

# NGO paper: Benefits of a Forest Monitoring Law

## Introduction

The European Commission (EC) has proposed a regulation for a “monitoring framework for resilient European forests”, or “Forest Monitoring Law” (FML)<sup>R1</sup>. The FML aims to create an EU-wide coordinated framework for data on our forests: to track progress towards achieving EU targets and policy objectives, including on biodiversity and climate; to inform evidence-based decision making; and to improve risk assessment and preparedness. Collecting information about our forests is crucial to understand how healthy they are, how they are responding to increasing threats in a century of climate change, and to inform decision-making that supports the resilience of forests and their continued provision of multiple ecosystem services – on which societal resilience depends.

Though unevenly distributed, forests are the EU's biggest land-use<sup>1</sup>. They are intrinsic to our lives: the relaxing walk under the tree canopy, the wooden table we use for our breakfast, and the animal and plant species they are home to. We depend on our forests: they are our principal carbon sink<sup>R2,60</sup>; they keep us cooler in summers<sup>R3</sup>; they create and recycle rain<sup>R4</sup>, reduce flooding, maintain river quality and water availability; filter severe winds; prevent soil erosion, land-slips, avalanches; our biodiversity depends on forest habitats<sup>2</sup>; forests provide jobs, wood and other products, as well as important places for recreation and tourism<sup>R5-7</sup>. As we grapple with climate change, we depend on forests more than ever.

Given our dependency on forests, and how transboundary they are (forests cross borders, as do their wildlife, their rivers, the climate they regulate, the rain clouds they generate, the wood products we trade, as well as problems affecting forests such as air pollution, forest fires and their smoke, pests, diseases and invasive species), it may seem obvious how much the EU needs a robust FML. Nonetheless, this paper sets out some of the core benefits of the FML. To ensure important legislation like this becomes adopted, particularly when it can appear quite technical to the lay-person, it is always useful to be clear on the benefits. Put simply, it is in everyone's interest to ensure an EU-wide understanding of our forest life-support system.

## Benefits

### 1. A clearer, coordinated picture of how our forests are faring

The FML can meet the clear need to finally achieve harmonised data-gathering on EU forests<sup>R8</sup>, as we do not yet have a robust overview of how EU forests are faring. Whilst many Member States produce National Forest Inventories (NFIs), NFIs were developed with a focus on economic indicators such as *timber volume* and *forest biomass increment* with little coverage of biodiversity and social indicators. Whilst there is a trend towards incorporating more environmental data, and some attempt at harmonisation of some methods (e.g. on *forest available for wood supply*<sup>R9</sup> and *growing stock*<sup>R10</sup>), progress has been gradual and limited<sup>R10-13</sup>: “most of the information collected is unusable transnationally because it is either outdated...very coarse...or countries cannot agree on definitions”<sup>R14</sup>.

These problems in the breadth and harmonisation of NFI data in turn limit the value of efforts to collate national data, such as in Forest Europe's five-yearly “State of Europe's Forests” reports. The Forest Europe process is voluntary and the reports suffer numerous gaps and inconsistencies in national

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<sup>1</sup> Forests (about 39%<sup>R45,46</sup>) in combination with “other wooded land” (approx. 5%<sup>R47,p.32</sup>). Agriculture covers 38%<sup>R48</sup>.

<sup>2</sup> 80% of global terrestrial biodiversity is attributed to forests. ½ of Natura 2000 sites are forests. The FML will provide further data.

methods. The data is presented as summary national statistics providing little geographical insight, and reporting happens only every 5 years. Forest Europe is not EU-focused: it includes many countries beyond the EU (so summary data are not EU-accurate) and is not designed to provide data relevant to EU legislation. The FML can resolve this situation of piecemeal reporting with an efficient and EU-focused approach.

## 2. Streamlining and strengthening reporting & delivery of forest-related legislation

Forests are important to a number of areas of EU law, such as renewable energy (RED), carbon sequestration (LULUCF<sup>R15</sup>), climate adaptation (Climate Governance Regulation<sup>R16</sup>), nature conservation (Habitats<sup>R17</sup> and Birds Directives<sup>R18</sup>, Nature Restoration Law<sup>R19</sup>), and trade (EUDR<sup>R20</sup>). The FML can streamline the collection of forest data, clarifying which forest information is required and ensuring it is collated in a coherent and comparable way across the EU, available in a one-stop “data sharing framework”. At the same time, the FML values national monitoring by enabling Member States to continue with their approaches provided there is consistency on key indicators, whilst leaving full flexibility to Member States to assess additional information at national level.

