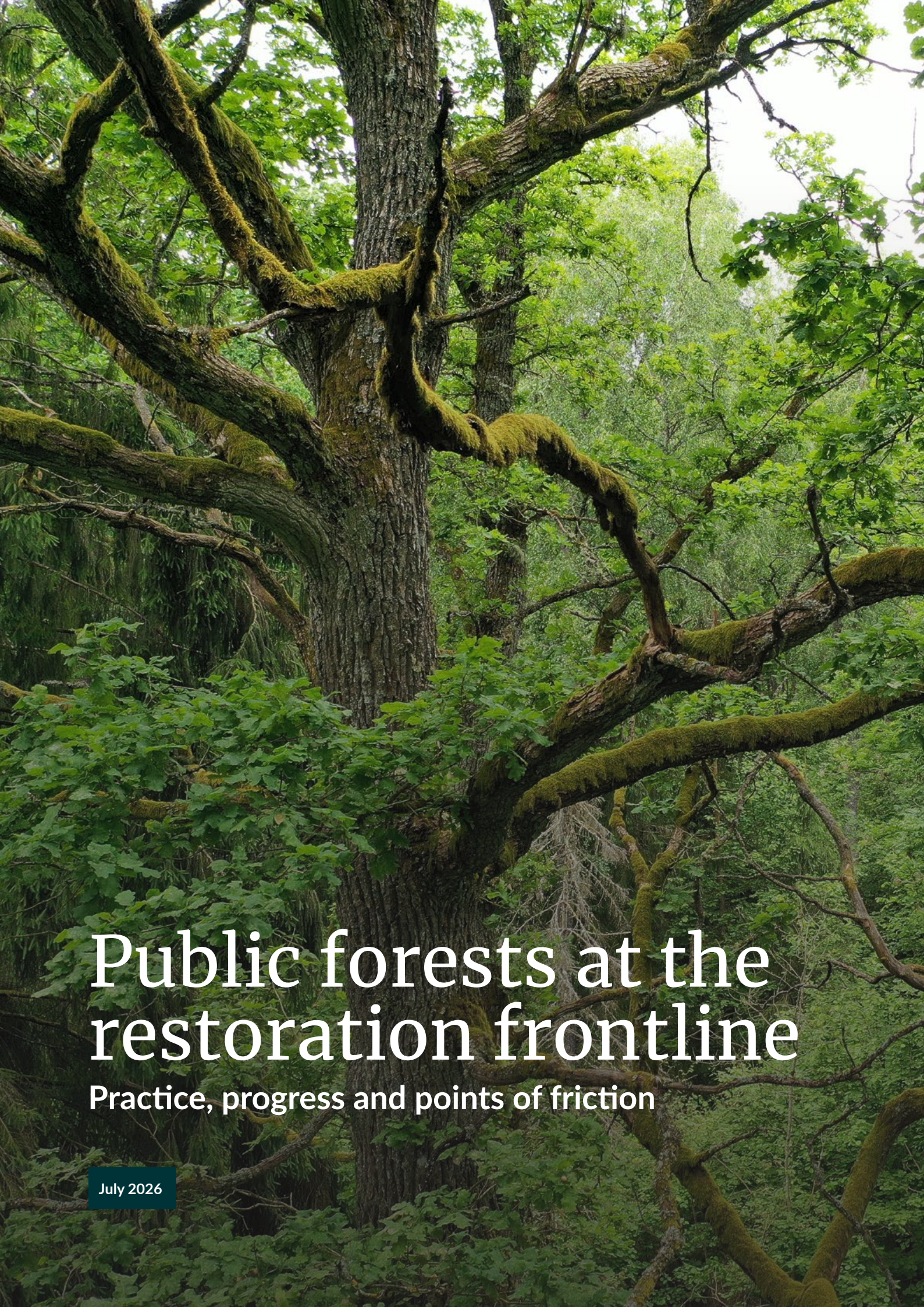

Public forests at the restoration frontline

Practice, progress and points of friction

July 2026

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Cover image: A forest in Latvia owned by the city of Rīga and managed by “Rīgas meži”, taken by SIA “Rīgas meži”

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Introduction

In line with the commitments made under the Kunming–Montreal Global Biodiversity Framework (GBF), the Nature Restoration Regulation (NRR) is Europe's first attempt to restore ecosystems at the scale of the crises they face.

And public forests are central to its success.

The burden and promise of public forests

Around 40% of Europe's forests are publicly owned, placing national, regional and municipal forest agencies among the continent's most influential land managers. Their decisions shape vast and varied territories and directly influence the ecological trajectory of Europe's forest landscapes and the wellbeing of communities that depend on them.

Europe's public forest agencies manage landscapes that underpin climate and water regulation, biodiversity and ecosystem services; supply timber, food and medicinal plants; and serve as places for work, recreation and cultural identity. Public foresters juggle many priorities under demanding conditions, facing climate impacts, institutional constraints and the weight of state and societal expectations. Across countries, ecosystems and histories, foresters share the belief that forests must remain healthy and resilient if they are to support both people and nature through the decades ahead. Yet amid accelerating environmental challenges and shifting societal needs, the question of how best to achieve this is evolving and continues to provoke debate.

There is broad agreement that the twin pressures of climate change and biodiversity loss require long-term thinking, investment and greater political clarity. Public forests have the potential to anchor Europe's restoration efforts, with impacts that extend to wider landscapes and sectors. They can be laboratories for innovation, provide ecological stability at scale and demonstrate practices that reconcile restoration with sustainable use.

The NRR has set out a shared vision and goals, but each country must determine how best to fulfil its obligations. And while quantitative targets are essential for monitoring and accountability, the qualitative realities on the ground differ widely. This calls for a discussion on the diverse management approaches to identify how state forests can best contribute to restoration and conservation while continuing to provide timber and other ecosystem services.

The many faces of Europe's public forests

Public forests are not a monolithic structure. They differ markedly in their institutional architectures, functional priorities, biogeographical contexts and day-to-day practices. Some operate as commercially oriented agencies with strong revenue mandates, while others work under broader public-interest objectives that include restoration, continuous-cover forestry and regional development. For some, high-quality restoration work has been underway for years; for others, the NRR introduces significant and sometimes uncomfortable shifts in direction. It is therefore unsurprising that the directive would be perceived differently across the union.

These forests encompass everything from expansive production landscapes to silvo-pastoral mosaics, from agricultural clearings slated for afforestation to pockets of mixed broadleaf stands, and from centralised enterprises to community-managed commons with public-interest mandates. Such diversity creates complexity, but also offers invaluable opportunities to learn from contrasting models, adaptations and histories.

This paper considers how such diversity can be harnessed to support the implementation of shared targets through practical exchange – highlighting where national contexts converge, where they diverge and how successful approaches can be adapted and transferred.

We spoke to public and community foresters, forestry scientists, policy practitioners and civil society stakeholders to identify opportunities for peer learning that could foster concerted efforts to tackle shared challenges and help promising practices take root in new settings.

Image: Knut Sturm in the Lübeck forest, Germany, by Marcus Brandt/ dpa/Alamy

Germany – from monoculture maker to close-to-nature forestry pioneer

The German forestry system began as a global model of regimented, productive monocultures, built on strict planning and sustained-yield principles. After many decades of windthrow, pest infestations and ecological decline resulting from these practices, however, pockets of the country have begun shifting towards diverse, resilient, close-to-nature forests – especially on public land.

Today, German forestry also showcases rare examples of how a legacy of clear-cut management can evolve into a modern, low-maintenance approach centred on ecological integrity, and long-term financial and societal benefit. Yet, entrenched habits, structural disincentives and anxieties about transition costs continue to slow down the change.

Case study 1
The Lübeck model: Learning from nature

Germany's move towards continuous-cover forestry began as an intellectual and practical current over a century ago – when the ecological and economic unsustainability of monocultural, clear-cut forestry could no longer be ignored. Although reforms have been introduced gradually in parts of the country, uptake remains uneven, partly because public forests are governed regionally with high autonomy. Northern states in particular retain strong adherence to rotational forestry – with some notable exceptions.

One such example is the Lübeck Model, which grew out of a long history of trialling nature-based, socially legitimate forestry approaches in Northern Germany since the 1920s. Upon approval by a local referendum, it developed into its current form in the 1990s , and now represents one of Europe's most advanced examples of continuous-cover, close-to-nature forestry on public land.

The city of Lübeck manages its forest with four aims: to offer a natural space for people to experience and learn from; to supply timber through selective, sustainable harvesting; to protect and enhance biodiversity; and to store carbon as part of climate-mitigation efforts. Over thirty years, this approach – widely regarded as the closest alignment with natural forest dynamics among major public-sector models – has produced structurally diverse, biodiverse and climate-resilient forests while maintaining steady timber production. The model is now internationally recognised as a leading public-sector example of ecological forest management.

