

FORESTS IN THE NATURE RESTORATION LAW

April 2023



Recommendations: Focusing on Article 4 (restoration of areas covered by terrestrial Annex I habitats), Article 10 (areas for improved management), Article 11 (preparation of national restoration plans), Article 12 (assessing harmful subsidies) and Article 16 (access to justice).

Article 4: Restoration of terrestrial, coastal and freshwater forest ecosystems

- To adequately restore forests, the Nature Restoration Law must set clear, time-bound targets for forest habitats and forest species protected under the Habitats and Birds Directives.

- The ambition of restoration in Article 4 must be increased leading to adequate restoration of all indicated habitats as soon as possible.

- Renewable energy and nature restoration must co-exist: There should be no block exemption for renewable energy projects preventing the achievement of restoration objectives in Article 4; any derogations allowed should be on a case-by-case basis.

- Restoration efforts should be maintained long-term, this requires the inclusion of a clear non-deterioration obligation for restored ecosystems.

Article 10: Criteria for restoring forest ecosystems

- Clear, time-bound targets for general restoration of all forest ecosystems should be promoted in addition to those covered by the Birds and Habitats Directives.

- Measurement should not delay action: Article 10 indicators should be measured as soon as possible, 2025 at the latest, to encourage a trajectory of restoration before the end of the decade.

- Article 10 criteria that reflect the multiple levels and dimensions (compositional, structural, and functional) of forest biodiversity should be supported. This means accepting in full the indicators in the Commission's proposal, as well as indicators that assess:

- The quality of carbon stocks, and their quantity
- The connectivity of biodiverse forests
- Native trees species composition
- The peak temperatures in forests
- Areas of tree genetic diversity

- It is of utmost importance not to allow derogations, or allow Member States to pick-and-mix indicators.

Article 11: Planning requirements to achieve forest restoration

- Preparation of National Restoration Plans should involve a participatory process to map forest landscapes in need of restoration.

- 'Satisfactory levels' of restoration for non-Annex I habitats should be science-based and avoid classifying marginal improvements as restoration.

- Member States should identify harmful subsidies and quantify financial burdens incurred by them.

Article 12: Redirecting negative subsidies and integrating the value of nature into restoration plans.

- All incentives, including subsidies for activities such as bioenergy production, which negatively affect the achievement of the targets of the Nature Restoration Law must be listed in the national restoration plans under Article 12 by 2025, with a specific plan of redirecting at least half of them towards nature restoration until 2030.

Article 16: Access to justice

- Citizens and civil society must be empowered to support restoration objectives, and Member States be accountable to their citizens, by enshrining the fundamental right of access to justice through Article 16



INTRODUCTION: THE NEED FOR RESTORATION OF FORESTS INSIDE AND OUTSIDE OF PROTECTED AREAS

Biodiversity loss in European forests is taking place at an alarming scale. To reverse this we must: 1) strictly protect (meaning non-intervention in) our remaining old-growth forests, 2) set aside additional forests for restoration in order for them to recover into high value biodiversity areas, and 3) improve the biodiversity of forests that will still be managed for wood production.

The Nature Restoration Law offers an opportunity to achieve all of the above, particularly the latter two elements by improving ecosystems through integrative restoration practices.

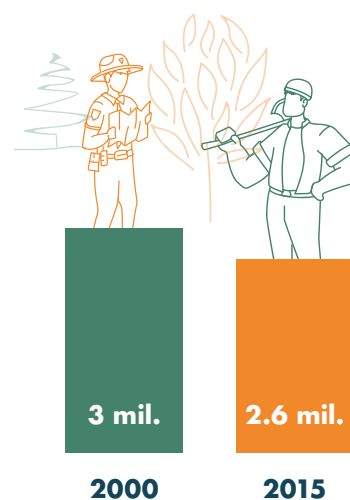
This broad view of restoration is moving away from a simplified land-sparing approach, which promotes a trade-off between forest reserves and tree plantations and ignores the role of foresters pursuing environmental objectives. There is scientific recognition that most European forests are managed and degraded; that protected areas are affected by this management; and that virtually all forests are in need of restoration.