The FML proposes that Member States be encouraged (but not mandated) to produce “integrated long-term plans” (LTPs). LTPs will pull together a prognosis of expected trends and threats with an explanation of national plans and targets, integrating key aspects of biodiversity, bioeconomy, climate mitigation and adaptation, and disaster risk assessment and management. The production of LTPs can be the foundational exercise that brings together the forest-thinking needed for completion of various important aspects of EU legislation, such as on climate mitigation and adaptation<sup>3</sup>, and the NRL’s National Restoration Plans. In this way the FML not only enables streamlined reporting across forest legislation, but also encourages efficient, joined-up forest planning and implementation (whilst leaving decision-making to Member States).

## 3. Plugging gaps to meet EU and international obligations

The FML can help to plug significant reporting gaps. RED stipulates that primary and old-growth forests should be no-go areas for harvesting for bioenergy – the FML can ensure all Member States clarify these locations and the data be available on a single, centralised website. The FML can help Member States and the EU to deliver on reporting commitments to the Global Biodiversity Framework, for instance with regards *Threatened species*<sup>R21</sup>.

## 4. Planning for resilient forests and society, & reducing disasters

Forests are crucial allies in mitigating the impacts of climate change. But “European forests face remarkable changes” this century<sup>R22</sup>, from tree species needing to migrate to keep up with climate change<sup>R23,24</sup>, to predicted increases in drought, fire, wind-damage and pests<sup>R24–28</sup>. We should not imagine it is only forests such as the Amazon that are at risk of crossing tipping points<sup>R28,29</sup><sup>4</sup>.

It is very important that we are able to map (with geographical information systems – GIS) how the EU’s forests are responding to pressures such as drought and fire, so we can see which forests (type of, features of, location of) are proving most vulnerable or indeed resilient. The GIS approach will enable us to track and anticipate the movement of threats such as invasive species and disease outbreaks. This is crucial to inform efforts to maintain viability of silviculture and also conservation areas.

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<sup>3</sup> such as LULUCF’s carbon sequestration targets and Compliance Reports (which require Member States to explain synergies between the land-use sector and efforts on climate mitigation and adaptation, and biodiversity, including regarding the goals of the Biodiversity Strategy and 8<sup>th</sup> Environmental Action Programme, RED (regarding bio-energy from forests, and primary and old-growth no-go areas), and the Climate Governance Regulation’s 10-year *National Energy and Climate Plans* and 30-year *Long Term Strategies* (to which forests are important with regards adaptation and bioenergy)<sup>R16</sup>.

<sup>4</sup> The EU has possibly already crossed a climate threshold exacerbating pest damage<sup>R29</sup>, some of our forests have already turned from C sources to sinks during dry summers<sup>R49,50</sup>.



The FML's encouragement of disaster preparedness planning, as part of LTPs, is extremely valuable. In light of increasingly devastating droughts, fires and floods, disaster preparedness is essential to preserve property and possessions but also infrastructure, ecosystems and silvicultural systems. Disaster management is a matter of life or death<sup>5</sup>, so the importance of LTPs cannot be overstated. The FML will enable us to relate data on incidence and severity of fire to data on locations and features of forests, informing efforts to reduce risk<sup>6</sup>. GIS-based data can help us to maximise the protective benefits of forests with regards flooding, heat-stress, avalanche, land-slips, etc.

## 5. Maximising forest ecosystem services whilst minimising trade-offs

It is urgent, as encouraged by the LTPs, that national forest planning considers key aspects of multifunctional forests in an integrated way: biodiversity, bioeconomy, climate mitigation and adaptation, and disaster risk. Otherwise, there can be negative trade-offs between these objectives leading to perverse outcomes: for instance, over-harvesting can negatively affect climate and biodiversity goals, as well as adversely affecting long-term forestry yields<sup>R2,27,28</sup>.

The FML does not mandate the production of LTPs, nor any particular actions Member States should include in them, but it is important the FML encourages Member States to undertake holistic, data-led planning. All ecosystem services can benefit from a trend towards forest planning that integrates broader considerations alongside the traditional focus on wood production: forestry benefits from increased resilience thanks to biodiversity<sup>R23,28,30–37</sup>; biodiversity (in Europe and beyond) benefits from ensuring wood-production and consumption is efficient (and need not expand) within a biodiversity-friendly forest landscape<sup>R38</sup>; climate goals benefit from in-tact natural forests<sup>R39</sup> and a carbon-conscious forestry sector and bioeconomy; the public benefits from a balanced forest estate they can enjoy.

