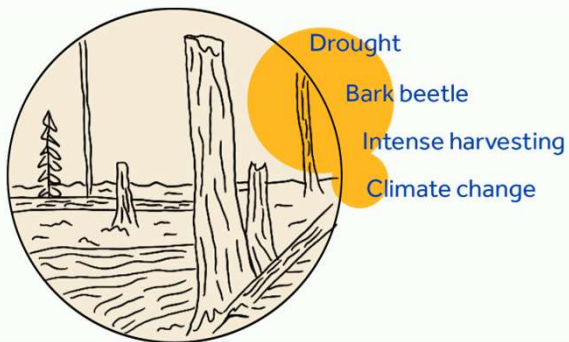
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Creating a large & powerful multi-stakeholder network and movement for transformative restoration





Among other common stressors:





## Toolbox of restoration measures:



Afforestation



Reforestation



Promoting natural  
regeneration



Underplanting



Protecting  
regeneration



Wildlife  
management



Removing invasive  
species



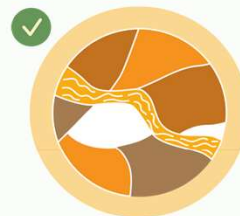
Inserting rare  
species



Adapting tree species  
composition to climate change



Enhancing forest  
connectivity



Landscape  
diversification



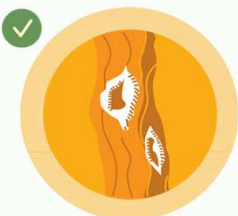
Habitat restoration for  
specific species



Enhancing  
structural diversity



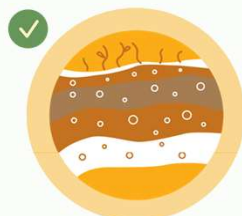
Protection of veteran trees/  
old-growth patches



Maintaining tree  
microhabitats



Increasing  
deadwood



Soil vitalisation



Hydrology  
restoration



Forest education



Stakeholder  
engagement

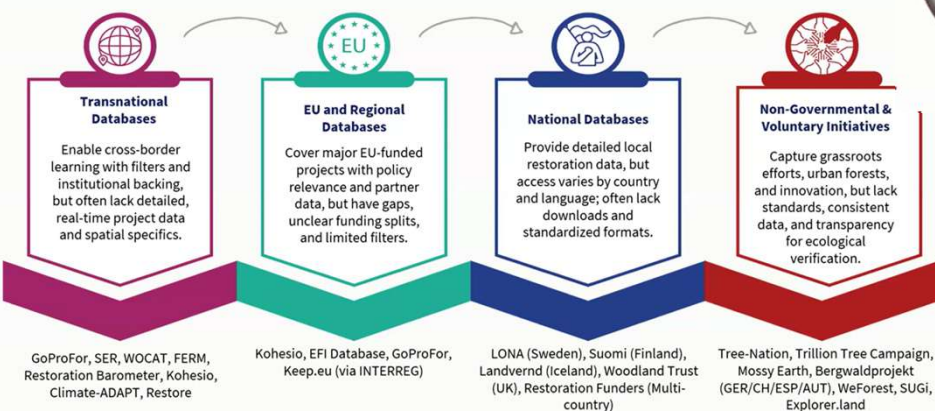


Advanced  
monitoring

# Practical restoration experience

- ~1700 forest restoration projects in last 30y
- 84 indicators on effort and success
- Very diverse degradation causes, restoration objectives and restoration methods

## Existing data platforms for restoration projects



## Different phases:

- Disaster risk reduction
- Production
- Multifunctionality

## 10 Forces Shaping the Evolution of Forest Restoration in Europe

Insights from expert narratives across 18 European countries

Analyzing expert national narratives provides a unique lens into the long-term, large-scale evolution of forest restoration, revealing how environmental, technical, political, legal, social and economic forces have driven successes and setbacks over the past two centuries. Below we summarized the findings into 10 key lessons learnt to guide future restoration efforts.



