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Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on a monitoring framework for resilient European forests

(Text with EEA relevance)

{SEC(2023) 384 final} - {SWD(2023) 372 final} - {SWD(2023) 373 final} - {SWD(2023) 374 final}

Explanatory memorandum

1. CONTEXT OF THE PROPOSAL

• Reasons for and objectives of the proposal

EU forests and other wooded land are increasingly stressed by climate change and unsustainable direct or indirect human use and activity, and related land use changes. Hazards like wildfires, pest outbreaks, droughts, and heatwaves, often reinforcing each other, are likely to lead to more frequent and intense catastrophic events, often beyond national borders. These pressures undermine forest resilience and pose a threat to the capacity of forests to fulfil their various environmental, social and economic functions. Some hazards, for example wildfires, also pose a direct threat to human health and safety. Moreover, they increase the cost of managing forests, including the cost of fighting wildfires.

A comprehensive, high-quality monitoring system that covers all forests and other wooded land in the EU can help to better counter all these pressures and hazards. For example, frequent monitoring of tree cover and its disturbances using earth observation (EO) technologies supplemented with ground observations can reveal patterns of forest vulnerabilities and allow decision-makers to take adaptive measures. If this knowledge is lacking, this also affects the timeliness and quality of forest planning by Member States. Long-term integrated planning is instrumental to keep the wide variety of demands for forest service and resources in balance and ensure disaster resilience according to EU policy objectives and targets for forest services, use and protection.

Current monitoring tools are not fully fit for purpose. Services such as the Copernicus-driven European Forest Fire Information System (EFFIS) and the Forest High Resolution Layer of the Copernicus Land Monitoring Service have brought about some degree of standardised remote sensing-based monitoring and data in the EU. However, work to harmonise ground-based data, collected mainly through national forest inventories, has been focussing on a few core variables related to timber resources, such as aboveground biomass, growing stock and increment. Even in these cases, there are gaps in terms of timeliness and wider availability of data, leading to uncertainty about its reliability and limitations to its use. There has been no work on harmonising other ground-based data on variables, especially relating to biodiversity, making an EU-wide assessment of the forest ecosystem's condition difficult. Moreover, the available data on forests has significant gaps, such as for drought, or bark beetle-related forest damage. These gaps hamper effective forest disaster prevention, preparedness, and response by land managers and relevant authorities. Furthermore, several forest parameters such as forest biomass and structure, can only be reliably mapped and monitored across the EU by combining ground observations, remote sensing, and modelling. This combination is complex and challenging, often due to data-sharing and access issues.

The lack of information on the condition and development of forests in relation to disturbances or ecosystem dynamics makes it difficult for policymakers and forest managers to see trends and detect damages or degradation at an early stage and act on them effectively. This impedes the ability of forests to continuously provide ecosystem services, goods and functions to society, including climate change mitigation in which forests play a key role.

Overall, information about the status of forests in the EU, their ecological, social and economic value, the pressures they face and ecosystem services they provide, is fragmented and patchy, largely heterogeneous and inconsistent, with data gaps and overlaps, and data is provided with significant delay and often only on a voluntary basis. Although there are existing reporting processes that gather data and information on forests and their development such as EUROSTAT's *European Forest Accounts*, Forest Europe's reports *State of Europe's*

Forests or FAO's *Global Forest Resources Assessments*, the EU lacks a common system for the consistent collection and sharing of accurate and comparable forest data.

The fast developments in monitoring tools and technologies, used for EO through satellite or aerial means (including drones) and in Global Navigation Satellite System (GNSS) services such as GALILEO, provide a unique opportunity to modernise, digitalise and standardise the monitoring of forests as a service to all forest users and authorities. This can benefit voluntary integrated long-term planning by Member States and stimulate market growth in these technologies and related new skills, including for SMEs in the EU. Data protection and ownership needs to be respected.

Against this background, this proposal aims to: (i) ensure coherent high-quality monitoring that makes it possible to track progress towards achieving EU targets, policy objectives and targets that concern forests including on biodiversity, climate and crisis response; (ii) improve risk assessment and preparedness; and (iii) support evidence-based decision-making by land managers and public authorities, promote research and innovation.

In the last few years, the EU institutions and Member State experts – in the relevant expert groups including the sub-group of the Standing Forestry Committee – have repeatedly and clearly mentioned the need for strengthening EU forest monitoring. The new EU forest strategy for 2030, consequently, announced a dedicated legislative proposal on EU forest observation, reporting and data collection that would also cover strategic plans for forests and the forest-based sector prepared by the responsible national authorities.

Some Member States' current instruments do not cater for an integrated approach in response to forests as multifunctional ecosystems as they often only address forests from specific policy perspectives: for example, national energy and climate plans and long-term strategies cover carbon sequestration, renewable energy, and energy efficiency, and national and regional climate adaptation strategies cover climate adaptation needs, but they do not necessarily consider other aspects, such as biodiversity or resilience.

Most national planning instruments in the EU do not go beyond a 10-year forest planning cycle. Consequently, they do not take account of long-term climate change impacts for example on species distribution or frequency and intensity of extreme events. Furthermore, they often do not follow an adaptive approach which means that they are not able to reflect policy developments for forests and forestry at EU and national level, that would require a structured response at strategic and prospective levels.

Forest-related EU policies take a long-term view and require strategic foresight, based on timely and accurate information. For instance, the core goals of making the EU climate-neutral (EU Climate Law and Regulation on land use, land use change and forestry - LULUCF Regulation) and climate-resilient (EU Adaptation Strategy), or to maintain and restore European ecosystems (proposed EU nature restoration law) are to be reached by 2050. Many climate change projections cover the period until the end of this century, including studies on how forests will react to, and will be impacted by, accelerating climate change.

Furthermore, the strong diversity of national planning approaches, or the lack of planning altogether, hampers a rapid, coherent and efficient disaster risk response, particularly for threats with a cross-border dimension such as plant pests or wildfires.

Against this background, the proposal further aims to support Member States in voluntary integrated long-term planning to strengthen the consistent implementation of the various sector-based policy objectives and targets to secure forest resilience in a changing climate.

- **Consistency with existing policy provisions in the policy area**

The proposal aims to support the coherent and effective implementation of existing EU policies affecting forests directly or indirectly in the areas of environment and biodiversity, climate, disaster and risk reduction, energy, and bioeconomy.

Specifically, the proposal will support the policy instruments below:

- The new EU forest strategy for 2030, by providing the knowledge base for an integrated approach to forests as multifunctional ecosystems and monitoring delivery of its targets and objectives.

- The biodiversity strategy for 2030, by specifying indicators to monitor the delivery of: (i) its ambition to increase the quantity and quality of forests, and their resilience against disasters such as fires, droughts, pests, and diseases likely to increase with climate change; (ii) its targets on strictly protecting the remaining primary and old-growth forests; and (iii) on further development of the Forest Information System for Europe.

- The LULUCF Regulation, by improving monitoring of indicators, which will facilitate the reporting of geographically explicit data regarding forest land.

- The Deforestation Regulation, by specifying indicators relevant for deforestation and forest degradation that make it possible to track progress against the non-degradation objective.

- The bioeconomy strategy, by improving coverage and monitoring of indicators that track progress towards sustainability in the EU and its Member States and feed into the monitoring system of the Joint research Centre's Knowledge Centre for Bioeconomy.

- The Renewable Energy Directive, by strengthening the evidence base in relation to sustainability criteria for sourcing biomass to produce energy, and in particular by requiring that Member States have information on the location of primary and old-growth forests

- the Union Civil Protection Mechanism (UCPM) and the recently adopted EU disaster resilience goals by improving forest data availability. This will help improve early warning tools for wildfires and other disasters, develop more accurate risk assessments, and increase the overall preparedness to deal with future disasters.

- The digital agenda for Europe and the drone strategy 2.0, by promoting the use of remote-sensing technologies in forest monitoring.

- The Regulation on protective measures against pests of plants by strengthening the evidence base on pest dynamics.

- **Consistency with other EU policies**

The European Green Deal called for action to improve the quantity and quality of the forested area in the EU and to further increase the resilience of forests. It aims to reach climate neutrality, set a higher biodiversity ambition, ensure a healthy environment, improve human health and well-being, and promote a sustainable and circular bioeconomy. Monitoring the status and trends of forest and ecosystems and multifunctionality that supports voluntary integrated long-term planning by Member States will be key to doing this effectively.

The proposal is designed to ensure synergies with other policies including with their rules on data collection, monitoring and planning relevant to forests. This includes the Air, Water and Nature Directives as well as the Commission proposals on the nature restoration law and on amending the European environmental economic accounts. The proposal will also support climate policy, by making it possible to monitor progress on climate adaptation and mitigation

and enabling the uptake of carbon farming schemes under the proposed carbon removal certification framework. The proposal is also fully in line with the final report of the Conference on the Future of Europe, in particular Proposal 2, which explicitly endorses efforts towards 'reforestation, afforestation, including forests lost by fire and enforcement of responsible forest management'.

The proposal can also help the EU to demonstrate global leadership and spur the international community into evidence-based targeted action to strengthen forest resilience in a changing climate and improve the sustainable management of forests as multifunctional ecosystems. The Kunming-Montreal Global Biodiversity Framework includes a dedicated target on accessible high-quality data, information and knowledge for integrated and participatory management of biodiversity.

2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY

- **Legal basis**

The proposal is based on Article 192(1) of the Treaty on the Functioning of the European Union (TFEU), which gives the EU the right to act to achieve objectives of its policy on the environment. The objectives of the EU policy on the environment as set out in Article 191(1) of the TFEU are preserving, protecting and improving the quality of the environment; protecting human health; prudent and rational utilisation of natural resources; and promoting measures at international level to deal with regional or worldwide environmental problems, in particular combating climate change. The EU policy on the environment must aim at a high level of protection taking into account the diversity of situations in the various regions of the EU. It must be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

The same legal basis underpins EU measures to protect the natural heritage of forest ecosystems. A forest monitoring framework will provide the data that will make it possible to monitor the European Green Deal targets related to forests, and to develop policies to preserve forest ecosystems. Environment is an area of shared competence between the EU and the Member States, so EU action must adhere to the subsidiarity principle.

- **Subsidiarity (for non-exclusive competence)**

Action at EU level is justified because of the scale and transboundary nature of forest-dependent markets and the growing risks and uncertainty connected to climate change which require monitoring of the effects of EU policies and legislation, and evaluate with greater precision and timeliness the need for policy changes with a view to achieving policy targets.

This concerns in particular, disturbances such as bark beetle outbreaks, wildfires or windstorms, all with a significant cross-border dimension. These disturbances are increasing in frequency and intensity with climate change, which result in higher prevention and suppression costs as well as increasing greenhouse gas emissions, biodiversity loss, and market distortions. Considering bark beetle for example, the early detection of bark beetle hotspots is essential to reduce the extent of salvage logging and related costs and loss of income. When occurring at large scale, salvage logging is liable to disrupt the timber market, with a particularly negative effect on SMEs that are heavily dependent on the timber price. Pheromone traps and other ground monitoring in combination with EO providing high quality data, facilitate timely policy intervention and can therefore play an effective and efficient role in reducing costs. As another example, understanding the type of forest and fuel existing in

specific areas will be important for forest fire prevention measures and make operations under the UCPM more effective, as European wildfire early warning systems will be improved.

Forest monitoring is currently patchy and fragmented, which prevents the EU from acting in a timely manner against stressors and threats (with a cross-border dimension), as advocated by the new EU forest strategy and from making the most out of cost-effective technological developments and digital innovation, particularly in relation to EO. This situation has arisen from the fact that Member States have been acting alone in an uncoordinated manner over many years. While forest ecosystems often stretch across boundaries, forests are often seen as sovereign entities, and no consistent, transnational data-gathering approach has been fully developed so far. Healthy and resilient forests are of common interest and Member States are unlikely to resolve this fragmented situation without EU intervention.

As regards planning, several Member States have planning instruments in place, but sectoral policies are not covered sufficiently, which might affect the coherence of policy-making, at both Member State and EU level. Member States would be able to make use of the coordinated governance system to ensure consistent timelines for sector-based forest policy objectives and make sure that common information is included.