"We must learn from nature itself," says Knut Sturm, formerly Lübeck's chief forester and now serving Mecklenburg-Vorpommern, the neighbouring state. He describes the need to observe how forests behave under local conditions: Does a tree normally die alone, or do they die in groups? What is the maximum diameter of a beech before it begins to rot and lose economic value? This, he argues, is the level of site-specific understanding on which forestry should be based.

Having seen the results achieved in Lübeck, Knut set out to scale the model across a much larger landscape of 185,000 hectares. It is an ambitious goal in a region steeped in conventional forestry, but research suggests it is both feasible and worthwhile. Alongside strong environmental gains, the model also outperforms other forestry systems economically.

Economic performance across forestry models[1]

Considering timber stocks, harvest volumes, revenues and operating costs, researchers modelled different forestry strategies across test sites on the ground and found:

- **The Lübeck model** builds the highest total and broadleaf timber stock, strengthening long-term stability.
- **Continuous-cover forestry** generates the highest long-term revenues, while rotational systems perform best only in the short term.
- **The Lübeck model** has the lowest operating costs and delivers the most stable economic results over time.

Overall, both close-to-nature approaches consistently outperformed conventional systems in terms of long-term economic returns across all test regions.

"It was a hundred years ago when German foresters realised that monocultural, rotational forestry is not a good idea – yet, we are still using the same practices," Knut notes, "It's crazy. Even some private forest owners who agree with the close-to-nature principles still go on to start 'that one last spruce stand' before changing course."

The reasons for the slow conversion are complex. While ecological and economic benefits are well-evidenced in established close-to-nature forests, breaking ingrained conventions takes time, resources and political commitment. One major factor sustaining the illusion of profitability in rotational forestry is a subsidy system that rewards activities rather than outcomes.

1 Christoph Kehl and Christoph Revermann, *Naturgemäßer Waldumbau in Zeiten Des Klimawandels* (Das Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag (TAB), 2024), https://www.tab-beim-bundestag.de/projekte_naturgemaesser-waldumbau-in-zeiten-des-klimawandels.php.

"There is a subsidy for planting trees, then for fencing, then for soil preparation on a clear-cut stand," Knut explains. "The cost is more or less 8,000 euros per hectare." This does not account for payments that compensate for lost profits after salvage logging following calamities such as bark beetle outbreaks, which disproportionately affect monocultural conifer plantations.

While close-to-nature forestry requires far less maintenance, the upfront conversion phase is investment-heavy and, unlike agriculture, outcomes take a long time to show. Successful models have emerged only through decades of testing, monitoring and adapting to local conditions – work that is even more essential under accelerating environmental change.

"Instead of funding actions with no accountability for outcomes, governments should be funding inventories – to optimise both the profits and climate resilience in close-to-nature forestry," Knut argues. "But as long as research funding favours conventional practices, many foresters will continue to align with industry voices insisting that 'what works elsewhere cannot work here' – and so business-as-usual prevails."

The NRR will make funds available for public close-to-nature forests, but challenges remain. In one state forester's assessment elsewhere, the proposed per-hectare subsidy appears sufficient in principle, but the overall funding pool remains too limited for the scale of conversion required. Moreover, compared with subsidies for rotational forestry, close-to-nature applicants face considerably more administrative hurdles, with each intervention requiring detailed surveys and fieldwork.

"It all takes time. I'm leaving the office in a year, and I haven't finished my work," Knut reflects. "My hope is that my successors will take it forward in the same spirit."

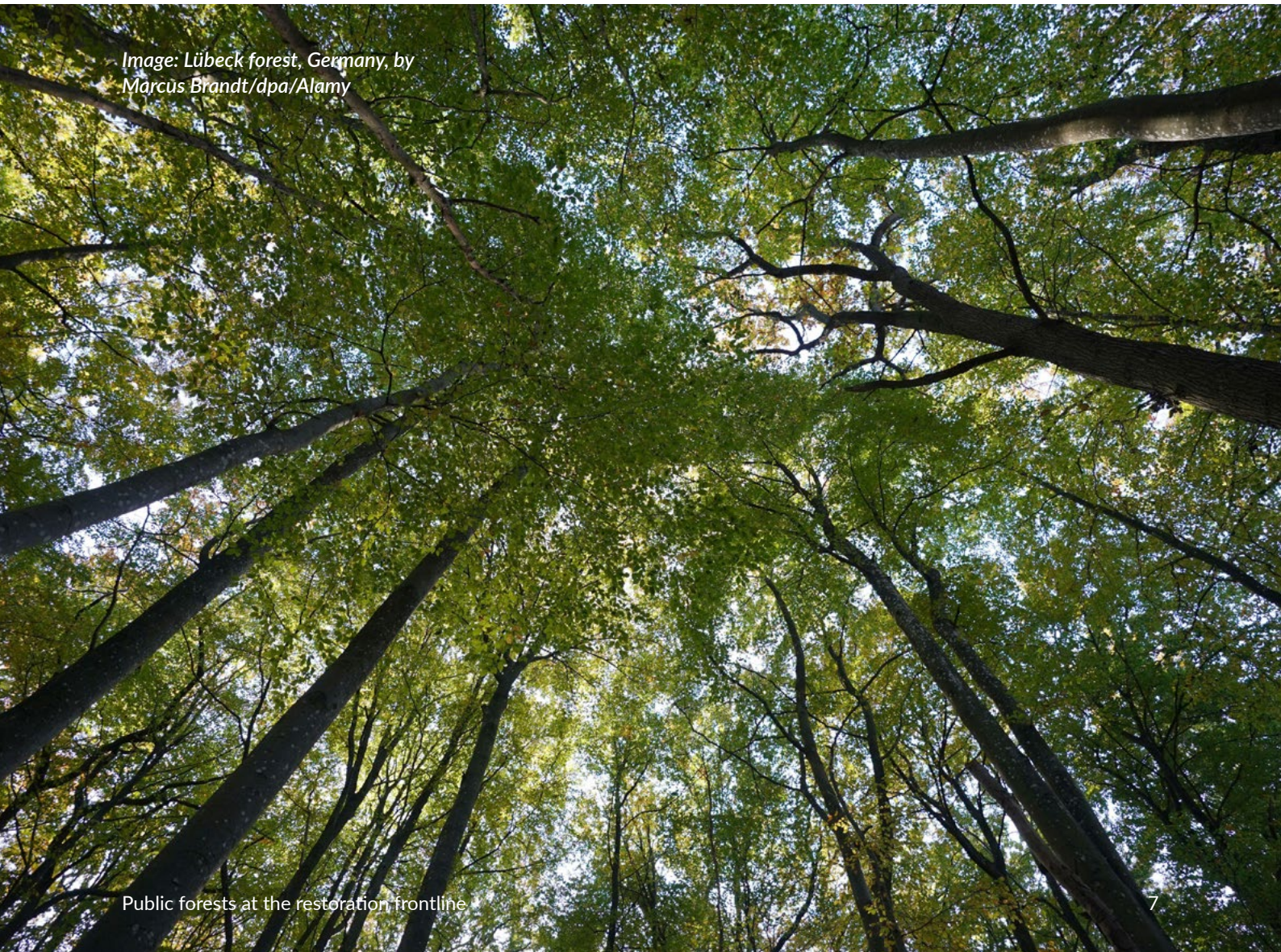

Image: Lübeck forest, Germany, by Marcus Brandt/dpa/Alamy

Image: Common land in the Comunidade de Montes de Teis, Spain.

Spain – tension and opportunity in diversity

Over its vast territory and autonomous regions, Spain hosts one of Europe's most diverse constellations of public and community forestry systems. Sharp ecological contrasts, layered land-tenure histories and a highly decentralised governance model have yielded approaches ranging from intensive timber production to low-intervention, multifunctional stewardship. While some regions have moved decisively towards restoration-oriented forestry, others remain locked into production-centred models.

This diversity complicates implementing a unifying framework such as the NRR, but it also provides a rich body of real-world experience on what enables – and what obstructs – effective restoration at scale.

Case study 2
Galicia: Communities on the line of (forest) fire

One of Spain's most tree-covered regions, Galicia, showcases within a single region Europe's competing forest futures.

Favoured for its rapid growth and low upfront costs, non-native eucalyptus has been widely adopted by private owners and public forestry bodies alike. Monocultural plantations dominate large areas, supplying low-added-value markets such as pulp, paper and biomass. But the model's externalised environmental costs – including biodiversity loss, water depletion and extreme fire risk – threaten lives and infrastructure.