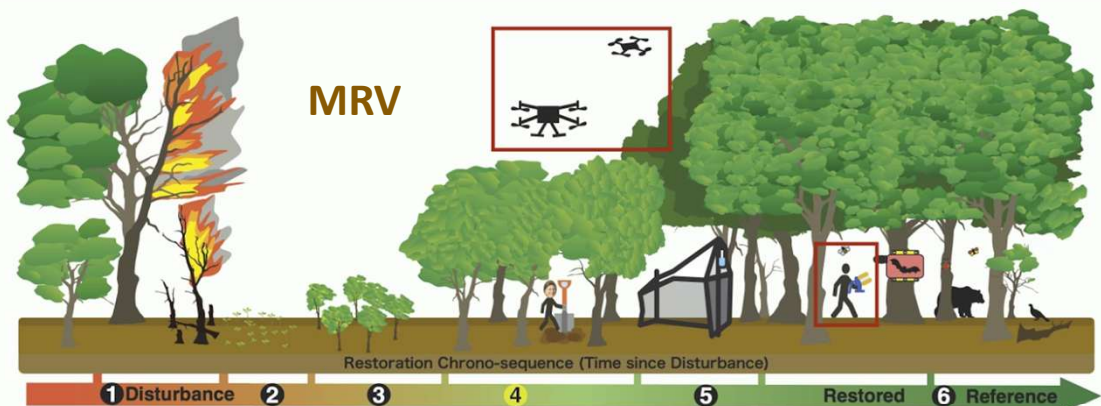
20/06/2025

forest-restoration.eu



Read full study here: Erdozain, M., Alberdi, I., Aszalós, R. et al. The Evolution of Forest Restoration in Europe: A Synthesis for a Step Forward Based on National Expert Knowledge. *Curr. For. Rep.* 11, 4 (2025). <https://doi.org/10.1007/s40725-024-00235-3>





## Best Practice Knowledge Base

- 1. Afforestation and Reforestation
- 2. Enhancing Structural Diversity
- 3. Enhancing Functional Diversity
- 5. Enhancing Soil Health/Soil Preparation
- 6. Enhancing Landscape Connectivity and Diversity
- 7. Risk Mitigation and Disturbance Prevention
- 8. Restoration of Key Species
- 9. Restoration of Natural Processes and Ecosystem Preservation

### 6. Enhancing Landscape Connectivity and Diversity

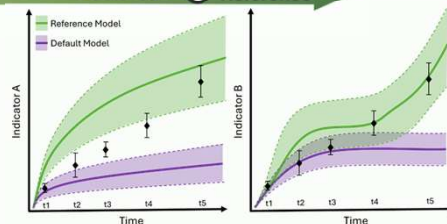


Enhancing landscape connectivity and diversity ensures the movement and genetic exchange of species, while supporting more resilient and adaptable ecosystems and landscapes. This approach involves creating corridors and linkages between fragmented habitats, allowing for the migration of wildlife and the dispersal of plant species, which is essential for maintaining healthy populations and genetic diversity. By promoting a heterogeneous landscape that includes a variety of habitats and successional stages, restored landscapes can better mimic natural systems, thus increasing ecological stability and resilience against disturbances. Ultimately, enhancing connectivity and diversity in the landscape fosters richer biodiversity, supports ecosystem services, and contributes to the long-term sustainability of both local and regional environments.



#### 6.1 Establishment of hedgerows/corridors

Hedgerows are linear strips of native or mixed-species vegetation which are commonly used in agricultural or tree plantation forest landscapes to connect fragmented habitats, or to increase biodiversity within the productive areas. Specifically, these structures serve as passages for wildlife by facilitating gene flow and species dispersal



## Biodiversity & Ecosystem Management Tools & Guides

## Species and provenance selection tool

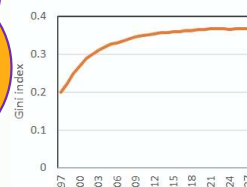
### SEED4FOREST

<https://app.seed4forest.org/>

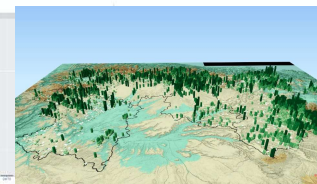
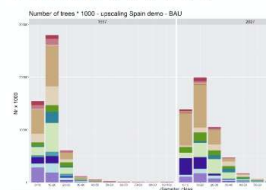
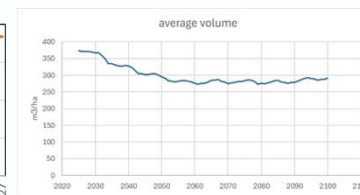


