





ACCELERATING FOREST RESTORATION IN CENTRAL EUROPE THROUGH HARMONISATION OF DEFINITIONS, POLICIES, AND ACTION PLANS







EXECUTIVE SUMMARY

Europe's forests face increasing pressures from storms, droughts, wildfires, and pest outbreaks intensified by climate change. Yet national restoration efforts remain fragmented, guided by inconsistent definitions, uneven financing, and uncoordinated monitoring. Without a common EU framework, Member States risk falling short of the legally binding forest restoration targets set under the Nature Restoration Regulation—30% of degraded forests restored by 2030, 60% by 2040, and 90% by 2050.

A harmonised, science-based, and climate-resilient approach is essential to ensure that restoration contributes meaningfully to EU biodiversity, climate, and resilience goals.

Background

European forests are critical for biodiversity conservation, carbon storage, and the delivery of ecosystem services, supporting both rural livelihoods and regional economies. However, climate change-induced disturbances are projected to drastically reduce these ecological and social functions.

The European Green Deal, the EU Biodiversity Strategy for 2030, and the Nature Restoration Regulation provide a comprehensive framework for reversing forest degradation. Yet gaps between EU-level ambition and national implementation threaten to undermine collective progress.

KEY CHALLENGES

1. DIVERGENT NATIONAL DEFINITIONS — FRAGMENTED LEGAL FOUNDATIONS

While the Nature Restoration Regulation defines forest restoration, it does not provide a common definition of forest degradation. Central European countries use varying definitions, and some offer none at all. This inconsistency undermines a shared understanding of when and how restoration obligations apply across the EU.

2. CLIMATE ADAPTATION LAG — RESTORATION CHOICES REMAIN DRIVEN BY TRADITION, NOT FUTURE SUITABILITY

The Nature Restoration Regulation does not define explicit criteria for selecting tree species or provenances. Consequently, rapid reforestation and economic return often remain the primary drivers of restoration initiatives. Many Member States therefore continue to base restoration choices on existing or historical forest compositions rather than projected climate suitability. Uncertainty about future growing environments, including potential disturbances, together with the inherent limitations of species suitability models, poses major challenges for long-term planning. Climate models often lack the resolution and local relevance needed for practical use, therefore short-term or conservative species choices risk locking European forests into maladaptive trajectories, undermining the Nature Restoration Regulation's climate-resilience goals.

3. FUNDING CONSTRAINTS — SHORT-TERM FINANCING UNDERMINES LONG-TERM RECOVERY

Forest restoration is fundamentally constrained by fragmented and short-term funding mechanisms. Many programmes remain limited to specific countries, projects, or disturbance types, hindering continuity, scalability, and strategic coordination. Crucially, these short-term funding mechanisms often favour quantifiable, 'hard' measures (e.g. planting a specific number of trees) over more ecologically effective, but less easily measurable, 'soft' interventions (e.g. managing browsing pressure or supporting natural regeneration), despite the latter being more economical and ecologically efficient. The absence of stable, long-term, and transboundary financial planning stands in sharp contrast to the slow regeneration and extended monitoring needs of forest ecosystems, critically weakening the EU's capacity to achieve lasting restoration outcomes.

4. VARIED RESTORATION OBJECTIVES AND FRAGMENTED MONITORING — LIMITED COMPARABILITY AND ACCOUNTABILITY

Most Central European Member States prioritise the establishment of forest cover, but only a few link restoration efforts to biodiversity enhancement, increased climate resilience, and ecosystem service recovery (e.g., Austria, Germany, Hungary, and Slovenia).

Despite common guidance under Article 17 of the Habitats Directive, monitoring methods and indicators differ widely. Only a few Member States—such as Germany, Austria, and Poland—require long-term monitoring with measurable success criteria. The Nature Restoration Regulation still lacks clear and operational definitions of forward-looking, climate-resilient "good condition" targets, while monitoring capacity and data availability remain insufficient in several Member States.

POLICY RECOMMENDATIONS

National policies often treat restoration as part of routine forest management, yet few establish clear mechanisms for responding to large-scale disturbances. To ensure coherence, Member States should adopt transparent, standardised planning processes and commit to long-term ecosystem recovery goals.

1. ESTABLISH SHARED DEFINITIONS AND INDICATORS

Define disturbance and degradation consistently at the EU level, using common indicators to monitor restoration progress.

Action: The European Commission, in cooperation with Member States and the European Environment Agency (EEA), should propose shared definitions and indicator sets.

2. INTEGRATE CLIMATE ADAPTATION INTO ALL NATIONAL RESTORATION PLANS

Include regional, national and local climate projections in species and provenance selection, and introduce rapid-response mechanisms for large-scale disturbances.

Action: Member States should reserve a portion of restoration areas for testing climateresilient provenances and mixed-species approaches by 2030. The results should inform the development and refinement of species and provenance selection models.

3. SECURE LONG-TERM AND TRANSBOUNDARY FINANCING

Action: Secure long-term financing, including EU-backed funds for biodiversity and climateadapted restoration.

4. DEVELOP A COMMON EU FRAMEWORK FOR MEASURING RESTORATION SUCCESS

Base assessment on ecosystem-specific indicators capturing biodiversity, structural complexity, and regeneration outcomes—such as tree cover, species composition, deadwood volume, forest flora and fauna, and soil characteristics.

Action: The European Commission should coordinate a pilot monitoring scheme to measure restoration success.





TITLE: POLICY BRIEF: ACCELERATING FOREST RESTORATION IN CENTRAL EUROPE THROUGH HARMONISATION OF DEFINITIONS, POLICIES, AND ACTION PLANS

AUTHORS: Slovenian Forestry Institute (SFI), Slovenia: Katja Kavčič Sonnenschein, Marjana Westergren,

Boris Rantaša, Anže Japelj,

Austrian Research Centre for Forests (BFW), Austria: Debojyoti Chakraborty, Silvio Schüler, Stefan Ebner, Eszter Buchert,

Forest Research Institute (IBL), Poland: Ewa Zin, Marcin Klisz, Tadeusz Zachara, Wojciech Gil, Pawel Przybylski,

Czech University of Life Sciences Prague (CZU), Czech Republic: Jiří Korecký, Jaroslav Čepl, Jiří Chuchlík, David Chludil, Jan Stejskal,

Landesforstanstalt Mecklenburg-Vorpommern (LFOA-MV), Germany: Eric A. Thurm, Anna Wöhlbrandt,

Croatian Forest Research Institute (CFRI), Croatia: Martina Đodan, Dora Baksa,

Università degli Studi di Padova, TESAF Department, (UNIPD), Italy: Flavio Taccaliti, Francesco Sforza, Emanuele Lingua.

KEYWORDS: Policy brief, Interreg CE, forest restoration, harmonization

PUBLISHING PLACE: Ljubljana

PUBLISHER: Gozdarski inštitut Slovenije

YEAR: 2025

Co-funded by the European Union DOI 10.20315/gis028