In contrast, roughly half of Galicia's forest area and 22% of Galicia's total land is governed by community assemblies. These locally managed systems demonstrate restoration-oriented, multifunctional approaches that integrate wildfire prevention and rural livelihoods.[2]

Baroña – rural economy built on forest revenue diversification

[3]Baroña's 878 hectares of forest commons illustrate how community-led land governance can combine ecological restoration with stable rural employment, reducing dependence on timber markets. Since regaining management control of the state-expropriated lands, the community has actively dismantled pine and eucalyptus monocultures, restoring native forests, wetlands and agro-silvopastoral mosaics.

Today, Baroña supports around ten local full-time jobs, funded through a diversified set of forest-based activities. These include resin extraction, livestock grazing, close-to-nature forestry, honey production and wild mushroom foraging. The community also operates a mobile sawmill, enabling local timber processing and value retention, and recently opened a food-processing centre for meat and other forest products.

Revenues are reinvested locally to enhance restoration, wildfire prevention and cultural heritage, reinforcing long-term stewardship.

Despite not falling under direct state management, community forests represent a major asset for meeting national restoration goals – but they remain vulnerable.

While some communities have achieved relative self-sufficiency, others have been drawn into market-driven plantation contracts, leasing land to eucalyptus companies for short-term income or upfront payments. Reversing these decisions is costly and slow, often requiring decades of restoration.

Support is therefore decisive. Yet, as community conservationist and firefighter Manuel Lopes Rodrígues explains, access to EU funding is often prohibitively complex: projects are deemed too small, too unconventional or excluded precisely because they already host native forests – "because we restored them ourselves, without support," he notes. "But there is always more to be done." Other times, approved projects face such severe delays in fund disbursement that they collapse, forcing communities into debt to keep restoration work alive.

Multimillion-euro restoration projects, meanwhile – if governed top-down and without social legitimacy – can sometimes do more harm than good, observes another community conservationist, Joám Evans Pim. "They underestimate the level of uncertainty – the need for local knowledge in order to experiment and innovate on the ground."

Galicia reminds us that Indigenous and local community environmental stewardship also exist within Europe. Regional and national governments would do well to recognise it as a low-cost, high-capacity delivery mechanism for NRR objectives, with proven results in restoration, climate adaptation and fire prevention.

The task ahead is to recognise, resource and scale the solutions already working – by easing administrative barriers and capitalising on the learning opportunities.

2 Joám Evans Pim et al., *Atlas de Áreas Conservadas Por Comunidades Locais* (Fundación Montescola, 2025), https://caprifcc.com/wp-content/uploads/2025/10/13-fichas-atlas.pdf.

3 Pim et al., *Atlas de Áreas Conservadas Por Comunidades Locais*.

Image: Mushrooms in the Majdal Heath Bornholm island in Denmark, by Johannes Pistorius/Alamy

Denmark – collective solutions where margins are thin

Following centuries of agricultural expansion and intensification, Denmark retains few natural ecosystems. Around 2% of its land is forest set aside for biodiversity, virtually none of which is old-growth. With minimal ecological buffers remaining against floods, droughts, nutrient pollution and biodiversity loss, Denmark has little margin for error.

This vulnerability has driven an ambitious land-use reform that integrates climate mitigation, biodiversity restoration and water protection within a single framework. Underpinned by broad, consensus-based stakeholder negotiations, Denmark's approach offers valuable lessons for Europe on restoration, multifunctional forestry and, not least, democratic decision-making.

Denmark has taken a proactive, collaborative approach to implementing the NRR. It has integrated its obligations into national policy through a landmark political agreement, followed by funding and implementation measures. The approach emphasises early stakeholder dialogue, financial incentives for landowners and measurable restoration targets, with a particular focus on agricultural land conversion.

The cornerstone of the initiative is the tripartite "Agreement on a Green Denmark", bringing together government, agricultural organisations (including the farmers' union), industry groups and environmental NGOs.

This consensus-driven model pre-empts conflict, turning land-use disputes into a cooperative planning process. It directly contributes to NRR objectives by committing to restore around 6% of Denmark's land area by 2030, including transforming farmland into semi-natural forests and other ecosystems, whilst recovering coastal and freshwater areas affected by agricultural nutrient runoff.

The agreement also introduces the world's first agriculture-specific carbon tax, with revenues earmarked for farmer compensation – a move widely recognised as a model for balancing economic interests with environmental goals.

Denmark's NRR implementation integrates existing national and international frameworks on biodiversity, carbon sequestration and agricultural resilience. The forthcoming National Restoration Plan draws on EU datasets and is facilitated by substantial public and private funding to incentivise afforestation and restoration. Delivery is coordinated through stakeholder-led working groups and digital monitoring tools, creating a bottom-up implementation model that in some areas exceeds EU requirements and will feed into Denmark's 2026 submission to the European Commission.

Case study 3
LIFE4Forest: De-risking the transition to close-to-nature forestry

While Denmark's national restoration strategy focuses heavily on land-use change and afforestation, a parallel challenge lies within its existing forests: how to transition from even-aged, singularly production-oriented plantations to ecologically resilient, climate-adapted and economically viable management systems. The LIFE4Forest project[4] was designed to address this gap: The project builds on research and the ongoing transition in the Danish State Forest via close-to-nature forestry and experiences from German forestry.

Launched in 2020 under the EU LIFE Programme and led by the Danish Nature Agency, LIFE4Forest seeks to accelerate the transition from monocultural conifer plantations – particularly Norway spruce – to close-to-nature forestry. The project operates across public and private forests, positioning Denmark as a testing ground for approaches that could be scaled across Europe's plantation-dominated landscapes.

At its core, LIFE4Forest addresses one of the most persistent barriers to forestry reform: economic uncertainty. Conventional forestry operates on rotation cycles of 50–100 years, making structural change difficult to justify within short investment horizons. LIFE4Forest responds by developing economic models, planning tools and decision-support systems that assess the financial performance of close-to-nature forestry alongside its ecological benefits. These tools enable forest owners and public agencies to compare cash flows, land values and risk profiles across management systems – reframing close-to-nature forestry as an economically defensible strategy rather than an ideological choice.

On the ground, the project has established large-scale demonstration sites covering more than 1,000 hectares. These sites test practical interventions such as mixed native species planting under shelterwood systems, irregular thinning, natural regeneration and increased deadwood retention. State forests act as anchor sites, providing controlled conditions for monitoring biodiversity indicators, carbon stocks and forest stability under changing climatic conditions.

Crucially, LIFE4Forest also invests in professional uptake. Through training programmes, workshops and targeted subsidies covering early conversion costs, the project engages private forest owners, managers and contractors – groups that often perceive close-to-nature forestry as risky or impractical. Early results suggest that once uncertainty is reduced and support structures are in place, resistance declines, with many participants reporting stable production, improved resilience and greater confidence in long-term management.

By aligning ecological restoration with economic rationality, LIFE4Forest complements Denmark's broader NRR implementation. The project directly supports Article 12 objectives by promoting upward trends in deadwood, native species diversity and uneven-aged structures, while contributing indirectly to Article 4 habitat restoration through improved forest condition and connectivity. Perhaps most importantly, it demonstrates that public forests can function as laboratories where new forestry models are tested, refined and made credible for wider adoption.

As forestry scientist Jørgen Bo Larsen observes, "Foresters have long taken pride in producing what society needs – historically, wood. This paradigm is changing, and the NRR reflects the growing societal value placed on other forest services."

In Denmark, society has shown a willingness to pay for these services. State forests are now largely restoration-focused, while private landowners are financed through public funding and technical assistance to overcome hesitancy around transforming land-use practices.

4 LIFE4Forest: Life Forest Fit for the Future - Increased Awareness of Close-to-Nature Forest Management, https://life4forest.dk/english.

Image: Protest in Krakow regarding logging in Bialowieza forest ahead of a UNESCO summit in July 2017. Poland ahead of the UNESCO summit in July 2017

Poland – balancing autonomy and accountability to release potential

In Poland, public forests are managed by a state body whose governance model combines far-reaching autonomy with weak oversight and a legal obligation to self-finance. This configuration has incentivised high harvest volumes and institutional self-protection, leaving limited space for the ecological commitments now expected of public foresters.

These constraints are structural but not fixed, and point to clear opportunities for reform, rooted in both institutional change and the country's substantial biogeographical potential.