## 6. Efficacy & cost-effectiveness

Every aspect of EU functioning benefits from the services provided by our forests, so it would be a terrible false-economy not to invest in robust data. The benefits of forest monitoring relate to maintaining and ideally improving the ecosystem services we derive from forests. Forestry contributes around €25 billion (0.17%) of GVA in the EU<sup>R40</sup>, and wider ecosystem services from our forests (carbon sequestration, flood control, water purification and recreation) have been valued at €67 billion per year<sup>R41</sup>. Implementing the monitoring framework is expected to lead to financial benefits to forest managers, the EU digital industry, tourism, etc (see Beneficiaries).

Establishing a harmonised approach to forest monitoring that makes optimal use of both remote sensing and ground surveys, is surely the route to ensure cost-effectiveness and efficacy into the future<sup>R42</sup>. Through the EC providing Member States with a remote-sensing service, countries could save between €28 million and €38 million by 2035<sup>R41</sup>. It's also important the EC be empowered through Delegated and Implementing Acts, developed in consultation with stakeholders, to ensure EU forest monitoring keeps up to date with the most effective and cost-effective techniques (e.g. such as deriving biodiversity data from eDNA metabarcoding).

The FML ensures Member States can decide the most efficient way to collect data – providing an opt-out of the EC remote-sensing service if countries prefer to continue their own, and enabling countries to continue with their ground-survey protocols provided they are in harmony. In most cases it will be a case of refinement not overhaul: whilst there is much variation, and no country monitors every indicator, there is considerable monitoring to build upon<sup>7</sup>.

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<sup>5</sup> Forest fires, for instance, have tragic and traumatic consequences. At least 865 people were killed by forest fire in Spain, Portugal, Greece and Sardinia between 1945 and 2016<sup>R51</sup>, and many more injured. In 2017 alone, Portugal suffered 117 mortalities<sup>R52</sup> – including 64 people in a single fire<sup>R53</sup>

<sup>6</sup> E.g. Contributing to the efficacy of the EU's Wildfire Prevention Action Plan<sup>R54</sup>

<sup>7</sup> The EC has analysed the extent to which Member States already collect data on the proposed indicators<sup>R55</sup>. They generally report on more than half the indicators, with many in the 80<sup>th</sup> and 90<sup>th</sup> percentiles.



## 7. Trust, transparency & collaboration

“Accurate and trustworthy forest information” is important to forest stakeholders<sup>8</sup>. Discussions on forest topics in the EU, and within Member States, can be heated, with stakeholders prioritising different ecosystem system services and failing to find common ground. The constructive way forward is to promote evidence-based decision-making, by making robust data readily available to all stakeholders, across the economic, environmental and social aspects of forest topics.<sup>R8,38</sup>

The FML is an important contribution to transparency. The EU is committed to “increased public access to environmental information”, through the AEI Directive<sup>9</sup>, which aims to ensure there are no inequalities between Member States with regards access to environmental information<sup>(Rec.9)</sup>. The FML can ensure this with regards to forests. By encouraging Member States to formulate LTPs, we can expect to boost collaboration between sectors, stakeholders and countries.

The FML’s Geographical Information System is important for transparency. Stakeholders, from the public to researchers to forest managers, need to know how factors are affecting forests in particular places, rather than seeing opaque statistics presented nationally, or at the “very coarse” resolution common to NFIs<sup>R8</sup>. All stakeholders should have access to geographic data from biodiversity to fire-risk. GIS can bring transparency to where illegal logging is an issue<sup>10</sup>. Our understanding is that geographical resolution will vary between indicators as appropriate, and mapping will respect privacy by being blind to property boundaries. Where necessary data can be aggregated, but we urge Member States to achieve the greatest level of geographical insight possible.

## Beneficiaries

All European citizens and every economic sector stand to benefit from the FML, given the crucial role forests play in providing stable living conditions for our societies. Here are some examples.