- **Proportionality**

The combination of aspects selected in the proposal is proportionate because it is limited to those aspects that Member States need to implement to satisfactorily achieve the objectives of the proposed regulation. To this end, Member States are only required to collect forest data that is linked to EU legislation and policy objectives. Moreover, the proposed regulation will be based on sharing of harmonised data from existing national data collection systems, mainly national forest inventories (NFIs). This will minimise the extent to which Member States will have to adapt their data acquisition methods. To ensure low adjustment costs, the descriptions of the forest data have been selected based on existing harmonisation work done by NFIs. The proposal also aims to work with existing reported data where this meets the requirements, avoiding duplication of reporting obligations. Voluntary long-term integrated planning by Member States is encouraged based on existing efforts respectively.

Because of the scale of the issue at stake and its cross-border dimensions, the EU is the only body that can ensure a consistent monitoring framework and encourage voluntary long-term integrated planning bringing together the Member States. Common standards for data collection and monitoring and minimum common elements for planning cannot be developed at a Member State level.

No option would involve transferring powers from Member States to the EU beyond the necessary monitoring harmonisation and standardisation (no transfer of powers over the operational choices related to forest management).

- **Choice of the instrument**

A legislative rather than a non-legislative approach fits the subject matter of this initiative and its level of precision. The objectives of this proposal are best pursued through a regulation. This will ensure direct and uniform applicability of the provisions in the EU at the same time and hence it will serve the purposes of harmonisation and provision of timely data. A regulation will make it possible to set common standards that are binding and directly applicable in all Member States without the administrative burden and the delay caused by the need to transpose the instrument into national law.

3. RESULTS OF EX POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS

- **Ex-post evaluations / fitness checks of existing legislation**

Not applicable as this is a new legislative initiative.

- **Stakeholder consultations**

In line with the better regulation guidelines, this regulation and the accompanying impact assessment have been underpinned by an extensive consultation process. The Commission collected the views of a wide range of stakeholders, in particular representatives of Member States, environmental organisations, research institutes, forest associations, and business representatives. Consultations were carried out as part of an open public consultation, in three expert workshops and in meetings with stakeholders and Member States. A dedicated sub-working group under the Standing Forestry Committee (SFC) met four times and two workshops organised by the Czech and Swedish Presidencies provided further insights. The different views provided valuable information and insights that helped prepare the impact assessment and the proposal.

Call for evidence

The call for evidence ran from 8 April to 6 May 2022. There were 116 responses from 21 countries, mainly from the general public, NGOs, public authorities, business associations, trade organisations and environmental organisations in decreasing order.

Most submissions supported the initiative for an EU framework on forest monitoring and strategic plans across different stakeholder groups, except for the general public, with less than half showing support. The primary concern expressed was that increased centralisation by this initiative should not make existing national forest monitoring unnecessarily burdensome, and that new legislation should not disrupt current management practices of forest owners. The Commission took this opinion into account in the impact assessment and when designing the proposal.

Public consultation

The Commission ran an open public consultation from 25 August to 17 November 2022 and received 314 viable contributions.

The consultation collected views on the need for forest monitoring, related technology choices, and preferred policy and financing options as well as the added value of strategic plans for forests. The results clearly confirmed the need for EU-wide harmonised and timely information on various forest aspects such as health, disturbance, and climate change. Monitoring systems should rely on field data in combination with remote-sensing technologies. Most respondents considered integrating data from Member State monitoring systems as the best policy option, while a single EU monitoring system was equally supported and rejected. Such system should be financed through a combination of Member State, private and EU resources. Around half of the respondents considered that a holistic view, overall coordination and comparability and exchange with other Member States add value to long-term planning. Only an insignificant number of respondents could not see any added value.

Expert workshops

The Commission organised three workshops with technical experts in October-November 2022 on: 1) “Strategic plans for forests”; 2) “Present and future possibilities of Earth Observation for operational forest monitoring”; and 3) “Benefits and costs of forest monitoring”. The workshops generated valuable input to the impact assessment.

Standing Forestry Committee's sub-working group

Four meetings with Member State representatives took place between November 2022 and May 2023 for technical discussion on policy options. Views were collected in particular on indicator coverage, the use of EO and possible key aspects of integrated long-term planning. Discussions were guided by the results of the open public consultation and the draft impact assessment, and framed by pre-defined questions shared with the group members ahead of the meetings. The sub-group then adopted a report on the upcoming initiative.

- **Collection and use of expertise**

The proposal is based on the latest scientific evidence. The impact assessment accompanying this proposal is underpinned by a support study prepared by a team of external experts published on the […]. The team of experts worked in close consultation with the Commission throughout the different phases of the study. The meetings of the sub-working group were opportunities for Member States to exchange views on key aspects of the initiative including a preliminary list of forest indicators, the results of the open public consultation and long-term integrated planning. These inputs were taken into account when drafting the impact assessment and this proposed regulation.

The Commission also used many other sources of information to prepare this proposal, in particular the results of EU research and innovation projects and recognised international reports.

The European Environment Agency provided specific expertise and were closely involved in developing the proposal and its impact assessment.

- **Impact assessment**

The proposal is based on an impact assessment. The impact assessment received a positive opinion with reservations by the Regulatory Scrutiny Board (RSB) on 17 February 2023[1]. Main points by the RSB included the question of the added value of the initiative notably regarding long-term forest planning and presentation of different options for the level of EU intervention respectively (EU forests – new EU Framework for Forest Monitoring and Strategic Plans (europa.eu)). In response to the opinion, the added value of the proposal was clarified and a hybrid option combining mandatory monitoring and data collection with voluntary planning was developed in the impact assessment.

The impact assessment considered five policy options of which two were discarded early on because they were highly unlikely to achieve the desired results. The policy options below were fully assessed.

(1) Fully voluntary option: this option would aim to achieve a common voluntary approach to forest monitoring and integrated planning to ensure coherent delivery of EU objectives and priorities related to forests while leaving maximum flexibility to Member States as how to translate them into their national context.

The Commission would issue voluntary guidelines to strengthen consistency and comparability in data collection, promote EO and facilitate the drafting of evidence-based integrated forest planning for example by offering a common set of basic requirements and core elements for consideration by Member States.

[1] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13396-EU-forests-new-EU-Framework-for-Forest-Monitoring-and-Strategic-Plans_en

An expert group would support the Commission in the preparation of voluntary guidelines and facilitate coordination and good practice exchange to promote harmonised national data collection and strengthen forest planning frameworks and mechanisms.

The Commission would continue to provide existing EO services through the Copernicus Land Monitoring Service on selected forest data such as phenology and net primary productivity.

(2) Legislative option: this option would aim to set up an obligatory EU framework covering: (i) the set-up of a forest monitoring system for geo-localisation of forest areas; (ii) data collection and sharing, including advanced use of EO; and (iii) integrated forest planning. This option has two sub-options related to the level of EU intervention in coverage of forest data, the use of EO systems, and the design and development of strategic planning at Member State level.

Common to both sub-options, mandatory forest data would be divided into two groups as set out below.

- Standardised data, for which the Commission takes the lead and provides unified data sharing across the EU. This data would be primarily collected via EO (e.g., Copernicus) and is subject to technical protocols such as those already supervised by the Directorate-General for Defence Industry and Space and the Joint Research Centre.

- Harmonised data, to which Member States would contribute with their own collected data, using their own surveys such as NFIs based on ground observation, but using EO tools where available and applicable. While Member States would need to provide harmonised data to the Commission in accordance with the common reference descriptions, they would not be obliged to standardise their data collection methods (for example sampling approaches and measurement methods), but only to make accessible the data in a harmonised way, if data accuracy requirements are fulfilled. This means Member States could continue using their existing data collection systems – where available – without major changes to the tools currently applied.

For the mandatory forest data, descriptions and methods would be harmonised based either on existing descriptions and methods or those developed with the support of an expert group (see further down). Standardisation would be suggested for forest data where the uncertainty of harmonised estimates is too high.

The second sub-option envisages the inclusion in the forest monitoring system of additional forest data extending beyond existing EU and international monitoring and reporting systems. It would include the issuance of Commission recommendations on the integrated long-term plans developed by the Member States.

(3) Hybrid option: this option would combine core aspects of the voluntary and legislative options described above. Monitoring aspects would be mandatory to address the problem of the varying level of data coverage and the varying approaches to data collection across Member States (as in the second sub-option of the legislative option). Integrated forest planning would be optional for Member States (as in the fully voluntary option).

A full legislative approach was assessed as the most effective, efficient and coherent policy option. Setting up a common framework using a simple, single instrument would address the need for promoting a holistic and integrated approach to forests, following the narrative of the new EU forest strategy for 2030.

The preferred option entails a combination of aspects from both sub-options related to the level of EU intervention. Monitoring and sharing of forest data would be mandatory based on

common harmonised or standardised descriptions and methods for a set of forest data covering all priority policy areas, including forest health resilience and biodiversity. This is essential to meet the strategic objectives for data comparability, quality, and availability.

Collection and sharing of forest data would follow a stepwise approach taking account of the operability in terms of availability of common descriptions and methods, availability of EO based tools and methods, and status of monitoring and data sharing in the Member States.

The Forest Information System for Europe would be strengthened as an existing one- stop-shop. This would increase transparency and facilitate access to forest information for stakeholders. It would support building an integrated understanding on forests, their status and diverse ecosystem services.

Recognising the varying use of EO across Member States, the first set of forest data under the forest monitoring system would be monitored at EU level using strengthened Copernicus possibilities, leaving the opportunity to Member States to opt out and contribute to the operation of the system with their data sets. This would strike a balance between stakeholder views expressed in the open public consultation and the need to ensure high-quality data and enable cost savings.

Mandatory long-term plans covering a common set of basic aspects in combination with the Commission issuing recommendations on their development would help Member States set further context-specific priorities, targets and measures in a way that can easily be shared at EU level, while ensuring integrated alignment with EU policies on forest conservation and uses.

The expert group that is being set-up as part of the new EU forest governance created in line with the forest strategy [proposal for a Decision of the European Parliament and of the Council XX amending Council Decision 89/367/EEC setting up a Standing Forestry Committee] will, inter alia, provide the framework for the cooperation and coordination between the Commission and the Member States and will support the Commission in developing common descriptions and protocols for forest data and data collection. This Expert Group should also be open to the participation of experts from Accession Countries.

The proposed combination of increased standardisation and improved harmonisation of forest data would enable a very strong EU-wide single market for SMEs active in this sector. It also builds directly on operational products currently maintained by the Directorate-General for Defence Industry and Space. These products provide a solid platform for developing the specific forest monitoring layers in this proposal. Furthermore, the proposed combination would provide a clear regulatory context for and already build on the experience of the Commission (Joint Research Centre) and the European Environment Agency of refining and harmonising existing map layers such as already produced under the Copernicus programme.

The digital geographical data market is a dynamic but – with respect to forests – a fragmented and highly technical market. The preferred option would provide a means for remote sensing companies, survey operators and data processing specialists to standardise and regularise products for nearly half the EU land area. By doing so, it would also facilitate innovation in advanced digital tools in the sector, for example in better performing digital tools to identify EU-wide indicators needed for climate and biodiversity policy (e.g. carbon removals and certification of action in forests).

The proposal based on the preferred option links strongly to key existing legislation such as the LULUCF Regulation, the Deforestation Regulation and the Renewable Energy Directive as well as to proposals under negotiation (carbon removal certification, nature restoration law, new environmental economic account modules). It thus harnesses the synergies of a common

monitoring system that ensures interoperability between the monitoring requirements under the different legislative frameworks without increasing the regulatory burden on Member States.

The forest monitoring to be established under the proposal would lead to a cost-efficient system based on the economies of scales, where EU-wide forest data products can be produced in accordance with standardised definitions and technical specifications, foregoing the need to develop them individually on national levels. This will consequently enable more effective implementation of the abovementioned legislation. For example, extrapolated results from a case study on replacing a single indicator (ground-based mapping of clear-cuts) with Copernicus satellite-data shows potential cumulative benefits of between EUR 28 million to 38 million by 2035 across all Member States.