Poland's state forestry is formally multifunctional, with responsibility for ecosystem, soil, water and biodiversity protection, alongside sustained timber production. In practice, however, the self-financing mandate has been interpreted narrowly in terms of timber output, contributing to largely homogeneous, clear-cut-based management. While Poland's forest area expanded over the twentieth century, structural diversity and species composition lag behind ecological potential, particularly in the context of climate change.[5]

A vast majority of Poland's public forests are controlled by a single, highly centralised institution, the State Forests National Forest Holding (State Forests), which also accounts for most timber harvesting. A recent state audit highlights the long-term effects of production-oriented management, including the prevalence of climate-vulnerable conifer stands and limited progress in diversification and afforestation. Forest management plans are frequently approved with significant delays and have not adequately addressed adaptation needs, even as high-volume harvesting continues, including in Natura 2000 areas. A comprehensive strategy was adopted only in 2022 and lacks clear measures, financing and scientific grounding. Consequently, afforestation has collapsed, protective forest areas declined and the carbon sink capacity decreased, while harvesting intensity and the use of wood for energy have increased.[6]

These ecological shortcomings remain unaddressed, despite strong economic performance. Timber revenues and profits have risen substantially, driven by increased harvesting and timber prices. Yet spending on nature conservation has declined relative to overall income, with support for national parks and protected areas

5 Supreme Audit Office, *Adapting Forest Management to Climate Change – a Wasted Decade (2025)*, https://www.nik.gov.pl/en/news/adapting-forest-management-to-climate-change-a-wasted-decade.html; Agata A. Konczal, 'Odtwarzając Las – Odtwarzając Państwo. Esej o Zalesianiu', Porównania 31, no. 1 (2022): 39–62, https://doi.org/10.14746/por.2022.1.3.

6 Supreme Audit Office, *Adapting Forest Management to Climate Change – a Wasted Decade.*

accounting for less than 0.5% of State Forests' revenues in 2021.[7] This imbalance raises questions about how effectively the current management arrangements can support large-scale restoration under the NRR.

Financial governance further compounds these risks. Although State Forests remain profitable, audits document overspending and significant irregularities, including disproportionately high administrative staffing and salaries, questionable expenditure on image-building activities, fictitious positions, unjustified outsourcing and the use of the Forest Fund to subsidise logging in forests of high natural value. At the same time, Poland's public forestry model combines "gigantic" economic returns with unusually low fiscal returns to the state, amounting to around €4 per cubic metre of harvested timber, well below the EU average of roughly €11 for comparable self-financing state forest systems.[8] Retaining most profits internally reduces political leverage over management priorities and limits the state's ability to redirect forest revenues towards conservation, restoration and climate objectives.

Case study 4
What better financial governance could deliver for restoring Poland's state forests

State Forests in numbers[9]

- **Public forest share:** over 75% of Poland's forests are managed by State Forests
- **Timber dominance:** around 95% of the national timber harvest
- **Revenues (2023):** approx. PLN 14.6 billion, nearly 90% from timber sales
- **Net profit (2020–2023):** PLN 0.5–1.0 billion annually
- **Nature conservation spending:** less than 0.5% of total revenues
- **Average salary:** about 160% of the national average
- **Staffing:** 3.3 employees per 1,000 ha, compared to the EU average of 1.5
- **Afforestation:** ~400 ha in 2023, down from ~12,000 ha in the 1990s

Given the turnover of State Forests, the scope for restoration investment is significant. Even conservative governance and spending corrections identified by the Supreme Audit Office could free resources sufficient to restore thousands of hectares annually, with deeper reforms significantly expanding this potential.[10]

Decision-making on financial allocations and timber sales remains largely internal, with limited ministerial, judicial or public oversight.[11] This governance gap weakens accountability for biodiversity and climate outcomes, and reinforces a predominantly clear-cut-based model, constraining the development of alternative approaches such as close-to-nature forestry, restoration-oriented management and non-timber revenue streams.

7 Augustyn Mikos et al., *Lasy Na Sprzedaż: Jak Lasy Państwowe Uwłaszczyły Się Na Wspólnych Lasach* (Pracownia na rzecz Wszystkich Istot, 2023), https://pracownia.org.pl/publikacje/lasy-na-sprzedaz.

8 Supreme Audit Office, *State Forests or Private Forests? (2025)*, https://www.nik.gov.pl/en/news/state-forests-or-private-forests.html.

9 Data: *Adapting Forest Management to Climate Change – a Wasted Decade*; *State or Private Forests?*; comparisons to average salary and conservation spending: Augustyn Mikos et al., *Lasy Na Sprzedaż: Jak Lasy Państwowe Uwłaszczyły Się Na Wspólnych Lasach* (Pracownia na rzecz Wszystkich Istot, 2023), https://pracownia.org.pl/publikacje/lasy-na-sprzedaz.

10 Estimates are indicative and based on combining audit-identified financial inefficiencies with global restoration cost ranges. Restoration costs vary widely depending on ecological conditions, labour costs and restoration objectives; see Trillion Trees, *Defining the Real Cost of Restoring Forests: Practical Steps towards Improving Cost Estimates* (2022), https://trilliontrees.org/wp-content/uploads/2022/08/Trillion-Trees_Defining-the-real-cost-of-restoring-forests.pdf.

11 Supreme Audit Office, *State Forests or Private Forests?*

Such dynamics pose a key implementation risk for the NRR: Without adjusting financial governance, incentives and oversight, existing priorities may continue to favour timber production and institutional stability over other mandates.

At the same time, Poland's public forests offer notable scope to enhance ecosystem services at relatively low cost. Research shows that some forest types, including upland and low-fertility sites, offer limited economic returns from timber but high ecological value, making them suitable candidates for reduced harvesting or restoration-focused management.[12] Managing more than seven million hectares of largely continuous forest landscapes across lowland, upland and montane regions, State Forests operate at a scale that could meaningfully advance biodiversity, climate resilience and ecosystem services if management objectives are realigned.

Recent political developments suggest an opening for such a shift. Since the change of government in 2023, environmental policy has begun to move, albeit unsteadily. Since 2024, the government has taken steps to limit logging in selected high-value forest areas, reinforced in 2025 by the creation of the 3,000-hectare Bliżyńskie Natural Forest reserve. Further commitments include expanding strictly protected old-growth areas and temporarily pausing logging in an additional 1,200 sites under review. Together, these measures could exclude up to 20% of Poland's forests from timber harvesting, creating space for diversified forest functions. While implementation remains uneven and temporary measures do not guarantee permanent protection, they represent a meaningful first step.

Poland's Supreme Audit Office has outlined a pragmatic starting point for reform, including clarifying ministerial supervision, strengthening the legal protection of State Treasury assets, improving transparency in timber sales, clarifying financial planning and the use of funds, and embedding climate adaptation and biodiversity objectives more firmly in forest law and practice.

The scale of State Forests, which has at times contributed to inertia, inefficiencies and weak oversight, could be turned into a strength. With clearer mandates, stronger oversight and transparent revenue allocation, a large, unified institution can set consistent standards, align management across regions and mobilise resources. In a country with considerable ecological and economic potential, this combination could offer a credible pathway to rebuilding public trust while securing resilience over the long term.

12 Anna Kożuch and Andrzej Marzęda, 'The Effects of Natural and Economic Factors on the Financial Performance of Forest Management Units: The Example of Forest Districts of the State Forests National Forest Holding from Eastern Poland', *Forests* (Basel) 12, no. 11 (2021): 1559-, https://doi.org/10.3390/f12111559.