## National and regional scale – EFISCEN-Space

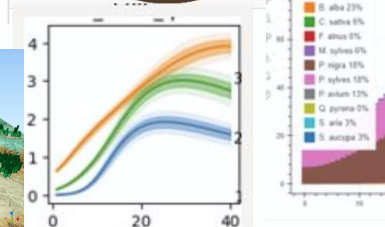
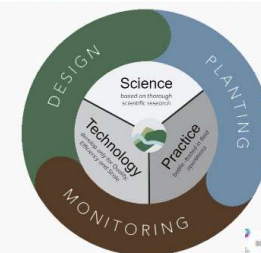
Gini – forest structure index

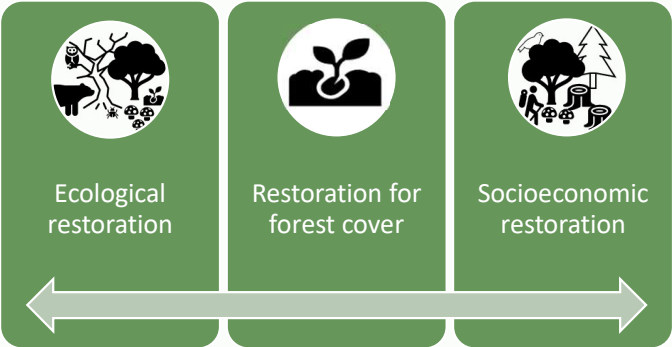


## Projections



## Site level - FastTrack





Restoration conflicts

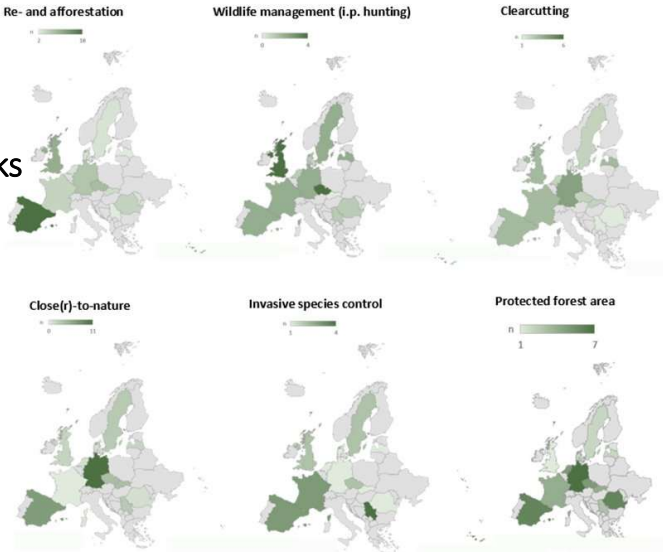
Topic at core of conflict	Restoration conflicts
Public administrations	Coordination conflicts due to ambiguous and conflicting administrative competencies Top-down decision-making misaligned with local interest
Policies and legislation	Horizontal and vertical incoherences and conflicts in national/regional forest policy
Stakeholders	Conflicts between stakeholder groups Historical powerful imbalances between stakeholders
Decision-making processes	Case study specific



The "silent majority" supports forest restoration, but lower support in disturbed areas.  
Perceived or expected negative impacts of restoration must be taken serious to not risk conflicts and decreasing general support of forest restoration!