Intensive management, without satisfactory multifunctionality, is undermining all three pillars of sustainability. Employment in the forestry sector has been falling (see graphic on right)¹ and the harvest costs are in some cases exceeding profitability.² Despite the extent of tree cover, EU countries have low ecosystem integrity³ and the carbon absorbed by forests has been declining since 2013.⁴ Neither small forest owners nor the environment are thriving.

While environmental protection has clear benefits for society, alternative forestry methods such as close-to-nature forest management have benefits for both the environment and the forestry sector, specifically small forest owners.

In order to achieve the climate, environmental, and social objectives underpinning resilient ecosystems and the forest sector, it is necessary to improve the condition of forests through deep restoration activities (Article 4), but also through a shift towards close-to-nature forest management (Article 10), which is currently practised on only around 25 per cent of the area of European forests.⁵

Employment in the forest sector



Employment in the forest sector decreased by about 33% from 2000 to 2015. Source: Forest Europe

1 - FOREST EUROPE | State of Europe's Forests

2 - A Just Transition - Fern

3 - Anthropogenic modification of forests means only 40% of remaining forests have high ecosystem integrity | Nature Communications

4 - Greenhouse gas emissions from land use, land use change and forestry in Europe

5 - Continuous cover forestry in Europe: usage and the knowledge gaps and challenges to wider adoption | Forestry: An International Journal of Forest Research | Oxford Academic (oup.com)

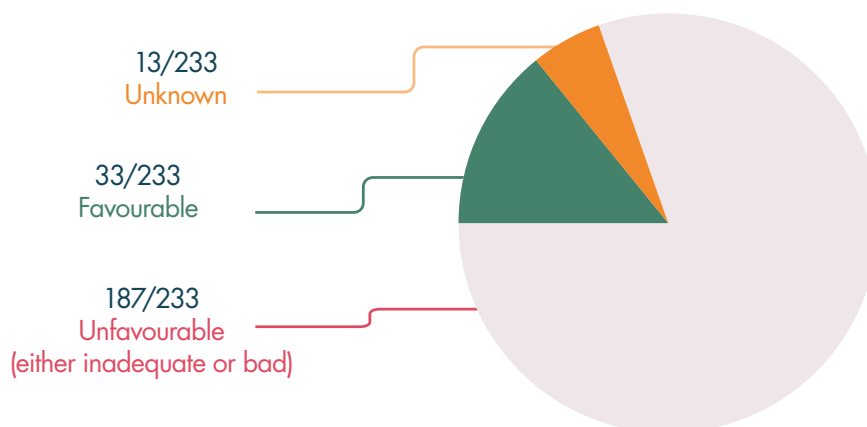
HOW CAN THE NATURE RESTORATION LAW INCENTIVISE BIODIVERSITY-FRIENDLY FORESTS AND FORESTRY?

Article 4: Restoring and re-establishing Natura 2000 habitats

Ensuring that protected areas are achieving their objectives is not enough to avoid the environmental and economic risks of biodiversity loss. Annex I habitats outside of Natura 2000 areas must also be restored to good condition.

The Habitats Directive is a crucial pillar of EU nature conservation, but has clearly not achieved the aim of ensuring biodiverse and resilient forests. Natura 2000 habitats constitute almost one-third of EU forests, but only a sliver of these have favourable conservation status.

Conservation status of forest habitats



An overall assessment of the condition of EU forest habitats showed that only 14 per cent of forest habitats had favourable conservation status. Source: [Habitat Assessment at EU biogeographical level](#)

Article 4 of the Nature Restoration Law lays out targets for restoring all habitats listed in the Habitats Directive, referred to as Annex I forest habitats, to good condition, growing the area of habitats that will be required to have conservation measures in 2030, 2040 and 2050. The Commission assumes that by 2030 forests covering 4.3-9 per cent of the EU land area will be placed under restoration measures.⁶ Restoration efforts should be taken up faster in the short-term as they can take many years to provide results, and should aim to return the habitats to a favourable conservation status. The law should ensure that areas designated for restoration are not degraded by logging through strong non-deterioration requirements.