Where national monitoring systems are already in place, the proposal would not require significant changes to their functioning with regard to data collection methods but rather leave large room for flexibility, requiring only that Member States harmonise the estimated aggregated values in line with common definitions. This will lead to improving the cost-efficiency of the system and reducing the administrative burden on the national administration.

This effective and cost-efficient forest monitoring system would serve multiple purposes:

- improving data for policy making and policy implementation, including by providing more up-to-date information on natural disturbances and forest disasters across Member States; and

- enabling individual forest managers to market their ecosystem services, such as carbon removals, based on comparable and credible data.

Most benefits of the initiative are indirect including the lower administrative burden on businesses, forest managers, administrations and the general public in search of forest-related information, in line with the digital agenda for Europe. Public accessibility to reliable and trustworthy data may also facilitate the use of forest data by the scientific community, policymakers, forest industries, and lead to the development of new data-based services by innovative SMEs.

Timely and accurate information on carbon stocks and fluxes in their forest may give the possibility to forest managers to better identify where the potential of additional carbon removals for the purposes of their certification and plan appropriate sustainable management practices in the most efficient way. The economic value of the EU forest area's net carbon sink can be estimated at EU32.8 billion. EU forests and wood products currently remove approximately 380 Mt of CO2 equivalent per year. The existence of an EU-wide framework for timely EO and long-term planning would improve early and rapid detection of forest disturbances and adaptation of forests and the forest-based sector to the changing climate. By 2100, the impact of temperature increases on 32 tree species in Europe is expected to reduce the value of European forest land by 27% due to a predicted decline in economically valuable species. Strategic and informed action today would reduce this decline tomorrow, helping the EU to reach its climate neutrality target by 2050 as set out in the European Climate Law.

Regarding costs of the preferred option, these are expected to be borne by Member States and the European Union while SMEs will be largely unaffected. Most of the costs for the Member States would relate to the need to carry out a regular systematized collection of ground data in a network of monitoring sites. This is currently work undertaken by national forest inventories in most Member States. If a Member State has to create a national forest inventory, associated costs are estimated at EUR 42/km2 of forest area (based on the costs three Member States

incurred in creating national forest inventories – 5-year interval and use of EO included). The cost of harmonisation of forest data has been estimated at EUR 10 000 per indicator. Adding a new indicator to an already established forest inventory is not likely to entail significant additional costs. However, for a few indicators selected under the preferred option such as mapping of primary and old-growth forests or of forest habitats under Habitats Directive, field surveys additional to the forest inventory might be necessary, entailing some further costs to Member States with large forest areas.

Costs for preparing and communicating an integrated long-term plan are estimated at EUR 600 000 (based on costs incurred by Germany in relation to its 2050 forest strategy).

Considering that better knowledge and better planning will lead to better forest management decisions and policymaking, the proposal will contribute indirectly to the delivery of several Sustainable Development Goals (SDGs), including on Health (SDG 3), Water (SDG 6), Responsible Consumption and Production (SDG 12), Climate Action (SDG 13) and Life on Land (SDG 15). With regards to Affordable and Clean Energy (SDG 7) positive effects and potential trade-offs can be expected. Better knowledge and planning facilitating more sustainable management can lead to greater or more long-term provision of woody biomass for renewable energy but risks overharvesting. A similar effect is assumed for Decent Work and Economic Growth (SDG 8) with better knowledge and planning supporting new bioeconomic activities and employment opportunities but leading to a decline in traditional sectors.

Supporting more targeted and evidence-based measures by policy- and decision-makers, including forest managers, the preferred option would strengthen the sustainable provision of economic, social and cultural forest resources and services. For example, timber provision was estimated at around EUR 16 billion in 2021 and the value of regulatory and cultural ecosystem services (i.e. flood control, water purification and recreation - forests held the largest share in the total value of nature-based recreation) was estimated at about EUR 57 billion.

Conclusions

The proposal corresponds to the preferred option in the impact assessment as regards all aspects mentioned above, with the exception of integrated long-term planning. Based on the consultation with Member States, the Commission decided to limit the level of intervention to voluntary integrated planning. This will have an impact on both the associated costs and the benefits of the proposal in comparison with the preferred option. In the absence of an obligation to develop or update integrated long-term plans administrative costs for Member States will not necessarily arise. However, Member States who decide to opt for the integrated long-term forest plans will benefit from strengthened climate adaptation of forests, improved policy coherence and efficiency, and avoidance of trade-offs and conflicts.

- **Regulatory fitness and simplification**

In line with the Commission's commitment to better regulation, the proposal has been prepared inclusively, based on transparency and continuous engagement with stakeholders. In line with the 'one in, one out' approach, the administrative impact has been analysed. The administrative costs will be mainly for the EU and public administrations in Member States. Administrative costs to businesses including forest owners and people are estimated to be insignificant since the initiative does not introduce new direct administrative requirements applicable to these groups.

Public authorities in the Member States will incur administrative costs in ensuring that their monitoring systems meet the minimum standards in terms of data collection frequency and indicator coverage set out in this proposal. If they opt for the voluntary planning, they will also incur administrative costs in drafting or updating long-term integrated plans for forests, reviewing these, and monitoring progress towards achieving the objectives set out in the plan. Administrative costs will depend on Member States' individual starting points.

The greater use of advanced forest monitoring technologies together with improved availability and accessibility of forest data through the single digital platform of the Forest Information System for Europe will reduce the administrative burden for businesses, general public, and administrations in search of forest-related information.

- **Fundamental rights**

The proposal respects the fundamental rights and in particular observes the principles recognised by the Charter of Fundamental Rights of the European Union. It helps to uphold the right to a high level of environmental protection and to improve the quality of the environment in line with the principle of sustainable development laid down in Article 37 of the Charter.

4. BUDGETARY IMPLICATIONS

Implementation of the proposal will require human resources in the Commission, as specified in the attached legislative financial statement. The human resource implications for the Commission are expected to be addressed by making additional allocations, as outlined in the financial statement.

Implementation will also require support from the European Environment Agency for which additional resources will be needed, as outlined in the financial statement.

Costs incurred by the Commission in developing and providing core remote-sensing data and products are covered by the Copernicus programme. Costs for specific products that are not available yet, are covered by the additional resources foreseen in this regulation for the European Environment Agency.

This proposal includes articles that details further work that will be needed to implement the regulation, including an empowerment to adopt delegated or implementing acts (for example, to develop technical specifications and data collection provisions for additional indicators, including those requiring integration of remote-sensing and ground-based data).

The financial statement included in this proposal shows the detailed budgetary implications and the human and administrative resources required. The costs for the additional tasks that the Commission has to assume will be borne by the LIFE programme. The tasks entrusted to the European Environment Agency will be financed through a re-allocation under the LIFE programme. Opportunities under the EU research and innovation framework programme, such as the upcoming partnership "Forests and forestry for a sustainable future", should further contribute to the development of improved, consistent, and up-to-date forest data in Member States.

5. OTHER ASPECTS

- **Implementation plans and monitoring, evaluation and reporting arrangements**

At the latest by the entry into force of this regulation, the Commission will design a plan based on a set of milestones to track the implementation of the measures required to achieve the specific objectives (e.g. adoption of technical implementation measures on data harmonisation and standardisation and on the governance framework) against a specific timeframe.

In addition, the Commission, in cooperation with Member States, will monitor the roll-out and impact of the measures on a regular basis (every two years) based on the following aspects:

- number of forest data with a common definition;
- number of forest data with harmonised or standardised data collection methods;
- data provision by Member States to the Forest Information System for Europe;
- data access via the Forest Information System for Europe (average clicks/month);
- national adaptation strategies and risk-assessment and risk-management strategies relying on common indicators;
- development of the forest digital services market (in particular, number of SMEs);
- number of voluntary integrated long-term plans adopted by the Member States;
- level of alignment of voluntary integrated long-term plans with the common set of basic aspects for consideration; and
- use of EU funds in support of monitoring activities.

The Commission will also launch an evaluation based on the above-mentioned aspects and report to the Council and Parliament on the implementation of the regulation 5 years after its entry into force.

- **Detailed explanation of the specific provisions of the proposal**

The key provisions of the proposed regulation are set out below.

Article 1 sets out the subject matter of this regulation to set up a forest monitoring framework. It identifies the regulation's guiding principles and overarching objectives, also with regard to voluntary integrated long-term planning at Member States level and strengthened governance between the Commission and the Member States.

Article 3 describes the forest monitoring system to be set up and operated by the Commission in cooperation with the Member States, specifying its elements. It lays down rules and responsibilities of the Commission and mandates the European Environment Agency to assist the Commission in implementing the monitoring system including the Forest Information System for Europe.

Article 4 sets out the rules applying to the first element of the forest monitoring system, namely the geographically explicit identification system for mapping and localising forest units.

Article 5 sets out the rules for the monitoring framework for the collection of forest data (second element of the forest monitoring system), specifying timing and data collection requirements for the Commission as regards standardised forest data and the frequency requirements for the Member States as regards harmonised forest data. It further empowers

the Commission to adopt delegated acts to amend specifications for the standardised forest data included in Annex I.

Article 6 enables Member States to opt-out of the standardised collection of the forest data operated by the Commission, by providing national data in line with standardised specifications and ensuring quality assessment.

Article 7 sets out the rules applying to the third element of the forest monitoring system, namely the forest data sharing framework, specifying timing and harmonisation requirements for the Member States and providing for the relevant empowerment to the Commission to develop further technical rules. It specifies the requirements for Member States and the Commission for making the data publicly accessible, also in the Forest Information System for Europe. It further empowers the Commission to adopt delegated acts to amend the specifications for the harmonised data in Annex II.

Article 8 requires the Commission and the Member States to collect additional forest data based on appropriate methodologies and empowers the Commission to lay down such methodologies.

Article 9 specifies the responsibility of the Commission and the Member States to develop compatible data exchange systems, empowers the Commission to adopt rules to ensure the compatibility of data storage and exchange systems, and to lay down safeguards relating to the geographically explicit location of monitoring sites.

Article 10 sets out the roles and responsibilities of the Commission and the Member States to ensure data quality control, empowering the Commission to establish accuracy standards and rules on quality assessment via delegated acts and specific rules on assessment reports and remedial actions via implementing acts.

Articles 11 and 12 set up a governance framework stipulating rules and principles for coordination and cooperation between the Commission the Member States and relevant regional stakeholders, and the role of national correspondents.

Article 13 provides the possibility for Member States to develop or adapt existing integrated long-term forest plans, further specifying the aspects to be considered in the plans and the obligation to make them publicly available.

Article 16 provides that the Regulation will be kept under review and that the Commission will report on its implementation within 5 years after its entry into force.

2023/0413 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on a monitoring framework for resilient European forests

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee[2],

Having regard to the opinion of the Committee of the Regions[3],

Acting in accordance with the ordinary legislative procedure,

Whereas:

(1) Forests and other wooded land cover close to half of the Union's land surface and play a key role in mitigating and adapting to climate change, preserving, and restoring biodiversity, ensuring a strong forest-based bioeconomy and prosperous rural areas, preserving cultural heritage, as well as providing recreational and educational opportunities for the wellbeing of Union citizens. Forests provide vital ecosystem services such as climate regulation, air purification, water supply and regulation, flood and erosion control, habitat for biodiversity, genetic resources. Healthy forest ecosystems support a significant part of the bioeconomy in the Union, providing the raw material (wood and non-wood such as food and medical plants) for a variety of sectors, with the extended forest-based value chains currently supporting 4.5 million jobs in the Union. Forested land is the main contributor to the Union carbon sink and should play an essential role in meeting the commitments of Regulation (EU) 2021/1119 of the European Parliament and of the Council ('European Climate Law')[4], including the Union's objective to reach climate neutrality by 2050, and of the Fit for 55 legislative package, in particular the new monitoring obligations introduced by the revised Regulation (EU) 2018/1999 of the European Parliament and of the Council[5]

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2 OJ C , , p. .

3 OJ C , , p. .

4 Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law') (OJ L 243, 9.7.2021, p. 1), ELI: http://data.europa.eu/eli/reg/2021/1119/oj.