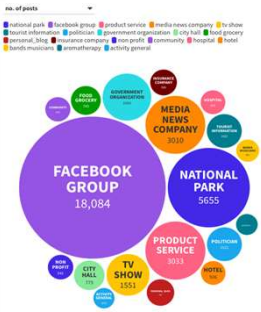
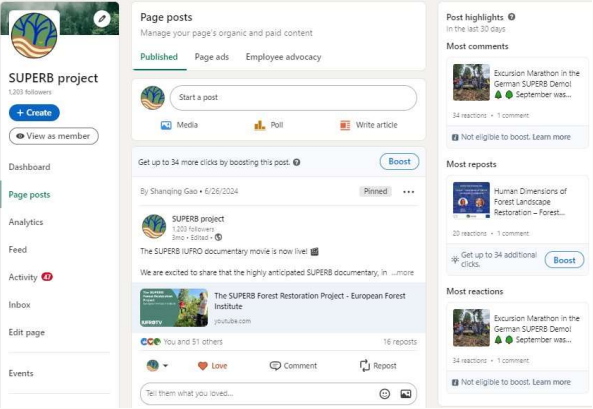
National regulatory and policy frameworks



EU cross-sectoral forest restoration policy coherence

	CLIMATE POLICY	RURAL DEVELOPMENT POLICY	NATURE CONSERVATION POLICY	BIOECONOMY POLICY	WATER POLICY	ENERGY POLICY
Forest-related policy objectives	Reach net carbon removals target of 310 million tons of CO <sub>2</sub> equivalent by 2030	Strengthening the economic fabric of rural areas	Enable the long-term sustained recovery of biodiverse and resilient nature	Reduce dependence on non-renewable, unsustainable resources	Combat water pollution and ensure sufficient water supply to flora and fauna and human needs	Increase the share of energy produced from renewable sources to at least 42.5% until 2030
Forest restoration objectives						
O <sup>1</sup> : Increase the share of standing and lying deadwood	0,30	-0,24	1,21	-0,48	0,55	-0,68
O <sup>2</sup> : Increase the share of uneven-aged forests (incl. through natural regeneration)	0,91	0,55	1,56	0,24	1,00	0,06
O <sup>3</sup> : Improve forest connectivity	0,97	0,73	1,30	0,53	1,09	0,26
O <sup>4</sup> : Increase the stock of organic carbon in forests	1,41	0,15	0,94	0,12	0,66	-0,21
O <sup>5</sup> : Foster strict forest conservation (in particular of primary and old-growth forests)	0,47	-0,52	1,03	-0,70	0,74	-0,76
O <sup>6</sup> : Foster afforestation (e.g. through planting at least three billion trees in Europe by 2030)	1,38	0,79	0,71	1,18	1,00	1,06
O <sup>7</sup> : Avoidance of clearcutting	0,44	-0,22	0,62	-0,27	0,70	-0,79
O <sup>8</sup> : Combat invasive (alien) species	0,33	0,53	1,18	0,18	0,42	0,18
O <sup>9</sup> : Ensure adapted cloven-hoofed game populations in forests	0,45	0,77	1,17	0,33	0,47	0,39

Social media analysis, Online debate mapping



Fleckenstein, S. (2024). From sectoral policy change to cross-sectoral (dis) integration? A longitudinal analysis of the EU's forest and rural development policy. *Forest Policy and Economics*, 169, 103319.