It is important to recognise that planning these restoration efforts can help with mapping suitable and unsuitable areas for renewables deployment so that Europe can achieve both biodiversity and climate goals simultaneously. To this end, it is crucial that no block exemption, be it renewables projects or climate change impacts, prevent the EU from achieving restoration goals. Transforming the energy sector and restoring biodiversity to EU forests. are both key priorities and are not mutually exclusive.⁷ To promote good land-use planning, there should be no block exemption for any energy projects preventing the achievement of forest restoration targets under Articles 4⁸ and 10. This includes overharvesting forests where bioenergy is produced, given that such an exemption could justify the over-intensive extraction of wood, to the harm of biodiversity and ecosystems services across the majority of the EU's forests.

⁶ - [EU Impact Assessment of the Nature Restoration Law, p. 62](#)

⁷ - [Nature-Positive Renewables, EEB policy brief](#)

⁸ - Any different provision, especially in Arts 4(9) and 5(9) would lead to an indirect amendment to the Habitats Directive. For the restoration of areas inside Natura 2000 sites, this is in line with the applicable law and the sequential application of the conditions that need to be met in order to justify any exemptions from Art 6 of the Habitats Directive. According to the combined reading of Arts 6(3) & 6(4), plans or projects that are not necessary for the achievement of the conservation objectives of a Natura 2000 site can only be initiated upon an appropriate assessment, which takes place at a case-by-case basis, ascertaining that the plan or project in question does not adversely affect the integrity of the site. In order for the project to go ahead, despite the assessment indicating adverse or potentially adverse effects on the site, it needs to fall under imperative reasons of overriding public interest. Even in those cases, the project can only go ahead if the Member State can prove that there are no alternative, less damaging solutions for the project (ie choice of other area, other type of project, or the zero option (no project)), and that it has put in place necessary compensatory measures to ensure that the Natura 2000 network remains coherent, despite the project developments. For more information, see: [Commission Guidance document on Article 6\(4\) of the 'Habitats Directive' 92/43/EEC](#)

Article 10: criteria for restoring forest ecosystems

For forests that are not measured to the rigorous standards of Birds and Habitats reporting, a recent academic study⁹ points to a need for large-scale restoration, beyond the levels proposed for Annex I habitats, which could also be beneficial for areas managed for wood production¹⁰ and climate mitigation goals. The scale of restoration clearly needs to be increased, with a view to benefiting all users of the forest.

Across protected and unprotected areas in the EU, 85 per cent of forests are available for wood production.¹¹ Forest Europe and the European Forest Institute (EFI) have shown that three-quarters of forests in the EU and across Europe are even-aged. In addition, around one-quarter¹² have only one species, which indicates a low level of naturalness in these areas and a higher risk of large-scale losses due to their reduced biodiversity and hence reduced resilience.¹³

Article 10 allows for an expansion of restoration activities, stretching from improved management on land suitable for forestry to carrying out restoration-development towards old-growth forests, and thus could apply to any forest land within the EU. Under Article 10(1) the focus should be on area-based restoration measures that enable forests, beyond those covered by Article 4, to develop towards high-biodiversity forests with old-growth forest characteristics. Activities could include a mix of active and passive restoration.¹⁴

To guide restoration for forests not protected under the Birds and Habitats Directive and for those not suitable for restoration towards old-growth forests under Article 10(1), Article 10(2) outlines a very small list of key indicators that, through a trend of improvement, would lead to an enhancement of biodiversity and climate resilience in all other forests, many of which are managed for wood production. Each of these indicators has an important purpose, but they work in unison so must be adopted as a group - see box below.