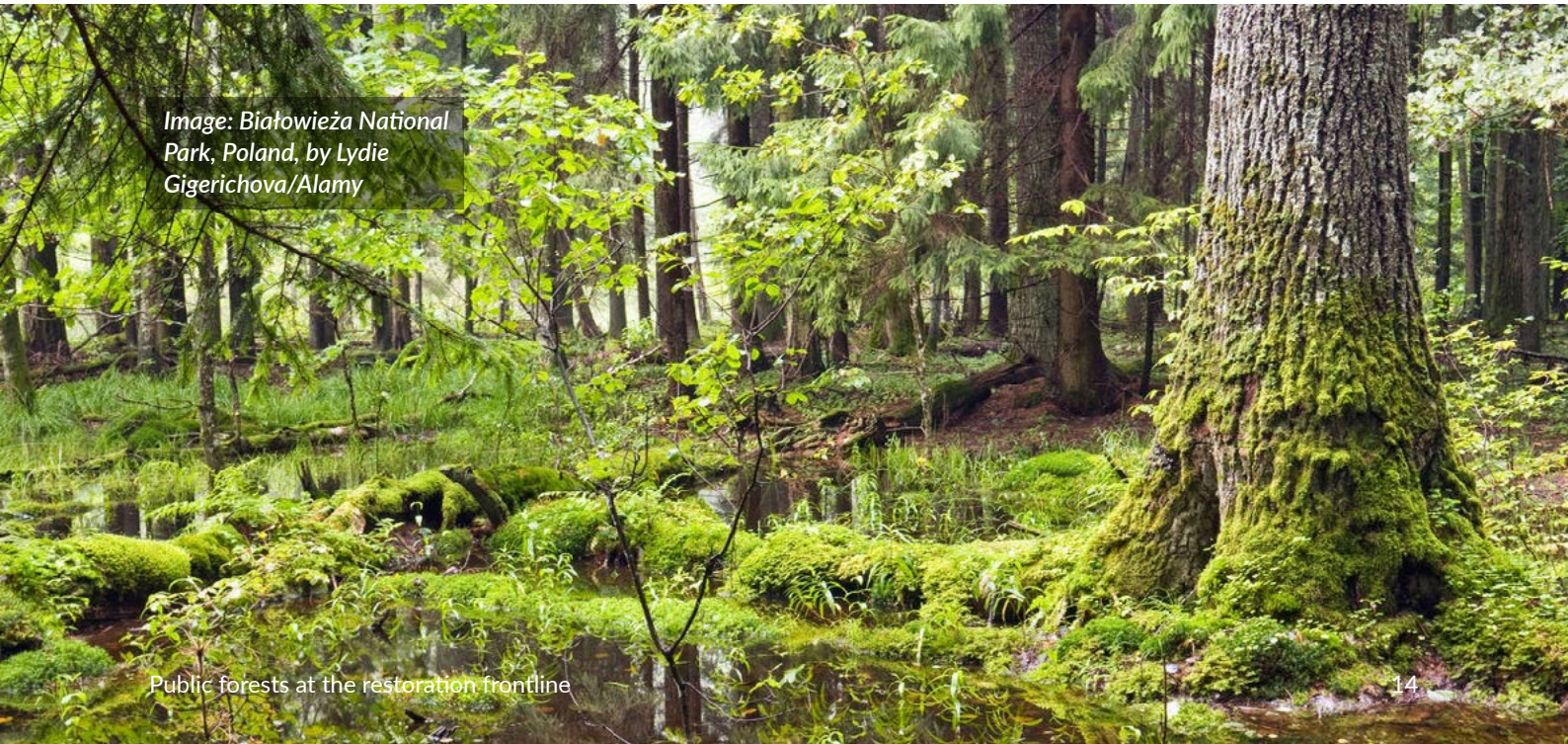

Image: Białowieża National Park, Poland, by Lydie Gigerichova/Alamy

Image: Tesson/Andia/Alamy

France – unlocking restoration potential under structural constraints

France exemplifies both the strengths and constraints of state-led forestry. Operating under a multifunctional mandate, the National Forestry Office (ONF) combines timber production with biodiversity, risk prevention and wider ecosystem services, supported by highly skilled field staff and a strong restoration tradition. This potential, however, is stifled by structural and political tensions. A largely self-financing model tied to timber revenues, declining staffing levels and administrative rigidity limit restoration at scale. Meanwhile, external industrial market pressures pull priorities towards subsidised production of low-added-value wood flows, eroding local economies and national autonomy.

Yet, the foundations for a more resilient system are already in place. With more dynamic governance and better-targeted funding, France's public forests could become a leading example of large-scale, multifunctional land management.

On the ground, many public foresters apply nature-friendly practices – favouring continuous-cover forestry, natural regeneration and habitat diversification – and retain significant technical expertise in both timber production and ecosystem restoration. This capacity, however, is increasingly constrained.

ONF staffing has almost halved since the 1980s[13] – despite expanding responsibilities linked to climate adaptation and restoration. "A large majority of foresters working on the ground are highly motivated to continue restoration work alongside sustainable timber production," notes Pascal Majzel, a forestry worker and national trade union representative in the European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT), "but declining staffing levels and restrictions on hiring have reduced field capacity." As civil service positions tend to be for life, the staffing structure favours office-based roles. Fieldwork is outsourced to temporary, often underqualified contractors, who lack the local expertise needed for optimal solutions, compromising accountability as well as safety.[14]

At the same time, ONF is expected to self-finance through timber sales while also delivering public-interest missions. Dedicated funding streams exist for mountain restoration, coastal stabilisation and biodiversity, but they remain tightly earmarked, fragmented and insufficient. The lack of flexibility reduces effective and integrated delivery of restoration targets.

These administrative constraints are compounded by broader structural weaknesses in the forest-wood chain. France has lost a significant share of its domestic processing capacity, with a long-term decline in sawmills,[15] driven by consolidation, cost pressures and fragmented supply. As a result of the reduction of local timber outlets, globally esteemed, high-quality logs are exported,[16] while lower-value uses such as pulp and biomass dominate domestically. The combined effect is a weakening of local economies and industrial resilience: High-value industries decline, and forest revenues become increasingly tied to volatile global markets and externally controlled supply chains.

Case Study 5
Reclaiming value and resilience in the domestic forest–wood chain

The recent case of state subsidy to the foreign-owned pulp producer Fibre Excellence illustrates these dynamics. Facing potential closure, the company – part of the global pulp empire Sinar Mas Group (best known for its Asia Pulp & Paper arm) – received a proposed €150 million support package to avoid bankruptcy.[17] The case illustrates a broader policy dilemma facing European forest economies: whether public funding should prioritise stabilising existing industrial infrastructure and employment, or enable longer-term restructuring towards higher-value and lower-impact forestry models, including retraining the workforce.

Alternative uses of €150 million

1. **Revive local sawmilling and value-added processing**

   €150 million could support the development or modernisation of multiple regional facilities,[18] while reviving downstream uses such as furniture and construction.

13 Snupfen, 'Office National Des Forets En Peril: Foret et Population En Danger!', Intersyndicale Publique / Prive de l'Office National des Forets, 24 November 2021, https://www.snupfen.org/IMG/pdf/communique_de_presse_intersyndicale_onf_manifestation_25_novembre_2021_a_paris_2.pdf.

14 See also Blast, *Forêts Françaises : Les Privés Font La Police*, 31 May 2022, https://www.blast-info.fr/articles/2022/forets-francaises-les-prives-font-la-police-sm0vN2GXS2mRbN4oectb-w.

15 Batinfo.com (AFP), 'La France a Perdu 90% de Ses Scieries Depuis 1960', 19 April 2018, https://batinfo.com/actualite/la-france-a-perdu-90-de-ses-scieries-depuis-1960_9980?

16 *France Saw Logs And Veneer Logs (Non-Coniferous) Market 2026 Analysis and Forecast to 2035*, Market intelligence (Indexbox, 2026), https://www.indexbox.io/store/france-saw-logs-and-veneer-logs-non-coniferous-market-analysis-forecast-size-trends-and-insights/.

17 Le Journal des Entreprises, *L'État Propose 150 Millions d'euros d'aides, Sous Condition, à Fibre Excellence*, 24 February 2026, https://www.lejournaldesentreprises.com/breve/letat-propose-150-millions-deuros-daides-sous-condition-fibre-excellence-2137624?

18 Subject to brand, features and market conditions. https://toolboxadvice.com/how-much-does-a-sawmill-cost/?

Shifting wood use from pulp to sawnwood and downstream industries increases value per unit of timber,[19] and contributes to more diversified and widely distributed rural employment. With a favourable policy environment – including procurement, trade and incentive alignment – such an investment would diversify economic and strategic risks, and strengthen long-term resilience, compared to concentrating funds in a single pulp producer.

Under appropriate policy conditions, reviving local forestry and processing can deliver clear ecological co-benefits and support NRR targets. It can create incentives for close-to-nature management and reduce pressure for high-volume extraction, opening space for restoring biodiversity and habitats. Stronger regional value chains shift incentives towards quality over quantity, reinforcing both carbon storage and ecological resilience.

2. **Invest in "restoration workforce"**

   €150 million could finance the annual employment of around 1,000–2,000 forestry and conservation workers, with scope for additional investment in training and rebuilding field capacity. Investing in ONF's field staffing would address employment and ecological challenges simultaneously.