## Media engagement



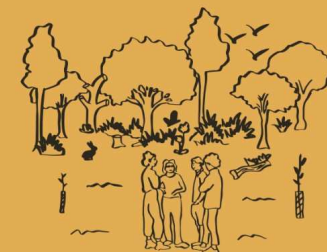
## Public engagement



**Societal support →  
Political support →  
Financial support →  
Benefit for nature!**

## Forest Storytelling and Engagement for Change

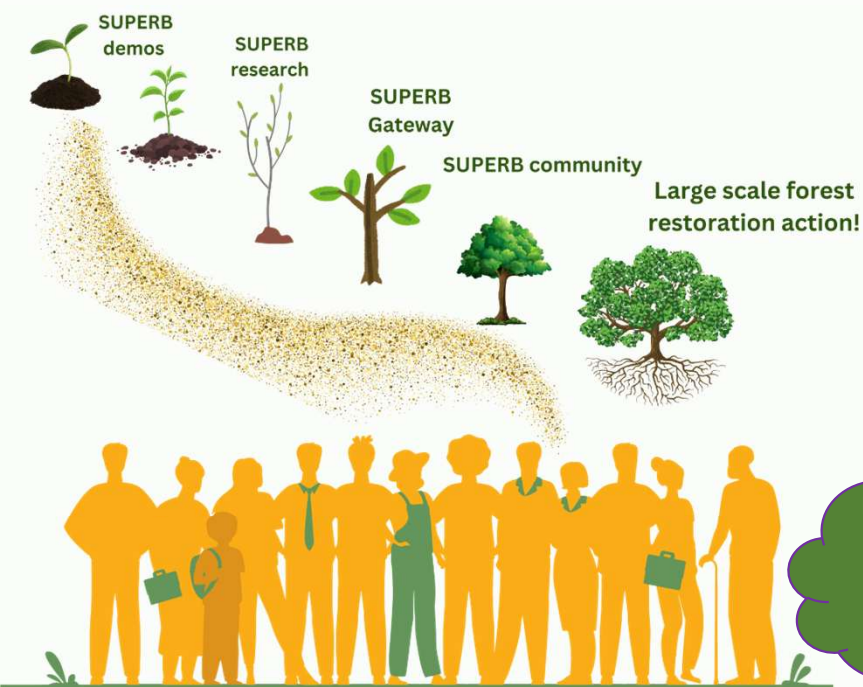
A toolkit for effective stakeholder  
engagement and communication



## Stakeholder Engagement & Community Building

Final events 2025  
26-28 May, Bonn  
23-26 June,  
Edinburgh  
8-12 Sep, Leuven

**Building the Upscaling  
Community with key  
restoration actors**





## SUPERB's Policy recommendations for the EU Nature restoration Law

SUPERB aims at large-scale forest restoration in Europe, combining scientific and practical knowledge to show restoration measures. The policy brief is based on the concepts underpinning the approach and provides four recommendations for changes to the proposed EU Nature Restoration law. These aim to avoid undesirable developments resulting from the currently built-in behavioural locking into our forests, and instead help to realise the full and positive potential of forests for the future.

Europe's forests - what's important to know?

Today's forests and their ecosystem services are under pressure from climate change and related disturbances such as droughts, fires and storms, the introduction of new pests and diseases. Further challenges are land-use changes and fragmentation, intensive management, and continuously high nitrogen deposition. At the same time, demand for forest products and services such as wood and carbon sequestration are increasing. All of these factors directly or indirectly influence forest ecosystems and their ability to meet diverse demands for ecosystem services, including habitat provision for biodiversity and carbon sequestration for climate change mitigation.

Nature Restoration law - main aims?

The proposed Nature Restoration Law (NRL) recognises the urgent need to address environmental challenges. It provides a much-needed approach to repair damage to Europe's forests by 2030 and is designed to prevent the overall impacts of climate change and biodiversity loss. It also provides an opportunity to improve the balance of the different functions that forests provide by prioritising the restoration of ecological functions and biodiversity in forests. Finally, it directly links with and complements the EU Biodiversity Strategy for 2030 with restoration measures that will improve forest biodiversity and safeguard its adaptive capacity.