5 Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and

with regard to Regulation (EU) 2018/841 of the European Parliament and of the Council ('LULUCF Regulation')[6]. Forested land is also subject to other obligations such as those relating to species and habitat protection under the Council Directive 92/43/EEC[7], to deforestation under Regulation (EU) 2023/1115 of the European Parliament and of the Council ('Deforestation Regulation')[8], [nature restoration in Regulation (EU) [X/X] of the European Parliament and of the Council[9]] and to renewable energy under the Directive (EU) 2018/2001 of the European Parliament and of the Council ('Renewable Energy Directive')[10]. Forests and forestry are also key for the achievement of key priorities such as the New European Bauhaus[11] or the EU Bioeconomy Strategy[12].

(2) However, unprecedented droughts, bark beetle outbreaks and wildfires driven by climate change have already caused significant tree dieback and temporary forest loss in many Member States in recent years. The frequency and severity of climate and weather extremes is projected to further increase. A large share of Union forests is vulnerable to their effects, with adverse consequences for forest owners, forest-based industries and value chains, for rural livelihoods and for forest biodiversity, negatively affecting the capacity of forests to provide vital ecosystem services that the wellbeing of Union citizens and bioeconomy in the Union depend on. Risks like wildfires and pest outbreaks are transboundary in nature and are increasing with climate change. That leads to higher costs for their suppression and contributes to wood market volatility. European forests are already suffering economic impacts from forest fires of around 1.5 billion euros annually, while increasing temperatures are predicted to reduce the value of forest land by several hundred billion euros by the end of the century due to changes in species composition.

(3) Addressing those negative trends and threats, ensuring that forests in the Union can continue delivering on their multiple functions under a changing climate, and preserving forest ecosystems as natural heritage requires an enhanced forest disaster

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(EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 328 21.12.2018, p. 1) ELI: http://data.europa.eu/eli/reg/2018/1999/oj

6 Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (OJ L 156, 19.6.2018, p. 1, ELI: http://data.europa.eu/eli/reg/2018/841/oj) .

7 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7, ELI: http://data.europa.eu/eli/dir/1992/43/oj).

8 Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 (OJ L 150, 9.6.2023, p. 2, ELI: http://data.europa.eu/eli/reg/2023/1115/oj).

9 Regulation (EU) X/XX of the European Parliament and of the Council of … (OJ …).

10 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (OJ L 328, 21.12.2018, p. 82, ELI: http://data.europa.eu/eli/dir/2018/2001/oj).

11 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions New European Bauhaus Beautiful, Sustainable, Together (COM(2021) 573 final).

12 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Innovating for Sustainable Growth: A Bioeconomy for Europe (COM/2012/060 final).

prevention, preparedness, response and post-disaster recovery, biodiversity enhancement to improve forest resilience to climate-induced impacts, a stronger capacity to manage risks and adaptive forest management approaches.

(4) Member States, forest owners and the Union can take the appropriate actions only if they have coherent, reliable, timely and comparable data, making best use of the digital transition opportunities, including Earth Observation technology. To that end, a European-wide forest monitoring system should be set up to collect and share forest data that will support informed decision-making, for example by allowing to identify, assess, and address forest hazards, risks and damages in a timely manner. Against that background, the new EU Forest Strategy for 2030 announced a legislative proposal on EU Forest Observation, Reporting and Data Collection including on Strategic Plans for Forests and the forest-based sector.

(5) Thanks to the constellation of Copernicus satellites and other space assets, complemented by periodic airborne imaging campaigns, the Union is equipped with reliable, cost-efficient, and readily operational Earth observation technologies. These allow for the detection and monitoring of climate change-driven forest disturbances, such as wildfires, droughts, storms, and pest outbreaks.

(6) Furthermore, it is necessary to obtain an accurate and complete picture of European forests in the Union to assess their vulnerability and resilience to climate change, and the effectiveness of the measures to help them adapt to climate change. That requires the collection of relevant data on forest health, biodiversity and forest structures.

(7) Most of the data on forests on the national level has been collected through national forest inventories. The main focus is on monitoring of timber resources even if some collected data also cover other forest functions. Moreover, no comprehensive system currently exists at the Union level that can ensure availability of comparable quality data across all relevant policy areas, including forest resilience and biodiversity. In addition, there are remaining challenges relating to the integration of remote sensing data and ground-based data due to lack of interoperability and data accessibility of ground data, often in connection to concerns relating to data confidentiality. Overall, the current forest monitoring in the Union needs to further develop a systematic data collection and data sharing in line with common descriptions and long and comparable high-resolution time-series.

(8) The fast developments in monitoring tools and technologies, in particular in Earth observation through space-borne or aerial means, and in Global Navigation Satellite Systems, provide a unique opportunity to modernise, digitalise and standardise the monitoring of forests, providing a service to forest users and authorities, and to support voluntary integrated long-term planning, while stimulating the Union market growth with regard to those technologies and related new skills, including for small and medium-sized enterprises (SMEs). To date rapid changes to forest cover, such as through forest disturbances, can be detected by Earth observation and can improve the efficiency of forest monitoring. However, ground measurements are needed to develop, verify, and calibrate Earth observation data products. Also, many features connected to forest disturbances or biodiversity (e.g. attribution of the forest disturbance causes, quantity of deadwood, forest naturalness, or presence of old-growth forests) are difficult to predict for large areas using only Earth observation.

(9) There are several Union policy instruments that directly or indirectly affect forests in the fields of environment and biodiversity, climate, energy, bioeconomy and civil protection. A high-quality forest monitoring system combining ground-based

observations with data and products from Earth observation will allow tracking progress towards Union policy objectives and targets, enabling their successful implementation and evaluation. As an example, the implementation of the revised Renewable Energy Directive necessitates that Member States have information on the location of primary and old-growth forests. Moreover, having access to wall-to-wall annual data on tree cover changes and extent of forest disturbances can support Member States monitoring and reporting of carbon stock changes for the purposes of the LULUCF Regulation. This approach is in line with other Union instruments such as the EU Observatory on Deforestation, Forest degradation and Associated Drivers, as anchored in the 2019 Communication on Stepping up EU action to protect and restore the world's forest[13], which aims to monitor changes in the world's forest and related drivers by providing global forest maps, information on supply chains and Earth Observation tools for regional to global analysis.

(10) Moreover, availability of quality forest data should support the uptake of sustainable business models such as carbon removal technologies and carbon farming solutions under the Union carbon removal certification framework in accordance with Regulation [X/X] of the European Parliament and of the Council[14], stimulating the adoption and large-scale deployment of sustainable carbon farming and carbon storage practices across the Union by decreasing costs for forest managers deciding to participate in such schemes.

(11) Against that background a forest monitoring system should be established by the Commission in cooperation with Member States, based on three elements that should be gradually made operational: a geographically explicit identification system for forest units, a forest data collection framework and a data sharing framework. The forest monitoring system should allow the collection of data based on Earth observation and georeferenced ground observation and should ensure interoperability with other existing electronic databases and geographic information systems, including those relevant for the monitoring of LULUCF activities and for the tracking of deforestation-free commodities in accordance with the Deforestation Regulation. The forest monitoring system should respect the principles laid down by the latest European Interoperability Framework[15].

(12) In order to ensure that forest data can be monitored in a coherent manner, it is first necessary to identify and localise forest units with similar core characteristics, such as minimum area, tree cover density and main forest type. To that end, the geographically explicit identification system should enable the correct mapping and localisation of areas containing forest, enabling the tracking of change to the forest cover and characteristics over time. To ensure a sufficient level of accuracy, the system should comply with a minimum standard in terms of scale and be developed around a standardised approach.

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13 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "Stepping up EU Action to Protect and Restore the World's Forests" of 23.7.2019 (COM(2019) 352 final).

14 Regulation (EU) X/XX of the European Parliament and of the Council of … establishing a Union certification framework for carbon removals (OJ …).

15 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions of 23.3.2017 - European Interoperability Framework – Implementation Strategy (COM(2017)134 final).

(13) Forest data to be collected under this Regulation reflects the data needs for underpinning Union policies in the areas of climate change mitigation and adaptation, disaster risk prevention and management, biodiversity and bioeconomy. The forest data collection system should be based on different datasets: standardised data, to be operated by the Commission and primarily collected via Earth observation through Copernicus satellites and subject to technical protocols, and harmonised data, to which Member States should contribute through systematic collection of data using their own surveys based on a grid of sampling plots, such as National Forest Inventories or other networks of monitoring sites, and complementing them with Earth Observation tools, where available and applicable.

(14) In order to provide the most comprehensive picture of the state and condition of forests within the Union, Member States should be able to choose not to use the service provided by the Commission and to contribute to the standardised data compilation operated by the Commission with their sources. That should allow Member States that have monitoring systems in place to contribute with their nationally applicable datasets such as in situ data or airborne campaigns that are not available wall-to-wall across the Union, without creating an additional resource burden, in line with the subsidiarity principle. Moreover, the complementary use of airborne monitoring systems should contribute to quantify the impact of forest fires in order to plan for the rehabilitation of the burnt area, and as a result reduce costs to Member States and forest owners through more efficient post-fire management. In case Member States choose not to use the services provided by the Commission, they should collect the data in accordance with the technical specifications included in this Regulation and should annually assess the quality of these data.

(15) With a view to reducing costs and facilitating access to forest data, the forest data sharing framework should ensure for such data to be made publicly accessible by the Member States and the Commission, including in the Forest Information System for Europe. Member States should be able to continue using their existing data collection systems. For the purposes of harmonisation they should share the data in accordance with the technical specifications included in the Regulation, which are based on existing reference descriptions and methods. With regard to data relating to the location of monitoring sites, which are currently treated as confidential by most national forest inventories, their sharing should be subject to the development of safeguards, in line with the relevant EU requirements, that ensure that the confidentiality of such data is not compromised. The forest data sharing framework should facilitate, through the geographical localisation of the Member States' shared data, the attribution of that information to each forest unit.

(16) Currently, not all forest-relevant data in the Union are being monitored and reported under existing Union and international frameworks due to lack of data collection systems and harmonised methodologies, for example data relevant for tracking the progress of adaptation to climate change as required in accordance with Articles 5 and 6 of the European Climate Law. For that reason, this Regulation should provide for the inclusion of such additional forest data in the forest monitoring system subject to the development of the relevant methodologies by the Commission, with the support of the European Forest Science Partnership developed through its Joint Research Centre. The technical specifications for these additional forest data should be developed in a stepwise approach through implementing acts in close cooperation with the Member States, based on the highest policy priority and taking into account financial and technical feasibility, as well as the possible administrative burden on Member States.

(17) Directive (EU) 2019/1024 of the European Parliament and of the Council[16] on open data and the re-use of public sector information mandates the release of public sector data in free and open formats. The overall objective of that Directive is to continue strengthening the Union's data economy by increasing the amount of public sector data available for re-use, ensuring fair competition and easy access public sector information, and enhancing cross-border innovation based on data. The main principle of that Directive is that government data should be 'open by design and default'. Directive 2003/4/EC of the European Parliament and of the Council[17] is aimed at guaranteeing the right of access to environmental information in the Member States in line with the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters ('Aarhus Convention'). The Aarhus Convention encompasses broad obligations related both to making environmental information available upon request and actively disseminating such information. Directive 2007/2/EC of the European Parliament and of the Council[18] also covers the sharing of spatial information, including data sets on different environmental topics. The provisions of this Regulation related to access to information and data-sharing arrangements should complement those Directives, in order not to create a separate legal regime and should therefore be without prejudice to Directives (EU) 2019/1024, 2003/4/EC and 2007/2/EC. In accordance with those Directives, the sharing of forest data under this Regulation should not adversely affect national security and defence.

(18) In order to ensure the compatibility of data storage and exchange systems for the collection and sharing of forest data under the forest monitoring system, the Commission and the Member States should cooperate, also involving specialised bodies.

(19) The forest monitoring system should ensure that the data shared is reliable and verifiable. The Commission and the Member States should therefore control the quality and completeness of the forest data collected under the forest monitoring system. Where the quality assessment reveals deficiencies of the system, Member States should address them and provide the Commission with the assessment and the remedial actions. In light of that, the Commission should be empowered to develop rules and procedures to ensure the quality of the forest monitoring system, taking into consideration the need to keep the additional administrative burden for SMEs to the minimum.