Use of €150m	Jobs & local economies	Economic risk diversification	Ecological impact	Natural resource intensity	Strategic autonomy & resilience
Pulp mill bailout	**Capital-heavy** (limited, concentrated employment)	**Concentrated** (single actor)	**Negative**	**High** (volume-driven)	**Externally dependent; limited local value**
Revival of domestic sawmill industry	**Labour-heavy** (rural, dispersed jobs)	**Diversified** (multiple actors and markets)	**Variable / partial alignment**	**Low** (value-driven)	**Local control and value-retention**
Creation of restoration jobs	**Labour-heavy** (rural, dispersed)	**Economic risk reduction via ecological resilience**	**Positive**	**Nature-positive**	**Strengthens domestic capacity**

There is a growing disconnect between on-the-ground realities and national decision-making. Foresters report a lack of meaningful dialogue with government authorities, while policy directions continue to prioritise large industrial actors. In practice, this sustains pressure to increase timber extraction for short-life wood industries, even where this conflicts with ecological objectives and long-term resilience.

The core elements of restoration-oriented forestry – expertise, practical experience and motivation – are already present in France's public forests. The challenge lies in enabling these to operate effectively at scale. With greater administrative flexibility, reinvestment in field capacity and stronger support for local, long-life wood-processing sectors, France can better align its financial investments with ecological outcomes. In doing so, the country could emerge as a leading example of multifunctional landscape management under the NRR.

19 Based on FAO data. *Global Forest Products Facts and Figures 2023* (2024), https://openknowledge.fao.org/items/3740bc34-b22a-4ba9-8962-1486af5ba25a.

Image: Finland, by Mark Olden

Finland – cost-effective nature restoration opportunity in broadening participation

The forests of Finland – a country famed for its extensive tree cover – are becoming increasingly poor in biodiversity, with landscapes growing more fragmented and structurally simple. In the Sámi homeland, where forestry has cumulatively impacted reindeer herding, and Sámi participation in decision-making remains limited, these pressures are particularly acute.

Yet, this same landscape also points to a cost-effective way forward for public forest managers. Protecting and restoring remaining natural and old-growth forests on state-controlled land could deliver substantial gains for nature while reducing the need for more expensive measures elsewhere.

Working with Sámi communities and supporting Sámi-led governance can simultaneously advance nature restoration and address long-standing land-use tensions.

Finland's state forests are managed within a model that seeks to balance multiple objectives, including timber production, biodiversity conservation and public access. In practice, production targets and long-term supply agreements with industry continue to exert strong influence over management decisions, contributing to ongoing logging in ecologically valuable forests.

These pressures are heightened by lack of transparency and weak coordination between state institutions. Environmental authorities, including the Finnish Environment Institute and regional administrations, have not received key data on state-owned forests from Metsähallitus, the state forest company responsible for timber production, limiting independent assessment. Meanwhile, Metsähallitus retains control over analysis and decision-making, with little external scrutiny.[20]

20 WWF Finland, *Primary and Old-Growth Forests at Risk in Finland and Sweden – What Will the EU's Impact Be on Protecting Them?* (2025), https://wwf.fi/app/uploads/t/n/x/oehmxh4q8ikqt692yxj1x/primary-and-old-growth-forests-at-risk-in-finland-and-sweden--what-will-the-eus-impact-be-on-protecting-them-wwf-report-2025.pdf.

Instead of building on well-established criteria and maps of old-growth forests, the government's response to the EU Biodiversity Strategy was to redefine the criteria and re-survey already mapped forest areas, using methodologies that have prompted widespread criticism from the scientific community.[21] Considering the insufficient public and stakeholder discussion,[22] concerns about similar forms of "creative compliance" – rather than substantive change – in the implementation of NRR are therefore well founded.

Case Study 6
A pathway to better forest governance through Indigenous initiative and cross-sector collaboration

In the Sámi homeland, where around 90% of land is state-controlled, forestry decisions have direct implications for Sámi livelihoods. Reindeer herding depends on intact, mature forest networks, particularly for winter grazing. The cumulative effects of logging, soil preparation and forest fragmentation have already caused significant harm to reindeer herding in several areas, affecting grazing availability, migration routes and snow conditions. These pressures are compounded by other land uses, including infrastructure and tourism development.[23]

Despite the state's legal obligations, Sámi inclusion in forest-related decision-making has not been realised to a satisfactory extent, and land use deliberations have often fallen short of the principle of free, prior and informed consent (FPIC).[24] Where state processes have struggled to deliver, however – civil society, academia and private actors have supported initiatives to strengthen the evidence base for forest protection and restoration. Sponsored by philanthropic and non-governmental organisations, led by researchers and powered by volunteers, a series of mapping initiatives to identify primary, old-growth and natural forests is underway. These efforts combine remote sensing with field verification and aim to produce the first comprehensive picture of forests that have escaped intensive management and retain high ecological value – initially in the Sámi homeland and increasingly at the national scale.[25]

This work addresses long-standing gaps in official data and has already helped bring previously overlooked forests into public and policy debate.[26] Sámi participation has been central, particularly in identifying so-called "continuity forests" – areas that may not meet strict old-growth definitions but are ecologically and culturally critical. From a reindeer herding perspective, these forests can be nearly as valuable as old-growth stands, pointing to the need to go beyond minimum restoration thresholds.

A recent comprehensive assessment of forestry impacts on Sámi livelihoods – commissioned as part of the Finnish Government's Sámi Truth and Reconciliation Commission – further reinforces this evidence base, documenting cumulative harm and shortcomings in democratic decision-making.[27] Together, these

21 WWF Finland, *Primary and Old-Growth Forests at Risk in Finland and Sweden – What Will the EU's Impact Be on Protecting Them?*

22 Jan Saijets and Jarmo Pyykkö, *Metsätalouden Vaikutukset Saamelaiseen Poronhoitoon – Tarkastelussa Kumulatiiviset Haitat Ja Päätöksentekoon Osallistuminen: Erillisselvitys Saamelaisten Totuus- Ja Sovintokomissiolle* (Sámi Truth and Reconciliation Commission appointed by the Finnish Government, 2025), https://urn.fi/URN:ISBN:978-952-383-474-3.

23 Saijets and Pyykkö, *Metsätalouden Vaikutukset Saamelaiseen Poronhoitoon – Tarkastelussa Kumulatiiviset Haitat Ja Päätöksentekoon Osallistuminen: Erillisselvitys Saamelaisten Totuus- Ja Sovintokomissiolle*.

24 Saijets and Pyykkö, *Metsätalouden Vaikutukset Saamelaiseen Poronhoitoon – Tarkastelussa Kumulatiiviset Haitat Ja Päätöksentekoon Osallistuminen: Erillisselvitys Saamelaisten Totuus- Ja Sovintokomissiolle.*

25 Jan Saijets and Natural forests of Sápmi working group, 'Methodologies and Results of Mapping of Primary and Old-Growth Forests in Northern Finland', 5 March 2024, https://koneensaatio.fi/wp-content/uploads/2024/06/Sapmi-mapping-2024-03-05_Saijets.pdf; Jan Saijets and Jarmo Pyykkö, 'Mapping of Continuous and Natural Forests throughout Finland 2025-2026', Workshop on the Implementation of the European Commission's Forest Guidelines in the Boreal Region, 27 January 2025, https://www.milieu.be/wp-content/uploads/2025/03/Sapmi-mapping-2025-01-27_Pyykko_Saijets_v1.pdf.

26 Risto Sulkava, 'Valtion Mailta Löytyi Runsaasti Suojelemattomia Vanhoja Metsiä – Mutta Metsähallitus on Jo Aiemmin Paikantanut Monikertaisen Määrän', *Koneen Säätio*, 26 June 2024, https://koneensaatio.fi/tarinat-ja-julkaisut/valtion-mailta-loytyi-runsaasti-suojelemattomia-vanhoja-metsia/.

27 Saijets and Pyykkö, *Metsätalouden Vaikutukset Saamelaiseen Poronhoitoon – Tarkastelussa Kumulatiiviset Haitat Ja Päätöksentekoon Osallistuminen: Erillisselvitys Saamelaisten Totuus- Ja Sovintokomissiolle.*

initiatives provide a stronger foundation for aligning restoration priorities with both ecological needs and Sámi land use.

Reducing logging pressure in Sámi lands could be one of the most economically efficient ways to advance both climate and biodiversity objectives. Recent research from neighbouring Sweden – where forest ecosystems, governance structures and Sámi land-use issues are broadly comparable – indicates that, even after accounting for carbon stored in harvested wood products, including bioenergy, paper and construction materials, undisturbed primary forests store 72% more carbon per unit area than the commercial forests that typically replace them.[28]

A large share (540,000 ha) of contested Sámi lands consists of old-growth or primary forests – highly biodiverse yet mostly of limited commercial timber value[29] – these findings point to a relatively low-cost opportunity to align carbon storage and biodiversity objectives by addressing Indigenous land-use needs in Europe's boreal forests.