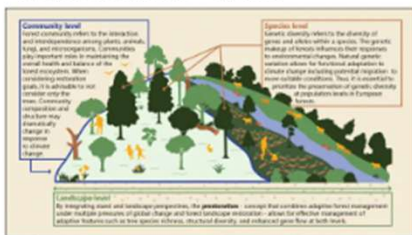
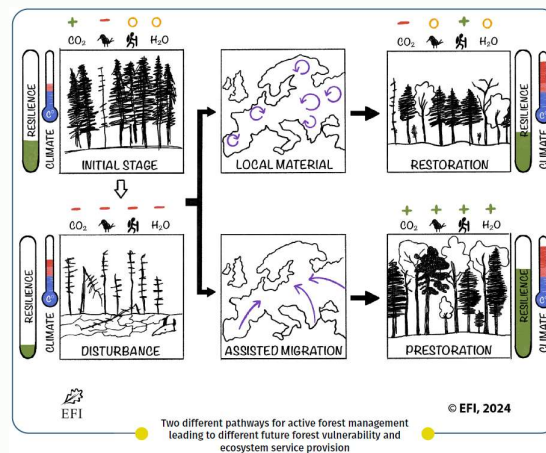
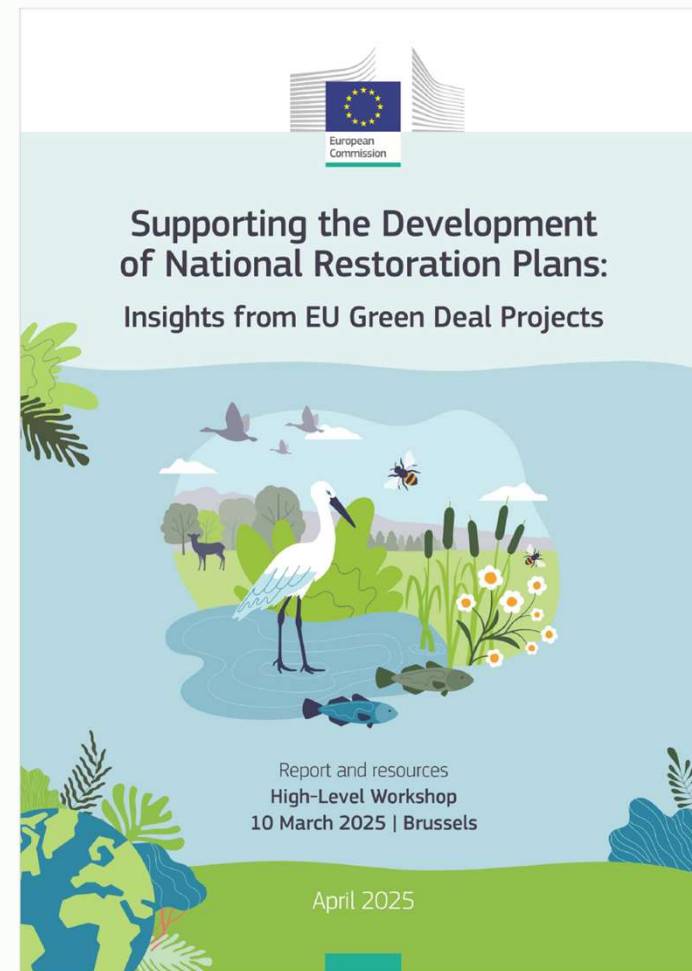


Figure 1: Biodiversity levels: the three levels of biodiversity - genetic, species, and ecosystem diversity. Biodiversity of the ecosystem level and ecosystem diversity are interlinked.



Chakraborty, D., et al. 2024. *How to strengthen the European forest carbon sink through prestonation: integrating active restoration and adaptation*. Policy Brief 11. European Forest Institute. <https://doi.org/10.36333/pb11>

- Joint Policy Brief and Science publication  
Daniel Hering et al., Securing success for the Nature Restoration Law. *Science* 382,1248-1250(2023). DOI:10.1126/science.adk1658
- Participation in DG ENV Expert Group on NRR (observer)
- In-person invitation-only event on **10<sup>th</sup> of March 2025** targeted at EC and national competent authorities + **report**
- Joint Session on Landscape Restoration at SERE '24, + Joint Session with UN Decade, SERE, UNEP-WCMC,...





# Forest Knowledge Gateway

Making knowledge on forest restoration and integrative management accessible to everyone.



This Gateway is being developed as part of EU-funded projects [SUPERB](#) and [TRANSFORMIT](#).