(20) In order to support Member States in forest monitoring and voluntary integrated long-term planning, this Regulation should establish a governance framework for coordination and cooperation between the Commission and the Member States and among Member States, in order to improve the quality, timeliness and coverage of forest data. The governance framework should be inclusive and science-based and should aim at further improving the reliability of scientific advice and the quality of

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16 Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (recast) (OJ L 172, 26.6.2019, p. 56 ELI: http://data.europa.eu/eli/dir/2019/1024/oj)

17 Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC (OJ L 41, 14.2.2003, p. 26 ELI: http://data.europa.eu/eli/dir/2003/4/oj).

18 Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) (OJ L 108, 25.4.2007, p. 1, ELI: http://data.europa.eu/eli/dir/2007/2/oj).

the integrated long-term plans, thereby facilitating knowledge and good practice exchange. That governance framework should ensure the participation of the competent authorities responsible for the different policy objectives reflecting the multifunctionality of forests as well as independent experts in line with Decision [X/X] of the European Parliament and of the Council[19]. For the implementation of this governance framework, each Member State should designate a national correspondent and inform the Commission; the national correspondent should be the main focal point for any activity relating to the forest monitoring system as well as voluntary integrated long-term planning. The Member States and the Commission should also make use of existing regional institutional cooperation structures, including those under regional Conventions and other forest relevant fora and processes.

(21) Similarly, in order to support an integrated approach across the relevant policy areas and to ensure the resilience of Union forests, this Regulation should provide for the possibility for Member States to develop voluntary integrated long-term forest plans, or adapt as necessary, their existing long-term forest strategies or plans in light of aspects specified by this Regulation, also taking into account socio-economic considerations. The development of such integrated approach would increase coherence in the delivery of Union objectives through the inclusion of common aspects in the plans, that would also cover enabling elements such as needed investments and training and capacity building to support upskilling of forest managers. The plans should be made publicly available and reflect a medium to long-term perspective, including but not limited to 2040 and 2050.

(22) In order to ensure the good functioning of the forest monitoring system, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of amending and supplementing this Regulation to adapt the technical specifications of forest data to technical and scientific progress and to adopt accuracy standards for data and rules on quality assessment. It is of particular importance that the Commission carries out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement on Better Law-Making of 13 April 2016[20]. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.

(23) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission with respect to technical rules and procedures for the sharing and the harmonisation of forest data; methodologies for the collection of certain forest data and further specification of their descriptions; procedures and formats to be used to ensure the compatibility of data storage and exchange systems and to establish confidentiality preserving safeguards for the inclusion into those data storage and exchange systems of information relating

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[19] Decision (EU) X/X of the European Parliament and of the Council of ... amending Council Decision 89/367/EEC setting up a Standing Forestry Committee (OJ…).

[20] Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on Better Law-Making of 13 April 2016 (OJ L 123, 12.5.2016, p. 1 ELI: http://data.europa.eu/eli/agree_interinstit/2016/512/oj).

to geographically explicit location of monitoring sites; the contents of the assessment reports on the quality of data and arrangements for their submission to the Commission as well as the description of remedial actions. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council[21].

(24) The Commission should keep this Regulation under review, taking into account the relevant developments concerning Union legislation, international frameworks and technological and scientific progress and additional monitoring needs. The review should also assess the quality of data harmonisation, in particular whether the harmonisation leads to excessive uncertainties of estimates that would justify the need for establishing standardised data collection. Five years after the entry into force of this Regulation, the Commission should report on its implementation.

(25) Union forests and sustainable forest management are crucial for the European Green Deal and its objectives. The Union has a range of competences that may also relate to forests such as climate, environment, rural development, and disaster prevention. Within these areas of shared Union competences, forests and forestry do not fall within the exclusive competence of Member States. The objectives of this Regulation, namely to ensure high quality and comparability of forest data collected in the Union and to promote the voluntary development of integrated long-term planning at Member State level supporting the resilience of the Union forests, cannot be sufficiently achieved individually by the Member States alone, and by reason of the scale and effects of the proposed action, those objectives can be better achieved at Union level. Therefore, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary to achieve those objectives,

HAVE ADOPTED THIS REGULATION:

CHAPTER 1
GENERAL PROVISIONS

Article 1
Subject matter

1. This Regulation lays down a forest monitoring framework for the Union by providing for rules:

(a) ensuring timeliness, accuracy, consistency, transparency, comparability and completeness of forest data within the Union and their public accessibility;

(b) supporting the voluntary development of integrated long-term plans at the level of the Member States through an evidence-based, inclusive, cross-sectoral and adaptive approach;

(c) setting up a strengthened governance between the Commission and the Member States.

[21] Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13 ELI: http://data.europa.eu/eli/reg/2011/182/oj).

2. This Regulation lays down rules for collecting and making accessible information to support:

(d) the implementation of Union legislation and policies pertaining to the conservation, restoration and sustainable use of forest ecosystems and their services, with particular attention to the objective of increasing forest resilience and enabling to safeguard the multifunctionality of forests, including in relation to:

(a) climate change adaptation and mitigation;

(b) biodiversity;

(c) disaster risk prevention and management;

(d) forest health;

(e) forest biomass use for different socio-economic purposes;

(f) invasive alien species;

(e) national forest management and integrated long-term planning by the Member States, *inter alia*, to increase forest resilience against wildfires, pests, droughts and other disturbances.

Article 2
Definitions

For the purposes of this Regulation, the following definitions apply:

(1) 'geographically explicit information' means information referenced and stored in a manner that permits it to be mapped and localised with specific precision and accuracy;

(2) 'geographic information system' means a computer system capable of capturing, storing, analysing, and displaying geographically explicit information;

(3) 'forest unit' means a geographically explicit area representing a sufficiently homogenous area of forest as determined by Earth Observation and any other suitable ancillary layer of geographically explicit information, such as tree cover density, administrative boundary, or topographic boundary in a national mapping system;

(4) 'forest data' means information relating to the state and condition of forest ecosystems and their use, including primary data and aggregated data derived from such information;

(5) 'Earth Observation' means the collection of data about the physical, chemical, and biological systems of the Earth through remote sensing technologies such as satellites or airborne platforms carrying imaging or other sensors, combined with *in situ* data, where appropriate;

(6) 'forest' means land spanning more than 0,5 hectares with trees higher than 5 metres and a tree crown cover of more than 10 %, or trees able to reach those thresholds in situ, excluding land that is predominantly under agricultural or urban land use. It includes areas with trees, including groups of growing, young, natural trees, or plantations that have yet to reach the minimum values for tree crown cover or an equivalent stocking level or minimum tree height, including any area that normally forms part of the forest area but on which there are temporarily no trees as a result of

human intervention, such as harvesting, or as a result of natural causes, but which area can be expected to revert to forest;

(7) 'other wooded land' means land other than forest, spanning more than 0,5 hectares; with trees higher than 5 meters and a tree crown cover of 5 to 10%, or trees able to reach these thresholds *in situ*; or with a combined cover of shrubs, bushes and trees above 10 %. It excludes land that is predominantly under agricultural or urban land use;

(8) 'data harmonisation' means a process utilising available data collected through different monitoring systems to derive comparable estimates corresponding to an agreed reference description;

(9) 'standardisation' means the outcome of a process establishing and implementing common standards for data, in order to ensure that data is collected, stored, and used consistently and accurately across the Union;

(10) '*in situ* data' means data collected in the field through a network of monitoring sites following standardised protocols. It includes the geographically explicit location of the measurement, georeferenced *inter alia* with Global Navigation Satellite System services.

CHAPTER 2
FOREST MONITORING

Article 3
Forest monitoring system

1. The Commission shall set up, in cooperation with the Member States in accordance with Article 11, and operate a forest monitoring system comprising the following elements:

   (a) a geographically explicit identification system for the mapping and localisation of forest units, as set out in Article 4;

   (b) a forest data collection framework, as set out in Articles 5 and 8;

   (c) a forest data sharing framework, as set out in Article 7.

2. The forest monitoring system shall consist of electronic databases and geographic information systems and shall enable the exchange and integration of forest data with other electronic databases and geographic information systems, including those developed in accordance with Part 3 of Annex V to Regulation (EU) 2018/1999 of the European Parliament and of the Council[22] and Article 33 of Regulation (EU) 2023/1115.

   The forest monitoring system shall ensure the regular and systematic collection of:

[22] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (DO L 328 de 21.12.2018, p. 1, ELI: http://data.europa.eu/eli/reg/2018/1999/oj).

(a) forest data on the basis of aerial or space-borne ortho-imagery, by Copernicus Sentinel satellites or other equivalent systems;

(b) *in situ* data through a network of monitoring sites.

3. The Commission may seek the assistance of specialised bodies to facilitate the setting up and operation of the forest monitoring system and to provide the competent authorities of the Member States with technical advice on forest monitoring.

4. The European Environment Agency shall assist the Commission in the implementation of the forest monitoring system, including in the development and operation of the Forest Information System for Europe (FISE).

5. The Commission shall share the Earth Observation data it produces free of charge with the Member States' authorities competent for the forest monitoring system or with suppliers of services authorised by those authorities to represent them.

Article 4
Geographically explicit identification system for forest units

1. The Commission shall set up the geographically explicit identification system for the mapping and localisation of forest units (the 'identification system') that shall be operational by [*PO: please insert the date = 12 months after the date of entry into force of this Regulation*].

2. The identification system shall be a geographic information system. The Commission shall establish and regularly update the identification system on the basis of aerial or space-borne ortho-imagery data, with a uniform standard that guarantees a level of accuracy that is at least equivalent to that of cartography at a scale of 1:100 000.

3. The identification system shall:

(a) enable the precise mapping and localisation of forest areas and, subject to the establishment of methodologies pursuant to Article 8(3), of other wooded land across the Union;

(b) uniquely identify forest units on the basis of a combination of forest data referred to in Article 5(2) and Article 8(1);

(c) facilitate the detection and location of change between land containing and not containing forest.

Article 5
Forest data collection framework

1. The forest data collection framework shall be operational by [*PO: please insert the date = 12 months after the entry into force of this Regulation*], with regard to the collection of forest data referred to in paragraph 2, and by [*PO: please insert the date = 30 months after the date of entry into force of this Regulation*], with regard to the collection of forest data referred to in paragraph 3.

2. The Commission shall collect the following forest data in accordance with the technical specifications set out in Annex I, thereby ensuring the standardisation of the data:

(a) forest area;

(a) tree cover density;

(b) forest type;

(c) forest connectivity;

(d) defoliation;

(e) forest fires;

(f) wildfire risk assessment;

(g) tree cover disturbances.

3. Member States shall collect the following forest data, in accordance with the frequency specified in Annex II:

(a) forest available for wood supply and forest not available for wood supply;

(b) growing stock volume;

(c) net annual increment;

(d) stand structure;

(e) tree species composition and richness;

(f) European forest type;

(g) removals;

(h) deadwood;

(i) location of forest habitats in Natura 2000 sites;

(j) abundance of common forest birds;

(k) location of primary and old-growth forests;

(l) protected forest areas;

(m) production and trade of wood products;

(n) forest biomass for bioenergy.

4. For the purposes of paragraph 3, points (a) to (h), Member States shall collect *in situ* data on the basis of ground surveys in combination with, where available, data from Earth Observation, and data from other relevant information sources. The ground surveys shall be based on a network of monitoring sites that are representative of, and consistent with, the Member State's forest area referred to in paragraph 2, point (a).

5. The Commission is empowered to adopt delegated acts in accordance with Article 14 to amend the technical specifications set out in Annex I, in order to adapt them to technical and scientific progress.

Article 6
Opt-out

1. Concerning the collection of forest data referred in Article 5(2), the Member States may choose not to use the service provided by the Commission and to contribute with their own data to the operation of the forest monitoring system referred to in Article 3.

2. Where a Member State chooses the option provided for in paragraph 1, it shall:

(a) collect the forest data referred to in Article 5(2) in accordance with the technical specifications set out in Annex I;

(b) share the forest data referred to in Article 5(2) in accordance with Article 7(2);

(c) annually assess the quality of the data collected, in accordance with Article 10.