The interconnectedness of biodiverse forests: Why biodiversity indicators cannot be à la carte



Photo by Sebastian Kirppu

Example 1. Many forest birds help to control insect pests, including the pine processionary moth that foresters dread in low-diversity forestry systems. Great tits, crested tit, and coal tits, are amongst the common species that eat pine processionary moth (at various life-stages).¹⁵ Most cavities for nesting birds are made by woodpeckers, but three-toed woodpeckers¹⁶ - which effectively predate bark beetle, another feared forestry pest,¹⁷ become absent when deadwood levels are not fairly high.¹⁸ Birds such as the tits also depend on the array of insects hosted by native tree species, which also provide the most useful deadwood for decomposers¹⁹ and synergise best with local fungi species²⁰ to store organic carbon. Forest species such as woodpeckers are more likely to be present where there is high forest connectivity of uneven-aged forests featuring old trees and deadwood.²¹

Example 2. Connectivity is essential for forest species to move and survive - and must be adopted alongside all the other Article 10 indicators because the value of connectivity strongly depends on the quality of forests being connected, as described by the other indicators. There is little point having a high connectivity of monoculture plantation forestry, which can be so low in biodiversity as to increase fragmentation and decrease functional connectivity.²²

⁹ - Anthropogenic modification of forests means only 40% of remaining forests have high ecosystem integrity | Nature Communications

¹⁰ - Forest biodiversity, ecosystem functioning and the provision of ecosystem services | SpringerLink

¹¹ - How does forest management and the use of wood contribute to economic prosperity and employment?

¹² - Figure 4.1-2, Forest Europe State of Europe's Forests, 2020

¹³ - Forest Resilience, Biodiversity, and Climate Change

¹⁴ - Guiding principles for rewilding

¹⁵ - Birds as predators of the pine processionary moth (Lepidoptera: Notodontidae) - ScienceDirect, Barbaro, L., & Battisti, A. (2011)

¹⁶ - Floyd, C. & Martin, K. (2016). Avian ecosystem engineers: birds that excavate cavities. In C. H. Sekercioglu, D. G. Wenny, & C. J. Whelan (Eds.), Why Birds Matter: Avian Ecological Function and Ecosystem Services. The University of Chicago Press.

¹⁷ - Regulation of spruce bark beetles by woodpeckers—a literature review - ScienceDirect, Forest Ecology and Management, 206(1–3), 1–14. Fayt, P., Machmer, M. M., & Steeger, C. (2005)

¹⁸ - See Müller & Büttler (2010) for examples of white-toed woodpeckers' (and others) deadwood threshold levels - 15 m³ of standing deadwood and 33 m³ of total deadwood in Switzerland and Sweden, 74 m³ in Germany, etc.

¹⁹ - Beetle diversity in dead wood is lower in non-native than native tree species, especially those more distantly related to native species, Kärvelo et al (2023).

²⁰ - Tree species influence on microbial communities in litter and soil: Current knowledge and research needs - ScienceDirect, See Prescott & Grayston (2013).

²¹ - Effects of Forest Management on Three-toed Woodpecker *Picoides tridactylus* Distribution in the Białowieża Forest (NE Poland): Conservation Implications, Wesolowski, et al (2005) & Assessing the role of landscape connectivity in recent woodpecker range expansion in Mediterranean Europe: forest management implications | SpringerLink, Gil-Tena et al, (2013)

²² - Tree plantations displacing native forests: The nature and drivers of apparent forest recovery on former croplands in Southwestern China from 2000 to 2015 - ScienceDirect

There has been a significant focus on carbon dioxide absorbed by forests as well as the conservation of species types found in certain ecosystems, but very little focus on simultaneously increasing the diversity of the composition,

structure, and function of the forest ecosystem. The focus on biodiversity is important as it increases the resilience and overall stability of forest ecosystems that need to adapt to a changing climate.²³