Increased forest protection in Sámi lands could strengthen carbon sinks and support biodiversity commitments, while reducing reliance on more costly mitigation measures in other sectors and on compensation-based conservation schemes on private lands to meet restoration targets.

Image: Osmo Seurujärvi, chairman of Muddusjärvi reindeer herding co-operative in Finland, by Mark Olden

While long-term timber supply contracts from state forests help stabilise and support industry under fluctuating market conditions, rebalancing management towards protection and restoration on low-productivity, high-ecological-value lands could deliver both ecological gains and greater overall economic efficiency.

There are early signs of change. New initiatives are supporting Sámi communities in developing their own land-use plans and forest management approaches, including forms of continuous-cover forestry adapted to local ecological and cultural conditions. One ongoing initiative, developed with Sámi reindeer herding cooperatives and supported by the Kone Foundation, combines further mapping of natural forests with spatial assessments of cumulative forestry and industrial land-use impacts on grazing landscapes. The project produces baseline data to support Sámi-led planning across different land ownerships, strengthening local decision-making and safeguarding ecologically and culturally important forest landscapes.[30] Alongside the ongoing work of Sámi Truth and Reconciliation Commission, these efforts are paving the way for a wider political and institutional shift. They signal a move towards recognising Sámi knowledge, rights and governance systems as integral to sustainable forest management.

For public forest managers, this represents an opportunity to move beyond conflict-driven dynamics. By engaging with Sámi-led processes and aligning management practices with restoration goals, state forestry can play a constructive role in delivering both ecological recovery and more equitable land-use governance.

28 Didac Pascual et al., 'Higher Carbon Storage in Primary than Secondary Boreal Forests in Sweden', *Science (American Association for the Advancement of Science)* (United States) 391, no. 6791 (2026): 1256–61, https://doi.org/10.1126/science.adz8554.

29 Saijets and Pyykkö, 'Mapping of Continuous and Natural Forests throughout Finland 2025-2026'.

30 Jan Saijets and Natural Forests Sápmi working group, 'Mapping of Forests in the Sámi Homeland to Protect the Traditional Sámi Natural Landscape (2026–2027)', Koneen Säätiö, 2025, https://koneensaatio.fi/apurahat-ja-residenssipaikat/saamelaisten-kotiseutualueen-metsien-kartoitus-saamelaisen-perinteisen-luonnonmaiseman-suojelemiseksi-2026-2027/.

Image: A forest in Latvia owned by the city of Rīga and managed by "Rīgas meži", taken by SIA "Rīgas meži"

Latvia – polarised stakeholders, segregated institutions and emerging integrated management initiatives

Latvia's state forest management is characterised by a structural separation between forestry and nature conservation, reflected in institutional arrangements and policy processes. This reinforces a sharp polarisation between the forest industry and civil society, visible in contentious public debate.

Riga's municipal forest manager, Rīgas meži, offers a contrasting model. It applies an ecosystem services-based approach that integrates ecological, recreational and economic functions, prioritising biodiversity and public use alongside timber production. The enterprise demonstrates that more integrated forms of public forest management are already being tested, pointing to pathways to align forestry with societal and environmental objectives.

In Latvia, state forests are managed by AS Latvijas valsts meži (LVM), a state-owned joint-stock company whose sole shareholder is the state, represented by the Ministry of Agriculture (MoA). The company is mandated to combine revenue generation with broader public functions, including conservation and recreation.

Formally, the MoA sets strategic direction. In practice, however, LVM operates with a high degree of autonomy, shaping priorities within a framework that emphasises financial performance. The company follows a self-financing model, generating revenue primarily from timber, with part of the income transferred to the state budget and the rest retained for operations and investment. This governance structure creates an inherent tension: The MoA acts simultaneously as a

shareholder, policymaker and representative of forestry interests, whereas responsibility for nature conservation rests with the separate Ministry of Smart Administration and Regional Development.

This imbalance is mirrored in oversight structures. LVM operates as a large, revenue-generating enterprise managing over 1.6 million hectares of land, while the State Forest Service, responsible for oversight and law enforcement, is a comparatively small administrative body with limited capacity. External audits and investigations have highlighted governance concerns and environmental shortcomings, and legal challenges have exposed limits to regulatory control. The Latvian State Audit Office is currently assessing the effectiveness of LVM's supervision and compliance, reflecting broader concerns about state forest governance. Previous scrutiny has included certification-related findings and disputes related to logging in protected habitats.

Economic and ecological objectives remain institutionally separated, with limited mechanisms for reconciliation. This is evident in the development of the National Restoration Plan for NRR implementation, where, according to one working group member, discussions are driven by stakeholder interests not sufficiently informed by science.

Case study 7
Rīgas meži: Municipal foresters showing how public forestry can align with people and nature

Rīgas meži, a municipal forest manager overseeing approximately 60,000 hectares around the capital, operates under a different governance model. Its integrated forest management plan[31] is based on multiple ecosystem services assessments, and seeks to balance ecological, recreational and economic functions. Around half of its forests are prioritised for biodiversity and recreation, and EU-designated habitats are excluded from timber production through internal decisions. The organisation also maintains both Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC) standard, unlike state forests, which no longer hold FSC accreditation.

31 Rīgas meži, *Integrētais Meža Apsaimniekošanas Plāns 2026 – 2035* (2025), https://rigasmezi.lv/storage/2_pielikums_rm_imap_2025.pdf?lang=en; Rīgas meži, 'On Integrated Forest Management Planning and Forest Care', https://rigasmezi.lv/par-meza-apsaimniekosanas-planosanu?lang=en.

Image: A forest in Latvia owned by the city of Rīga and managed by "Rīgas meži", taken by SIA "Rīgas meži"

Rīgas meži's integrated forest management plan formalises a multifunctional approach through structured planning, spatial zoning and measurable targets supported by monitoring and adaptive management. Timber production is maintained without relying on large-scale clearcutting and intensive practices. This is supported by automated IT tools for close-to-nature forestry planning, developed in partnership with scientists, forest managers, NGOs and civil society.[32]

In comparison, Latvia's state forests operate under a production-oriented model reliant on clear-cut forestry, with biodiversity largely addressed through regulatory requirements and designated areas. While both systems formally recognise multifunctionality, Rīgas meži integrates ecological, social and economic objectives within its core planning framework. In state forests, these remain more segmented.

Management aspects	Rīgas meži (municipal forests)	Latvijas valsts meži – LVM (state forests)	Significance
Governance	Municipal company owned by Riga city	State-owned company under MoA	Different ownership structures shape priorities and accountability
Core mandate	Multifunctional: ecology, recreation and economic use	Production-oriented: timber revenue with additional functions	Defines whether forests are managed as public space or economic asset
Planning approach	Integrated, ecosystem services-based planning	Production planning with regulatory constraints	Determines whether functions are balanced or isolated
Management logic	Functions combined within one system	Functions segmented (production vs protection)	Reflects integration vs segregation of forest uses
Spatial planning	Landscape-based zoning and decision making	Primarily stand-level planning with regulatory overlays	Influences how trade-offs are handled across landscapes
Biodiversity approach	Embedded across management, including voluntary set-asides	Primarily through protected areas and legal requirements	Indicates proactive vs compliance-based conservation
Harvesting practices	Adaptive, close-to-nature practices	Systematic use of clear-cutting	Affects ecological structure, landscape continuity and resilience
Role of society	Central: recreation, public access, urban wellbeing	Secondary: considered but not core driver	Reflects degree of social integration in forestry
Decision-making basis	Ecosystem services evaluation and monitoring	Economic performance and regulatory compliance	Shapes prioritisation and trade-offs
Financial model	Revenue balanced with public service functions; exploration of non-timber revenues	Self-financing with strong revenue expectations addressed through timber production	Influences incentives and management intensity
Adaptation and monitoring	Adaptive, complex data-driven, regularly updated plan	More static, compliance-based planning	Affects responsiveness to ecological and social change
Overall model	Integrated multifunctional forestry	Production-led multifunctionality	Impacts balance of priorities

32 Rīgas meži, 'Cooperation Projects', https://rigasmezi.lv/sadarbibas-projekti?lang=en.

Emerging international and inclusive cross-sector collaboration

There are reasons to be cautiously optimistic that integrated approaches may extend beyond isolated examples. Municipal actors, including Rīgas meži, participate in national-level processes such as the development of Latvia's Nature Restoration Plan alongside state forest actors, ministries and other stakeholders. Although a standard consultation procedure, this introduces alternative approaches to forest management into a policy context where production and restoration strategies have long remained institutionally and operationally separate.