Article 7
Forest data sharing framework

1. By [*PO: please insert the date = 30 months after the date of entry into force of this Regulation*], the Member States shall share the latest available forest data referred to in Article 5(3) in accordance with the technical specifications set out in Annex II, by making them publicly accessible. The Member States shall ensure data harmonisation by sharing aggregated forest data in accordance with the descriptions set out in Annex II. Sharing of the geographically explicit location of monitoring sites shall be subject to the establishment of the safeguards referred to in Article 9(2).

2. The Member States and the Commission shall make publicly accessible the data referred to in Article 5(2) and (3) and in Article 8(1) in an open format that is machine-readable and that ensures interoperability and re-usability in accordance with Article 5 of Directive (EU) 2019/1024.

3. The Commission shall make the following data publicly accessible in FISE:

(a) the data collected under Article 5(2);

(b) the data shared in accordance with paragraph 1 of this Article, with the exception of the geographically explicit location of monitoring sites;

(c) the data shared in accordance with Article 6(2), point (b);

(d) the data collected in accordance with Article 8(1).

4. Member States may use the data shared through the forest data sharing framework for the development of the voluntary integrated long-term forest plans referred to in Article 13 of this Regulation, as well as for the purposes of Article 14 of Regulation (EU) 2018/841.

5. The Commission is empowered to adopt delegated acts in accordance with Article 14 to amend the technical specifications set out in Annex II, in order to adapt them to technical and scientific progress.

The Commission is empowered to adopt implementing acts laying down technical rules and procedures for the sharing and the harmonisation of forest data under this Regulation. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 15(2).

Article 8
Additional forest data

1. The Commission and the Member States shall collect the forest data listed in Annex III through a stepwise approach, subject to the adoption of the implementing acts referred to in paragraph 3 of this Article.

2. For the purposes of paragraph 1, the Commission and the Member States shall make use of the data from Earth Observation or *in situ* data and, as regards the forest data listed in points (a), (b) and (c) of Annex III, of a combination of data from Earth Observation, *in situ* data and other relevant information sources.

3. The Commission is empowered to adopt implementing acts, to establish methodologies, including the technical specifications, for the collection of the forest data listed in Annex III, and to further specify the descriptions of forest data listed therein. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 15(2).

Article 9
Compatible data storage and exchange systems

1. The Commission and the Member States shall cooperate to develop compatible data storage and exchange systems for the collection and sharing of forest data under the forest monitoring system, with the assistance of specialised bodies referred to in Article 3(3).

2. The Commission is empowered to adopt implementing acts laying down rules on procedures and formats to be used to ensure the compatibility of data storage and exchange systems referred to in paragraph 1, and to establish confidentiality preserving safeguards for the inclusion into those data storage and exchange systems of information relating to geographically explicit location of monitoring sites. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 15(2).

Article 10
Data quality control

1. The Commission and the Member States shall be responsible for the quality and completeness of the forest data that they collect and share under the forest monitoring system.

2. Member States shall annually assess the quality of the data shared in accordance with this Regulation.

   Where the assessment reveals deficiencies in the data, Member States shall adopt appropriate remedial actions. Member States shall submit to the Commission the assessment reports on the quality of data and, where appropriate, the description of the remedial actions and the timetable for their implementation by 1 July following the calendar year in which the deficiency was identified.

3. The Commission is empowered to adopt delegated acts in accordance with Article 14, to supplement this Regulation by establishing accuracy standards for data shared under this Regulation and rules on the quality assessment referred to in paragraph 2 of this Article and Article 6(2), point (c).

4. The Commission is empowered to adopt implementing acts to specify the contents of the assessment reports on the quality of data and arrangements for their submission to the Commission as well as the description of remedial actions referred to in paragraph 2, second subparagraph. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 15(2).

CHAPTER 3
INTEGRATED GOVERNANCE

Article 11
Coordination and cooperation

1. The Member States and the Commission shall coordinate their efforts and cooperate to improve the quality, timeliness and coverage of forest data.

2. The Commission shall support the Member States, upon request, in the development or adaptation of their voluntary integrated long-term forest plans referred to in Article 13, by providing information on the state of the underlying scientific knowledge and by facilitating knowledge and good practice exchange.

3. Member States shall cooperate among each other and coordinate their actions to improve the quality, timeliness and coverage of forest data. Such cooperation and coordination shall be based on open scientific debate and shall aim to promote impartial scientific advice.

4. Member States and the Commission may use existing regional institutional cooperation structures, including those under regional Conventions and other forest relevant fora and processes.

Article 12
National correspondents

1. Each Member State shall designate a national correspondent and shall inform the Commission thereof.

2. The national correspondent shall, in particular, carry out the following tasks:

   (a) coordinate the preparation of the forest data to be shared under this Regulation, taking into consideration all competent authorities, including those responsible for disaster risk prevention and management;

   (b) coordinate attendance of relevant experts in expert group meetings organised by the Commission and other relevant bodies.

3. The national correspondent shall serve as focal point for the exchange of information between the Commission and the Member State for the development or adaptation of the voluntary integrated long-term plans referred to in Article 13. Where several authorities in a Member State are participating in the development or adaptation of the voluntary integrated long-term forest plan, the national correspondent shall be responsible for the coordination of that work.

Article 13
Voluntary integrated long-term plans

1. Member States are encouraged to develop integrated long-term forest plans or adapt their existing integrated long-term forest plans or strategies, taking into account a medium to long-term perspective, including but not limited to 2040 and 2050.

2. Where Member States develop or adapt the plans referred to in paragraph 1, they are encouraged to cover the aspects set out in Annex IV.

3. Member States shall encourage the active involvement of all interested parties in the development of their integrated long-term forest plans. Member States shall make the plans publicly available.

CHAPTER 4
FINAL PROVISIONS

Article 14
Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Article 5(5), Article 7(5), first subparagraph, and Article 10(3) shall be conferred on the Commission for an indeterminate period of time from [*PO: please insert the date = the date of entry into force of this Regulation*].

3. The delegation of power referred to in Article 5(5), Article 7(5), first subparagraph, and Article 10(3) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. Delegated acts adopted pursuant to Article 5(5), Article 7(5), first subparagraph, and Article 10(3) shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of 2 months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by 2 months at the initiative of the European Parliament or of the Council.

Article 15
Committee procedure

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2. Where reference is made to this Article, Article 5 of Regulation (EU) No 182/2011 shall apply.

Article 16
Review

1. This Regulation shall be kept under review in all aspects, taking into account the relevant developments concerning Union legislation, international frameworks,

technological and scientific progress, additional monitoring needs and the quality of data shared under this Regulation.

2. By [*OP please insert the date = five years after the entry into force of this Regulation*], the Commission shall report to the European Parliament and to the Council on the implementation of this Regulation.

Article 17
Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the European Parliament
The President

For the Council

The President

LEGISLATIVE FINANCIAL STATEMENT

1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

1.1. Title of the proposal/initiative

1.2. Policy area(s) concerned

1.3. The proposal/initiative relates to:

1.4. Objective(s)

1.4.1. General objective(s)

1.4.2. Specific objective(s)

1.4.3. Expected result(s) and impact

1.4.4. Indicators of performance

1.5. Grounds for the proposal/initiative

1.5.1. Requirement(s) to be met in the short or long term including a detailed timeline for roll-out of the implementation of the initiative

1.5.2. Added value of Union involvement (it may result from different factors, e.g. coordination gains, legal certainty, greater effectiveness or complementarities). For the purposes of this point 'added value of Union involvement' is the value resulting from Union intervention, which is additional to the value that would have been otherwise created by Member States alone.

1.5.3. Lessons learned from similar experiences in the past

1.5.4. Compatibility with the Multiannual Financial Framework and possible synergies with other appropriate instruments

1.5.5. Assessment of the different available financing options, including scope for redeployment

1.6. Duration and financial impact of the proposal/initiative

1.7. Method(s) of budget implementation planned

2. MANAGEMENT MEASURES

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2.2. Management and control system(s)

2.2.1. Justification of the management mode(s), the funding implementation mechanism(s), the payment modalities and the control strategy proposed

2.2.2. Information concerning the risks identified and the internal control system(s) set up to mitigate them

2.2.3. Estimation and justification of the cost-effectiveness of the controls (ratio of "control costs ÷ value of the related funds managed"), and assessment of the expected levels of risk of error (at payment & at closure)

2.3. Measures to prevent fraud and irregularities

3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

3.1. Heading(s) of the multiannual financial framework and expenditure budget line(s) affected

3.2. Estimated financial impact of the proposal on appropriations

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3.3. Estimated impact on revenue

1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

1.1. Title of the proposal/initiative

Proposal for a Regulation of the European Parliament and of the Council establishing a monitoring framework for resilient European forests In addition, this Legislative Financial Statement also covers the ressources in the European Environmental Agency in relation with the Proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law) (COM(2023) 416)

1.2. Policy area(s) concerned

09 -Environment and Climate Action Activities: 09 02 - Programme for Environment and Climate Action (LIFE) 09 10 – European Environment Agency (EEA)

1.3. The proposal/initiative relates to:

☒ **a new action**

☐ **a new action following a pilot project/preparatory action**[23]

☐ **the extension of an existing action**

☐ **a merger or redirection of one or more actions towards another/a new action**

1.4. Objective(s)

1.4.1. General objective(s)

The objective of the proposed Regulation is to contribute to address the big societal challenges of: - Achieving climate neutrality and becoming resilient to climate change - Reversing biodiversity loss and fulfilling international commitments on biodiversity - Addressing risks related to forest health and resilience - Fulfilling international commitments on biodiversity preservation and climate change

1.4.2. Specific objective(s)

Following from the general objective, the specific objective of this proposed Regulation are: <u>Specific objective 1:</u> Ensure accurate, digitalised, consistent, comparable, timely and accessible data on the state of EU forests, establishing a forest monitoring system to be operated by the Commission and the Member States. The new system will enable the geolocalisation of forest units, the standardised collection of forest data via enhanced Earth

[23] As referred to in Article 58(2)(a) or (b) of the Financial Regulation.

observation and navigation/positioning possibilities and harmonised or, where not possible, standardised data sharing.

Specific objective 2: Encourage Member States to develop or adapt their integrated long-term forest plans based on high quality monitoring information related to relevant EU policy objectives and considering minimum common aspects as specified.

Following from the specific objective, the operational objective are:

Establish an effective framework to ensure collection and reporting of forest data, integrating Earth observation and georeferenced in-situ monitoring, and encourage consistent long-term integrated forest planning by Member States.

1.4.3. *Expected result(s) and impact*

Specify the effects which the proposal/initiative should have on the beneficiaries/groups targeted.

The proposed intiative will deliver significant benefits for the environment, including climate change mitigation and adaptation, biodiversity and improve forest health by improving preparedness and response to disturbances.

Climate-neutrality and a sustainable and biodiverse circular bioeconomy depend heavily on the state and resilience of EU forests.

The implementation of the proposal is expected to create new opportunities for SMEs linked both to the growth of the digital services' market related to forest monitoring and to innovation in the devise and application of monitoring technologies. Additionally, actors of the forest and forestry sectors will benefit from potential income possibilities through certification schemes relying on robust monitoring.

The implementation of forest monitoring is also expected to create opportunities for research and development.

1.4.4. *Indicators of performance*

Specify the indicators for monitoring progress and achievements.

The Commission will monitor the roll out and impacts of the initiative on a regular basis (biannual) based on the following aspects:

- Number of indicators with a common definition
- Number of indicators with harmonised or standardised data collection methods
- Data provision by Member States to FISE
- Data access via FISE (average clicks/month)
- National adaptation strategies and risk-assessment and risk-management strategies relying on common indicators
- Evolution of forest digital services market (in particular, number of SMEs)
- Number of voluntary integrated long-term plans adopted by Member States
- Level of alignment of integrated long-term plans with common set of basic aspects
- Use of EU funds in support of monitoring actions

1.5. Grounds for the proposal/initiative

1.5.1. Requirement(s) to be met in the short or long term including a detailed timeline for roll-out of the implementation of the initiative

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Regulation and the Commission is to develop the relevant implementing measures. Member States shall therefore implement policies and measures and legal and administrative provisions necessary on national level to comply with the proposal.