Elements of forest biodiversity

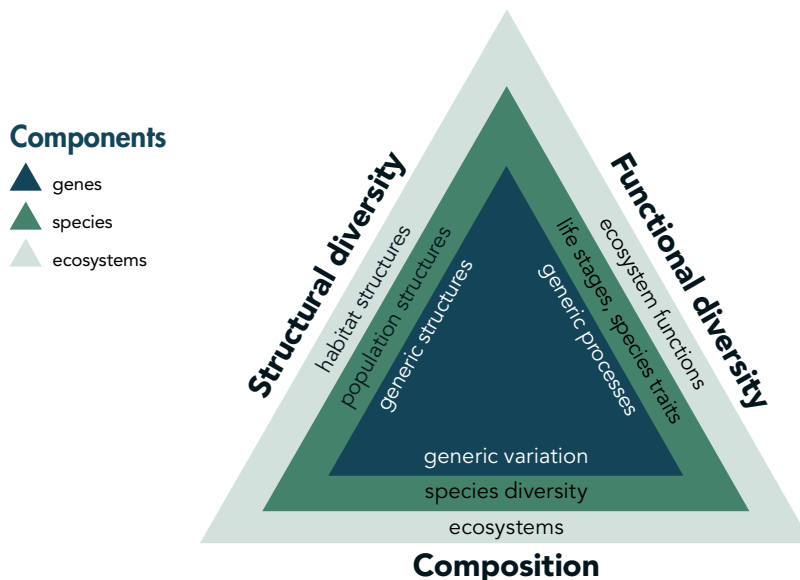


Figure from publication 'Forest Biodiversity in Europe'. Source: EFI

These components of biodiversity occur at multiple levels, which for forests can include the tree, a forest plot, or the entire forest ecosystem. Many of the current indicators in Article 10 (standing and lying deadwood, share of forests with uneven-aged structure, forest connectivity, common forest bird index and stock of organic carbon) attempt to respond to these elements and need to be considered as a binding package, although some can be improved:

- **Quality and quantity of organic carbon:** forests can lose carbon if the condition of the carbon stock is poor, hence the need to look at the stability and resilience of the carbon reservoir in addition to the amount of carbon stored both above and below ground. The stock of plantation forests has lower resilience and higher risk of reversals than the stock of semi-natural or natural forests.²⁴

- **Connectivity.** The proposed connectivity indicator is essential but should apply only to forests of reasonable naturalness (see text-box above),²⁵ so as not to confuse forest extent with integrity.

Additionally, indicators should be representative of the above three pillars of biodiversity and there are therefore key indicators missing including:

- **Native tree species composition:** forests with a diversity of species are more resilient to droughts and other natural disturbances.^{26,27} Tracking an improvement of the number of tree species indicates the overall resilience that can be expected of the forest. This should reflect the percentage of native tree species present in the reference forest type of a given location.²⁸

- **Mean peak temperature:** Forests act as microclimates and can decrease the temperature in its surrounding area compared to outside the forest. When habitats are degraded it loses this function, and temperatures rise. Even with rising temperatures, comparing the temperatures inside and outside of the forests on hot days can show if forests maintain their ability to cool the environment.

- **Tree genetic diversity:** The variation that exists within a species or population at the genetic level can be used to assess the health and resilience of an ecosystem.

²³ - Biodiversity and Ecosystem Stability | Learn Science at Scitable

²⁴ - Forest Resilience, Biodiversity, and Climate Change

²⁵ - For instance, Angelstam 2020 applies connectivity only to High Conservation Value forests. Another option could be applying it to forests with at least a given threshold of one or more of the other Article 10 indicators - e.g. a given percentage of native tree species present (see Marin et al. 2021).

²⁶ - Tree Diversity Drives Forest Stand Resistance to Natural Disturbances

²⁷ - Tree diversity mitigates defoliation after a drought-induced tipping point

²⁸ - This can be done very easily - Marin et al (2021) derive the potential tree diversity from EUNIS habitat types (their potential distribution) and compare it to the species actually present (they use data from the European Atlas of Forest Tree Species).