Beyond national boundaries, early forms of cooperation are emerging. Joint biodiversity and restoration initiatives involving ministries from all three Baltic states are underway, indicating a growing willingness to collaborate. These efforts are still exploratory, but they represent initial steps towards shared approaches and regional alignment in comprehensive nature restoration.

Even though collaboration remains fragmented and predominantly project-based, it may signal a gradual shift towards more open and connected governance, where knowledge, experience and responsibility are increasingly exchanged across institutional, sectoral and national boundaries.

Image: A forest in Latvia owned by the city of Rīga and managed by "Rīgas meži", taken by SIA "Rīgas meži"

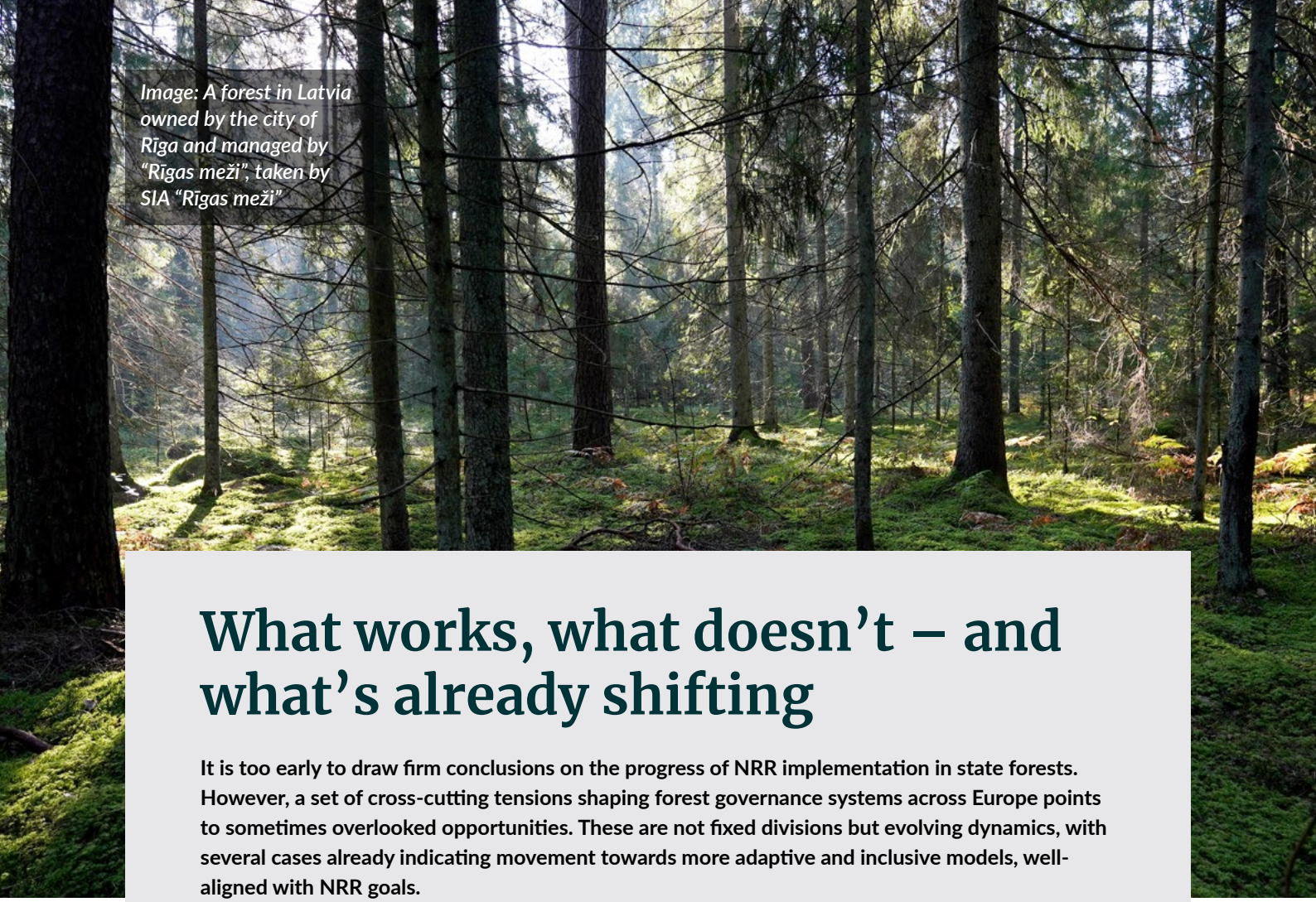

Image: A forest in Latvia owned by the city of Rīga and managed by "Rīgas meži", taken by SIA "Rīgas meži"

What works, what doesn't – and what's already shifting

It is too early to draw firm conclusions on the progress of NRR implementation in state forests. However, a set of cross-cutting tensions shaping forest governance systems across Europe points to sometimes overlooked opportunities. These are not fixed divisions but evolving dynamics, with several cases already indicating movement towards more adaptive and inclusive models, well-aligned with NRR goals.

Structural and economic configurations

Institutional and structural constraints remain a defining feature across many systems. These include rigid administrative frameworks, segmented responsibilities across ministries and agencies, and long-term supply contracts with the private sector, all of which can hinder a transition towards climate-adaptive and nature-aware forest governance. Administrative reforms, a rethink of ingrained management strategies and greater openness to experimentation with alternative models are beginning to create space for change, albeit unevenly.

Economic structures often reinforce bottlenecks. The prevailing expectation that state forest management should be self-financing continues to drive an over-reliance on timber production as a primary revenue source, sometimes at the expense of other forest functions. While alternative income streams such as biodiversity credits or resilience-based payments are being explored, they remain limited in scope and maturity. There is, however, increasing recognition that the distinction between self-financing and public financing is somewhat artificial, given that state forests constitute public assets. This opens space for a gradual shift towards models that more explicitly acknowledge public goods and justify public investment, alongside a broader understanding of public returns beyond direct financial transfers to the state.

Tensions between administrative efficiency and locally tailored governance further complicate this picture. Centralised systems and streamlined field staff expenditure may, at times, achieve operational efficiency but risk disconnecting from local ecological conditions and stakeholder needs. More decentralised and participatory contexts, in contrast, tend to support diversity in practices, experimentation and pilot initiatives, which are better suited to addressing the uncertainties associated with climate change. Such approaches can, in some cases, increase short-

term costs, but enhance responsiveness and precision, particularly in biogeographically and socially diverse contexts. Balancing efficiency with local adaptability remains a core challenge, especially in the transition towards close-to-nature forestry, which requires both strategic coherence and locally finetuned adaptability.

Governance culture and cohesion

While many European public forests formally operate under a multifunctional mandate, its interpretation varies widely. A key distinction lies between systems that maintain separation between mandates – often resulting in uneven allocation of attention and resources or limiting data sharing between actors with perceived competing interests – and those that pursue more integrated approaches. This separation is often reinforced by organisational silos and entrenched professional cultures, which shape how mandates are interpreted, how knowledge is shared and how collaboration is approached in practice. While such arrangements can provide clarity of roles, without meaningful collaboration, they tend to limit responsiveness and shared ownership of outcomes.

More integrated governance cultures, observed in various subnational contexts, municipal and community forest systems, often treat environmental, economic and social objectives as inherently interconnected. These arrangements enable more iterative decision-making. They support experimentation and strengthen coordination between policymakers, forestry and conservation managers, researchers and local communities through continuous interaction and shared learning.

Transparency and stakeholder cohesion are critical enabling conditions for effective collaboration and adaptive governance. Opaque governance environments tend to exacerbate mistrust and weaken accountability, contributing to polarisation among both professional and public actors in several countries. While there are early signs of improved stakeholder inclusion in some otherwise centralised systems, transparency should remain a non-negotiable baseline – regarding accessibility of data across state institutions, as well as external stakeholders.

Broader political context

Forest governance is deeply dependent on institutional robustness and broader political systems. Corruption and weak oversight remain significant in several cases, affecting both effectiveness and institutional trust. Although monitoring capacity is improving, its potential is not always fully realised. In some contexts, environmental scrutiny is being deprioritised in favour of broader geopolitical considerations, including those linked to the war in Ukraine and wider regional instability. This has reportedly been manifested in recent environmental concessions in some of the institutionally weaker states in the EU – a development that responds to immediate pressures, but may carry longer-term implications for regional resilience.

Looking ahead

These case studies reflect a fragmented landscape in which governance models persist, adapt or resist change in response to their specific political, institutional and ecological contexts. This diversity creates a broad testing ground for alternative approaches, from more integrated governance models to new financing mechanisms and more inclusive forms of decision-making. The opportunity lies less in convergence than in exchange, institutional openness and targeted reform, where incremental adjustments or more structural changes can unlock wider transformation.

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