By July 2026 (one year after the assumed entry into force of the Regulation), the Commission and the Member States will establish the identification system for the forest units and the monitoring system, whereas the framework for data sharing will need to be operational from 1 January 2028. The Commission will provide Member States with data gathered through Earth Observation free of charge to Member States which choose to contribute with own-data via opt-out to the standardised operation of the new monitoring system.

The initiative also foresees the adoption of a number of secondary legislative acts. In particular, in close consultation with the relevant expert group and in cooperation with JRC and European Environment Agency, the Commission will prepare delegated acts to develop and amend the methodologies and technical specifications for the collection and sharing of the three types of forest data included in the initiative. In addition, for the relevant Committee approval, the Commission will need to prepare implementing acts setting out the technical rules for governing the acquisition, processing, storage, and use of forest data and for procedures, standards and benchmarking to ensure quality and good operation of the forest monitoring system.

The implementation of the initiative will require the establishment of a framework for collecting and sharing data and an associated knowledge base through the development and operation of the Forest Information System for Europe (FISE) and data services under the Copernicus programme.

Finally, following the entry into force of the Regulation, the Commission will cooperate and coordinate with Member States via a governance system based on communication through national correspondents and the provision of technical support.

1.5.2. Added value of Union involvement (it may result from different factors, e.g. coordination gains, legal certainty, greater effectiveness or complementarities). For the purposes of this point 'added value of Union involvement' is the value resulting from Union intervention, which is additional to the value that would have been otherwise created by Member States alone.

Reasons for action at European level (ex-ante)

There is a clear need for a coherent system to monitor and plan for transformations in forests and the forest-based sector as a result of climate change. In addition, the climate and biodiversity crises require a re-consideration of the role of forests with greater focus on their multifunctionality. In this context, without accurate and comparable forest data, which the Member States are not currently providing at the

necessary scale on their own, it is not possible to achieve the climate, biodiversity and sustainable and circular bioeconomy policy objectives stemming directly from the European Green Deal.

Expected generated Union added value (ex-post)

Standardised, comparable information, taking advantage of the innovative solutions on Earth Observation, would facilitate Member States's monitoring requirements under forest-relevant legislation (e.g. LULUCF) and allow to check the consistency and sustainability of the various forest-related policies at EU level (or to identify trade-offs) in a cost-effective manner, supplementing with quality data long-term forest planning by Member States. Harmonising or, where not possible, offering a standardised approach versus 27 monitoring systems would lead to significant cost savings. Moreover, the development of a common framework for the European Union for forest data collection and sharing acts as a strong facilitator for European SMEs related to the digital transition and for forest actors with regard to certification schemes and relevant income possibilities.

1.5.3. Lessons learned from similar experiences in the past

The Forest Focus Regulation, expired in 2006, established an obligation for coordinated EU-level forest monitoring backed by extensive co-funding (EUR 65 Mio over a four-year period for the EU-15). That Regulation strengthened integrated forest monitoring, established a database with aggregated data and information on the state of EU forests, and broadened the scope of forest monitoring to soil and biodiversity.

However, its cost-efficiency was limited by the absence of common descriptions for indicators, data collection or monitoring protocols. In combination with the complex landscape of beneficiaries of these funds, significant differences of "value for money" among beneficiaries were the result.

The assessment of the legal instrument concluded that despite strict control of financial management (external auditing) implementation of forest monitoring in Member States was insufficient. Since 2006, without dedicated focus on forests, clear monitoring targets or obligations for consistency and harmonisation, uncoordinated activities and limited spatial and temporal coverage increased again.

1.5.4. Compatibility with the Multiannual Financial Framework and possible synergies with other appropriate instruments

The initiative falls under Heading 3 (Natural Resources and Environment), Title 9 (Environment and Climate Action) of the Multiannual Financial Framework (MFF) 2021-2027.

The initiative falls under the umbrella of the European Green Deal. It also follows from and contributes to achieving the ambitions set out in the new EU Forest Strategy for 2030. The EU Forest Strategy is a key deliverable of the EU biodiversity strategy for 2030 and sets out a framework and concrete measures to protect and restore forests, and ensure that they are healthy and resilient.

The proposal has strong interlinkages with other Commission initiatives supporting forest policies such as:

- LULUCF Regulation
- Deforestation Regulation

- Bioeconomy Strategy
- [Nature Restoration Law]
- [European Environmental Economic Accounts Regulation]
- [Union Carbon Removal Certification Framework]
- Air, Water and Nature Directives
- Renewable Energy Directive (REDIII)
- Union Civil Protection Mechanism

1.5.5. Assessment of the different available financing options, including scope for redeployment

The implementation of the new Regulation will entail new tasks and activities for the Commission. This will require human resources, EEA support, procurement resources for external contractors and one administrative arrangement with JRC.

There is currently no dedicated existing EU binding instrument on forests and the implementation and monitoring of the Regulation are therefore new responsibilities for the Commission and the Member States. At present, forest data layers provided by the Copernicus land monitoring services and consequently associated EEA resources do not meet all the needs of the future monitoring system - additional forest data products (on forest area, defoliation and forest connectivity) will need to be developed and maintained,

This requires additional resources with policy knowledge, analytical skills, independence and resilience throughout the long-term implementation of the legislation. Additional expert support will be equally needed, also through outsourcing, where possible, but core tasks that involve a high degree of political sensitivity need to be carried out by the Commission.

1.6. Duration and financial impact of the proposal/initiative

☐ **limited duration**

– ☐ in effect from [DD/MM]YYYY to [DD/MM]YYYY

– ☐ Financial impact from YYYY to YYYY for commitment appropriations and from YYYY to YYYY for payment appropriations.

☒ **unlimited duration**

– Implementation with a start-up period corresponding to the transposition period of 2 years

– followed by full-scale operation.

1.7. Method(s) of budget implementation planned[24]

☒ **Direct management** by the Commission

– ☒ by its departments, including by its staff in the Union delegations;

– ☐ by the executive agencies

☐ **Shared management** with the Member States

☒ **Indirect management** by entrusting budget implementation tasks to:

– ☐ third countries or the bodies they have designated;

– ☐ international organisations and their agencies (to be specified);

– ☐ the EIB and the European Investment Fund;

– ☒ bodies referred to in Articles 70 and 71 of the Financial Regulation;

– ☐ public law bodies;

– ☐ bodies governed by private law with a public service mission to the extent that they are provided with adequate financial guarantees;

– ☐ bodies governed by the private law of a Member State that are entrusted with the implementation of a public-private partnership and that are provided with adequate financial guarantees;

– ☐ bodies or persons entrusted with the implementation of specific actions in the CFSP pursuant to Title V of the TEU, and identified in the relevant basic act.

[24] Details of budget implementation methods and references to the Financial Regulation may be found on the BUDGpedia site: https://myintracomm.ec.europa.eu/corp/budget/financial-rules/budget-implementation/Pages/implementation-methods.aspx

2. MANAGEMENT MEASURES

2.1. Monitoring and reporting rules

Specify frequency and conditions.

The initiative involves procurement, administrative arrangement with the JRC, increase of the contribution to the EEA and impact on the COM HR. Standard rules for this type of expenditure apply.

2.2. Management and control system(s)

2.2.1. Justification of the management mode(s), the funding implementation mechanism(s), the payment modalities and the control strategy proposed

N/A – cf. above.

2.2.2. Information concerning the risks identified and the internal control system(s) set up to mitigate them

N/A – cf. above.

2.2.3. Estimation and justification of the cost-effectiveness of the controls (ratio of "control costs ÷ value of the related funds managed"), and assessment of the expected levels of risk of error (at payment & at closure)

N/A – cf. above.

2.3. Measures to prevent fraud and irregularities

Specify existing or envisaged prevention and protection measures, e.g. from the Anti-Fraud Strategy.

N/A – cf. above.

3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

3.1. Heading(s) of the multiannual financial framework and expenditure budget line(s) affected

- Existing budget lines

In order of multiannual financial framework headings and budget lines.

Heading of multiannual financial framework	Budget line		Type of expenditure	Contribution			
	Number		Diff./Non-diff.[25]	from EFTA countries [26]	from candidate countries and potential candidates [27]	fromother third countries	other assigned revenue
3	09 02 01 Nature and biodiversity		Diff	YES	NO	YES	NO
3	09 10 02 European Environment Agency		Diff.	YES	YES	NO	NO
7	20 01 02 01 – Remuneration and allowances		Non-diff.	NO	NO	NO	NO
7	20 02 01 03 – National civil servants temporarily assigned to the institution		Non-diff.	NO	NO	NO	NO
7	20 02 06 01 - Mission and representation expenses		Non-diff.	NO	NO	NO	NO
7	20 02 06 02 – Meetings, expert groups		Non-diff.	NO	NO	NO	NO

- New budget lines requested: N/A

[25] Diff. = Differentiated appropriations / Non-diff. = Non-differentiated appropriations.
[26] EFTA: European Free Trade Association.
[27] Candidate countries and, where applicable, potential candidates from the Western Balkans.

3.2. Estimated financial impact of the proposal on appropriations

3.2.1. Summary of estimated impact on operational appropriations

– ☐ The proposal/initiative does not require the use of operational appropriations

– ☒ The proposal/initiative requires the use of operational appropriations, as explained below:

EUR million (to three decimal places)

Heading of multiannual financial framework	3	Natural resources and environment

DG: ENV			2023	2024	2025	2026	2027 and beyond	**TOTAL**
○ Operational appropriations								
09 02 01 Nature and biodiversity	Commitments	(1a)			0,700	0,200	0,150	1,050
	Payments	(2a)			0,700	0,200	0,150	1,050
TOTAL appropriations for DG ENV	Commitments	=1a+3			0,700	0,200	0,150	1,050
	Payments	=2a +3			0,700	0,200	0,150	1,050

The amount reported above will be needed to support various implementation tasks related to the legislative provisions that will be carried out by DG ENV and DG JRC.

The procured activities include a general support contract for the implementation of the FML.

In addition, an administrative arrangement with JRC has been included in this category, in particular for establishing the science partnership provided for under the New Forest Strategy for 2030, which will support the development of new indicators and methodologies.

	All costs except HR and	(EUR million (to three decimal places)

	Administrative						
tasks	**resources**	**2023**	**2024**	**2025**	**2026**	**2027 and beyond**	**total**
General support for implementing the FML (for developing technical guidance, providing support for MSs)	Service contract/ External experts			0,200	0,200	0,150	0,550
Technical support for implementing the FML, in particular concerning indicator development, integrating MS monitoring aspects and promoting harmonization through the European Forest Science Partnership	Administrative arrangement between ENV - JRC			0,500			0,500
Total				**0,700**	**0,200**	**0,150**	**1,050**

Agency: EEA			2023	2024	2025	2026	2027 and beyond	TOTAL
Title 1: Staff expenditure	Commitments	(1a)			0,468	0,955	0,974	2,398
	Payments	(2a)			0,468	0,955	0,974	2,398
Title 2: Infrastructure	Commitments	(1b)						
	Payments	(2b)						
Title 3: Operational expenditure	Commitments	(1c)			0,420	0,790	0,790	2,000
	Payments	(2c)			0,420	0,790	0,790	2,000
TOTAL appropriations for agency EEA	Commitments	=1a+1b +1c			0,888	1,745	1,764	4,398
	Payments	=2a+2b +2c			0,888	1,745	1,764	4,398

Notes on EEA expenditure:

to regroup the needs for reinforcement in the agencies in one legislative financial statement, the EEA resource request includes also needs in relation to the Commission proposal for a Directive on Soil Monitoring and Resilience (COM 416(2023).

Title 1: this title is composed by 2 additional TA and 1 additional CA for this proposal and 1 TA and 1 CA in relation to COM 416(2023) all starting mid- 2025:

TA Senior Forest Monitoring Thematic Expert

Tasks:

- Support the development of periodic data sets and indicators for the forest indicators of Annex II the forest monitoring framework as collected by (one annually, two biannually, two every three years, five every five years, one every six years). This includes assessing the indicators' status and trends and establishing consistent terminology for these concepts.
- Develop guidance on how to interpret the data and derive meaningful statistics from status and change assessments of forest indicators.
- Publish and disseminate the collected data through user-friendly dashboards and clear online visualisations on the Forest Information System for Europe (FISE).
- Develop practical implementation guidance and solutions for conducting assessments on the state and trends of forests.
- Ensure synergies with reported information under the LULUCF regulations.