Photo: An old Estonian forest, adamikar/SHUTTERSTOCK

Article 11: Preparation of national restoration plans for forests

Effective forest restoration relies on adequate planning, both in terms of identifying drivers that impede restoration goals as well as setting strong baselines for what classifies as ‘satisfactory levels’ of restoration.

In order to address the impact of negative subsidies, which globally tallies at US\$155 billion per year in the forestry sector,²⁹ it is essential to identify such subsidies in Article 11 when preparing restoration plans. In addition to quantifying these harmful subsidies, Member States should be required to quantify additional financial burdens incurred due to all harmful subsidies that will not be redirected by 2030.

To support restoration of all forests covered in Articles 4 and 10, countries need to identify such forest areas in their planning under Article 11(4), through a participatory process. The restoration objective for non-Annex I forest habitats must be robust and rely on science-based evidence to avoid classifying marginal improvements on indicators such as deadwood or structural diversity as ‘satisfactory’ restoration under Article 11(3). Restoration cannot be achieved without proper planning and clear objectives.

Article 12: redirecting negative incentives and subsidies, and integrating the value of nature into restoration plans

Member States should commit to transforming their fiscal and economic policies related to land use - in line with Target 18 of the Kunming-Montreal Global biodiversity framework,³⁰ and with the recommendations of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in its Assessment Report on Land Degradation and Restoration,³¹ as well as with paragraph 74 of the explanatory memorandum of the draft Regulation on nature restoration.

Article 12(2,m) suggests that the national restoration plans shall include "an indication of the subsidies which negatively affect the achievement of the targets", but there is no obligation for Member States to reduce such harmful subsidies. All incentives, including subsidies for activities such as bioenergy production, that are harmful to biodiversity and ecosystems must be identified then listed in the national restoration plans by 2025. By 2030, at least half of these incentives should have been eliminated and redirected towards nature restoration, protection or close-to-nature management. By 2050, all harmful incentives and subsidies must be removed and redirected.

Article 16: Access to Justice

Access to justice has been an important legal tool to ensure the effective protection of forests, while constituting an internationally recognised fundamental right of all EU citizens. From Poland, to Romania,³³ to Sweden,³⁴ the ability of civil society to challenge their countries' implementation of EU environmental policies has been a central democratic check which protects biodiversity. To enable the long-term and sustained recovery of biodiversity in the EU, and meet international commitments, it is important that access to justice is enshrined in law, otherwise systemic obstacles to environmental protection will continue.

Article 12(2,j) also suggests the inclusion of an estimation of co-benefits for climate-change mitigation, land degradation neutrality, and socio-economic benefits of restoration measures. This is a restricted view of proper nature valuation as described by the IPBES in its "Methodological assessment regarding the diverse conceptualisation of multiple values of nature and its benefits, including biodiversity and ecosystem functions and services."³² Member States must fully integrate the valuation of natural capital and ecosystem services into their national action plans, for their steering and evaluation. These valuations should consider both the monetary aspect and the functional and symbolic aspects, as suggested by the IPBES in its assessment.

Providing access to justice in environmental matters is also required by the Aarhus Convention, to which the EU and all its Member States are parties. It is therefore crucial for the provisions ensuring access to justice to be explicitly included in the text of the Nature Restoration Law, in order to avoid differences of interpretation regarding the requirement to provide the public with an opportunity for substantive review of restoration plans and measures in independent courts.

30 - Document CBD/COP/15/L25. Available at <https://www.cbd.int/conferences/2021-2022/cop-15/documents>

31 - Chapter 6, page 439. Available at <https://ipbes.net/assessment-reports/ldr>

32 - <https://ipbes.net/the-values-assessment>

33 - Letter to the Swedish Presidency: Serious concerns about the Swedish Presidency proposal for the Nature Restoration Law

34 - JUDGEMENT of the European Court of Justice

Association Workshop for All Beings
BirdLife Europe and Central Asia
BirdLife Sverige
Canopée
Climate Action Network Europe
Environmental Action Germany (DUH)
European Environmental Bureau
Fern
Nature Heritage Foundation
Forest Defenders Alliance
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