**SUPERB**  
Upscaling Forest Restoration



**TRANSFORMIT**



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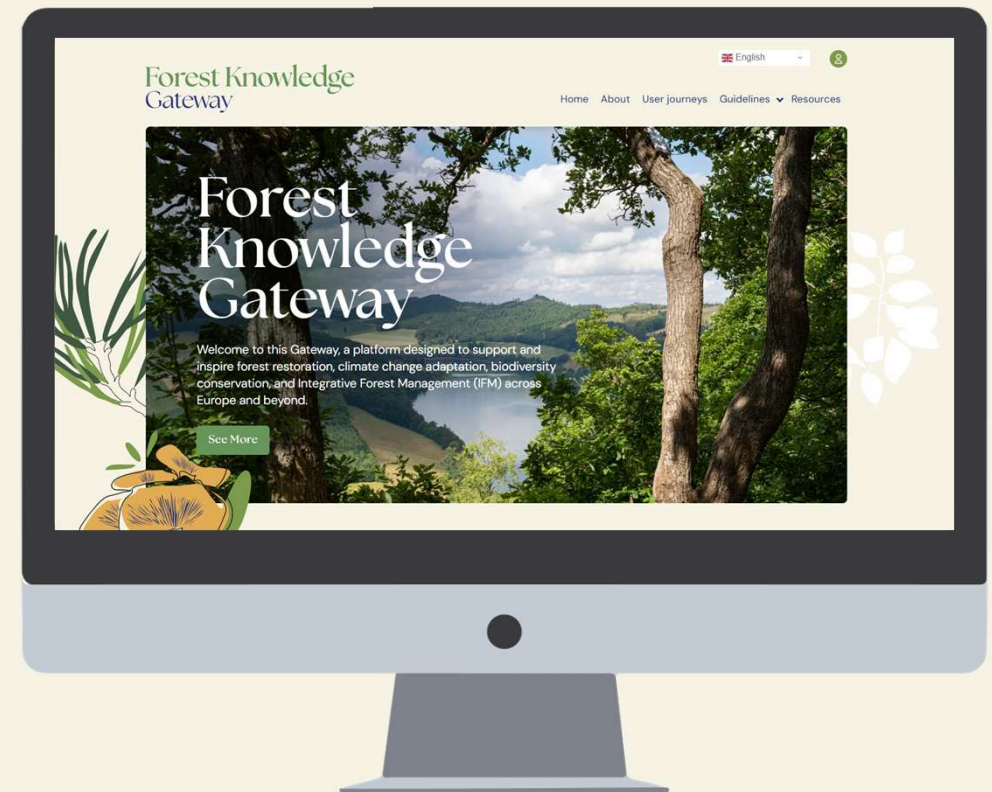
# Forest Knowledge Gateway

- About

...designed to support and inspire **forest restoration, climate change adaptation, biodiversity conservation, and Integrative Forest Management** across Europe and beyond.

Get to know the Gateway!  
[www.forestknowledge.eu](http://www.forestknowledge.eu)

\*The platform will officially be launched in September 2025.







# Resources that you will find in the Gateway



Educational  
material



Tools &  
Methods



Projects



Publications



Stories



External platforms





# Restoration journeys 4 you

Based on stakeholder specific major restoration barriers and enablers, we have developed "Stakeholder Journeys", which will guide people through the topics and synthesized knowledge most relevant for their work.



Landowners and  
practitioners



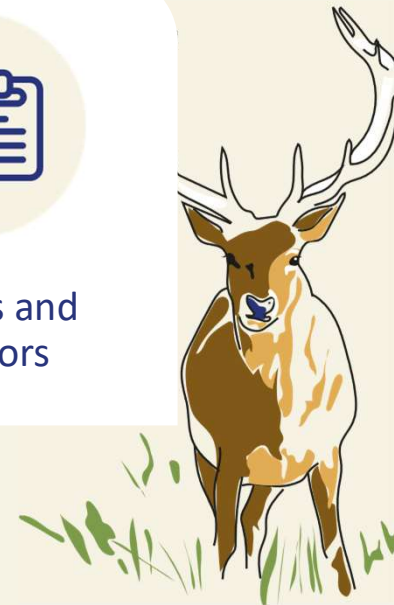
Planners and  
implementers



Policy actors



Funders and  
investors



# Your contributions are welcome!



Make your insights or hands-on experience in forest restoration or forest management accessible!

We're building this Gateway together – contribute your resources and help others learn from your work.








# Stay in touch!

For questions, feedback, or if you would like to connect,  
contact [elisabeth.schatzdorfer@efi.int](mailto:elisabeth.schatzdorfer@efi.int) or [gesche.schifferdecker@efi.int](mailto:gesche.schifferdecker@efi.int)

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