- **Member States** will benefit from the EC providing considerable data from the Copernicus satellite programme, a more streamlined approach to reporting across numerous forest-related EU legislations, and a boost to integrated forest planning (nationally and collectively) to maximise the services from forests whilst minimising trade-offs and impacts from climate change.
- **Forest owners and managers** will gain access to important data to inform decision-making, such as suitability of different tree species to changing conditions, patterns of tree disease and invasive species, aspects of forest structure that increase resilience<sup>11</sup>. The FML is expected to help forest owners access payments for ecosystem services<sup>R43 12</sup>.
- **Potential victims of natural disasters** will benefit, likely saving hundreds if not thousands of lives a year through avoiding and reducing the impact of catastrophes such as fire, flood, heat-wave, land-slides, avalanches, etc. The Disaster Risk Preparedness aspect of Long Term Plans,

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<sup>8</sup> More than 90% of respondents to the EC’s consultation on the FML considered “accurate and trustworthy forest information” to be either very important (nearly 50%), important (about 20%), or somewhat important<sup>R55</sup>.

<sup>9</sup> The EC signed the Aarhus Convention and implements it through the Public Access to Environmental Information Directive (AEI Dir), recognising “the dissemination of such information contribute[s] to a greater awareness of environmental matters, a free exchange of views, more effective participation by the public in environmental decision-making and, eventually, to a better environment.”<sup>R56, Rec.1</sup>

<sup>10</sup> “Better control of illegal logging” was a hoped for benefit of 1,389 of the EC’s FML consultation respondees<sup>R55</sup>.

<sup>11</sup> Such info is important, e.g. the changing suitability of locations for tree species could lead to a “severe” drop in the economic value of forestry land between 14% & 50% this century<sup>R57</sup>. “From an investor perspective, the profitability and long-term survival of some sectors undoubtedly depends on well-functioning ecosystems — the most obvious being agriculture, forestry and fisheries.”<sup>R58</sup>

<sup>12</sup> The FML is *not* expected to provide data organised by holding, but we anticipate foresters will be able to support their applications (e.g. for funding for nature restoration, carbon removal, etc) by drawing comparisons between their forest plans and data from the FML on forest characteristics in their general area.



combined with FML data, will help to ascertain areas of high risk and to learn lessons from areas of low risk.

- **Researchers**, who have called for “a strongly improved information base”<sup>R8</sup>, will benefit from an enhanced and regularly refreshed databank, thus multiplying the benefits of the FML as scientists provide insights into forest issues<sup>13</sup>.
- **The digital sector** will benefit from the ongoing demand for monitoring services, and will enhance the benefits of the FML by continually innovating effective and cost-efficient approaches, contributing to a Digital Europe<sup>14</sup>.
- **The financial sector and wider economy.** Natural capital, of which forests are one of the EU’s biggest assets, provides the conditions and resources that enable a stable society and economy to function. The FML will provide us with data to inform efforts to manage risks such as forest fires, and to safeguard ecosystem services such as the provision of wood and non-wood products, forest-jobs, water supplies, regulation of flooding and extreme heat, and so on. Loss of these assets “results in financial risks”<sup>R44</sup>, such as: loss of life and property; increased insurance claims, premiums, uninsurable situations and risk of default; reduced asset values (e.g. property prices); devaluation of investments (including the value of forest stands); flooding the market with low-priced salvage timber after die-back episodes, etc<sup>R44</sup>.

## Conclusion

Forests support the stability and vitality of the EU. We need a robust Forest Monitoring Law to provide an integrated data set on how EU forests are faring from different perspectives (environmental, social and economic), in support of integrated forest planning. This will assist efforts to safeguard our forests and prevent their deterioration due to climate change. The cost-benefit ratio of a strong Forest Monitoring Law should be persuasive: the EC provides much data, and what remains is largely a matter of plugging necessary gaps and harmonising methodologies.

Given the life-supporting ecosystem services of our forests, literally everyone stands to benefit from the Forest Monitoring Law, and it is hard to see anyone who would experience disbenefits. Conversely, there is much to lose if we fail to gather data on the forests on which we depend.

For more detail on how the benefits of the Forest Monitoring Law could be further enhanced during co-decision process, please see: [WWF asks on the proposed regulation for a monitoring framework for resilient forests](#) and [How could European forests best benefit from the European forest monitoring law?](#)

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<sup>13</sup> E.g. Brazil set up certain forest monitoring measures including annual data on forest loss and real-time monitoring of fires, data that has been utilised by at least 1200 scientific articles<sup>R59, p.65</sup>

<sup>14</sup> <https://manifesto2030.digitaleurope.org/>







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- N.B. In the text, references are differentiated from footnotes through <sup>R</sup>, whereas footnotes are in [blue](#)
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