TA AD 6 Senior Forest Monitoring Data Custodian

Tasks:

- Provide IT technical expertise to develop reporting schemas
- Manage the delivery of the reporting flows listed
- Create reporting format, Reportnet 3 dataflow, QC checks, reference datasets
- Import and export of data in Reportnet 3
- Create a production database with EU datasets of delivered datasets.
- Create standard services on top of EU datasets
- Creation and management of data outputs, e.g., in datahub, discomap etc.
- Creation of technical guidance Documents
- Provide Helpdesk support and training webinars

CA Forest Monitoring Data Analyst

Tasks:

- Develop comprehensive guidance and a field manual that includes reference descriptions of variables, methodologies for data collection (including metrics), guidelines for harmonisation procedures, and reporting formats.
- Create and develop the reporting tool (Reportnet 3) for efficiently collecting and managing spatial and tabular data.
- Establish data quality procedures to ensure each recorded data's precision, accuracy, completeness, and comparability. Set up a quality assurance/quality control (QA/QC) documentation system that includes a plan, checklists, notes, calculation sheets, and reports for documenting the QA/QC activities.
- Establish the European forest database, which includes plot-level, tabular, and spatial data for individual countries and European maps. Integrate the database into the European Environment Agency Spatial Data Infrastructure (EEA SDI).
- Develop validation rules for the database, including data type validation, range checks, constraint validation, and checks for missing records. Provide guidelines for transferring data to the centralised database.
- Ensure synergies with reported information under the LULUCF regulations.
- Provide a helpdesk for technical support related to field monitoring, harmonisation, and data reporting processes. Address and fix any bugs or technical issues that may arise.
- Control and support the data flow from countries into Reportnet 3 and the European forest database. Oversee and assist with the uploading of maps from countries into the European forest map repository.
- Develop and maintain products based on Copernicus data and information, providing the required forest indicators of Annex I based on earth observation

CA Soil Data Management and Assessment Expert

Tasks:

- Set up, in synergy and coordination with other relevant systems, an architecture to exchange data flows through Reportnet and EIONET to collect, process, validate and analyse data reported by MS every 6 years:
    - Data and results of the monitoring
    - Trend analysis of soil health descriptors and indicators

- Summary and progress on implementation of SSM and restoration
- Data in national registers for contaminated sites

- Assist the Commission with the evaluation of the implementation of the Soil Health Law 8 years after its entry into force

TA Senior Soil Monitoring Expert

Tasks:

- Support development of an overview at EU level of national registries on contaminated sites and reporting from Member States, overview of defined terminologies, criteria to define potentially contaminated sites and lists of potentially contaminating risk activities, national triggers and rules for soil investigation, reporting specifications and schema
- Provide a regularly updated overview of risk assessment methodologies implemented at national level (including screening values), support development of guidance on risk assessment methods and support Member States to apply the guidance as relevant
- Support the development of an overview at EU level of MS targets and indicators on land take and sealing (every 2 year), and publish and disseminate policy-relevant data through dashboards and clear online visualisations of the data
- Provide support to MS to implement indicators compliant with descriptions and requirements in the Soil Health Law, to implement the land take hierarchy and keep track of the methodologies applies in MS
- Develop guidance for using and interpreting Copernicus data and deriving statistics from status and change assessments
- Develop guidance for practical solutions towards the net land take target setting, actions for achieving it and related monitoring

Title 2: Infrastructure (mainly IT systems/databases developement) – IT solutions to be developed by the additional soil TA and CA in Title 1

The Title 3 costs comprise: IT developments, running costs of reporting systems, development and production of new indicators, orgganisation and follow-up of technical meetings, development of guidance documentation, and support contracts for forest indicators and assessment and contaminated soil and land use expertise

○ TOTAL operational appropriations	Commitments	(4)			1,588	1,945	1,914	5,447
	Payments	(5)			1,588	1,945	1,914	5,447
○ TOTAL appropriations of an administrative nature financed from the envelope for specific programmes		(6)						

TOTAL appropriations under HEADING 3 ENV+EEA of the multiannual financial framework	Commitments	=4+ 6			**1,588**	**1,945**	**1,914**	**5,447**
	Payments	=5+ 6			**1,588**	**1,945**	**1,914**	**5,447**

○ TOTAL operational appropriations (all operational headings)	Commitments	(4)						
	Payments	(5)						
TOTAL appropriations of an administrative nature financed from the envelope for specific programmes (all operational headings)		(6)						
TOTAL appropriations under HEADINGS 1 to 6 of the multiannual financial framework	Commitments	=4+ 6			1,588	1,945	1,914	5,447
	Payments	=5+ 6			1,588	1,945	1,914	5,447

Heading of multiannual financial framework	7	'Administrative expenditure'

This section should be filled in using the 'budget data of an administrative nature' to be firstly introduced in the Annex to the Legislative Financial Statement (Annex 5 to the Commission decision on the internal rules for the implementation of the Commission section of the general budget of the European Union), which is uploaded to DECIDE for interservice consultation purposes.

EUR million (to three decimal places)

			2024	2025	2026	2027 and beyond	**TOTAL**
DG: ENV							
○ Human resources			0,264	0,435	0,435	0,435	**1,569**
○ Other administrative expenditure			0,037	0,064	0,064	0,064	**0,229**
TOTAL DG ENV	Appropriations		0,301	0,499	0,499	0,499	**1,798**

The other administrative expenditure accounts for expert group meetings, missions and other costs associated with this personnel.

			2024	2025	2026	2027 and beyond	**TOTAL**
DG: CLIMA							
○ Human resources			0,171	0,171	0,171	0,171	**0,684**
○ Other administrative expenditure							
TOTAL DG CLIMA	Appropriations		0,171	0,171	0,171	0,171	**0,684**

TOTAL appropriations under HEADING 7 of the multiannual financial	(Total commitments = Total payments)		0,472	0,670	0,670	0,670	**2,482**

framework							

EUR million (to three decimal places)

			2024	2025	2026	2027 and beyond	**TOTAL**
TOTAL appropriations under HEADINGS 1 to 7 of the multiannual financial framework	Commitments		0,472	2,258	2,615	2,584	7,959
	Payments		0,472	2,258	2,615	2,584	7,959

3.2.2. *Estimated output funded with operational appropriations*

Commitment appropriations in EUR million (to three decimal places)

Indicate objectives and outputs ⇩			Year **N**		Year **N+1**		Year **N+2**		Year **N+3**		Enter as many years as necessary to show the duration of the impact (see point 1.6)						**TOTAL**	
	OUTPUTS																	
	Type[28]	Average cost	No	Cost	No	Cost	No	Cost	No	Cost	No	Cost	No	Cost	No	Cost	Total No	Total cost
SPECIFIC OBJECTIVE No 1[29]…																		
- Output																		
- Output																		
- Output																		
Subtotal for specific objective No 1																		
SPECIFIC OBJECTIVE No 2 ...																		
- Output																		
Subtotal for specific objective No 2																		
TOTALS																		

[28] Outputs are products and services to be supplied (e.g.: number of student exchanges financed, number of km of roads built, etc.).

[29] As described in point 1.4.2. 'Specific objective(s)…'

3.2.3. Summary of estimated impact on EEA's human resources and administrative appropriations in the Commission

1.1.1.1. Estimated impact on EEA's human resources

– ☒ The proposal/initiative does not require the use of appropriations of an administrative nature

– ☐ The proposal/initiative requires the use of appropriations of an administrative nature, as explained below:

EUR million (to three decimal places)

	2023	**2024**	**2025**	**2026**	**2027 and beyond**	**TOTAL**
Temporary agents (AD Grades)			0,346	0,705	0,719	**1,770**
Temporary agents (AST grades)						
Contract staff			0,123	0,250	0,255	**0,628**
Seconded National Experts						
TOTAL			0,468	0,955	0,974	2,398

Staff requirements (FTE):

	2023	**2024**	**2025**	**2026**	**2027 and beyond**	**TOTAL**
Temporary agents (AD Grades)			3	3	3	
Temporary agents (AST grades)						
Contract staff			2	2	2	
Seconded National Experts						
TOTAL			**5**	**5**	**5**	

1.1.1.2. Estimated requirements on administrative appropriations in the Commission

– ☐ The proposal/initiative does not require the use of appropriations of an administrative nature

– ☒ The proposal/initiative requires the use of appropriations of an administrative nature, as explained below:

EUR million (to three decimal places)

		2024	2025	2026	2027	**TOTAL**
HEADING 7 of the multiannual financial framework						
Human resources		0,435	0,606	0,606	0,606	2,253
Other administrative expenditure		0,037	0,064	0,064	0,064	0,229
Subtotal HEADING 7 of the multiannual financial framework		**0,472**	**0,670**	**0,670**	**0,670**	**2,482**

The cost per FTE (AD/AST) is calculated at EUR 171 000/y. The "other administrative expenditure" accounts for Committee and expert group meetings, missions and other costs associated with this personnel.

Outside HEADING 7[30] of the multiannual financial framework		2024	2025	2026	2027	**TOTAL**
Human resources						
Other expenditure of an administrative nature						
Subtotal outside HEADING 7 of the multiannual financial framework						

TOTAL		**0,472**	**0,670**	**0,670**	**0,670**	**2,482**

The appropriations required for human resources and other expenditure of an administrative nature will be met by appropriations from the DG that are already assigned to management of the action and/or have been redeployed within the DG, together if necessary with any additional allocation which may be granted to the managing DG under the annual allocation procedure and in the light of budgetary constraints.

30 Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former 'BA' lines), indirect research, direct research.

3.2.3.3. Estimated requirements of human resources in the Commission

– ☐ The proposal/initiative does not require the use of human resources.

– ☒ The proposal/initiative requires the use of human resources, as explained below:

Estimate to be expressed in full time equivalent units

		2023	2024	2025	2026	2027 and beyond
20 01 02 01 (Headquarters and Commission's Representation Offices) - DG ENV			1	2	2	2
20 01 02 01 (Headquarters and Commission's Representation Offices) – DG CLIMA			1	1	1	1
20 01 02 01 (Headquarters and Commission's Representation Offices) - JRC						
20 01 02 01 (Headquarters and Commission's Representation Offices) – DG DEFIS						
20 01 02 03 (Delegations)						
01 01 01 01 (Indirect research)						
01 01 01 11 (Direct research)						
Other budget lines (specify)						
20 02 01 (AC, END, INT from the 'global envelope') – DG ENV			1	1	1	1
20 02 03 (AC, AL, END, INT and JPD in the delegations)						
XX 01 xx **yy zz** [9]	- at Headquarters					
	- in Delegations					
01 01 01 02 (AC, END, INT - Indirect research)						
01 01 01 12 (AC, END, INT - Direct research)						
Other budget lines (specify)						
TOTAL			3	4	4	4

XX is the policy area or budget title concerned.

The human resources required will be met by staff from the DG who are already assigned to management of the action and/or have been redeployed within the DG, together if necessary with any additional allocation which may be granted to the managing DG under the annual allocation procedure and in the light of budgetary constraints.

Description of tasks to be carried out:

Officials and temporary staff ENV	Coordinate with relevant services and provide support to Member States in the implementation of the initiative, in particular in the field of: sampling, data, methodology, assessment, monitoring and analysis Sustain a dialogue on forest monitoring with Member States and their competent authorities including in the framework of relevant expert groups and committees; report to EP and Council Prepare and coordinate the adoption of Commission implementing and delegated acts provided for in the FML Prepare and lead the monitoring and verification of the implementation of the law by Member States Manage the agreement on Forest Science Partnership and Copernicus Services with JRC and Copernicus Services and FISE with EEA, upgraded to be consistent with FML requirement
External staff	General support for implementing the FML (for developing technical guidance/suppprting MS)
Officials and temporary staff CLIMA	Coordinate with relevant services and provide support to Member States in the implementation of the initiative, in particular in the field of: sampling, data,

	methodology, assessment, monitoring and analysis Sustain a dialogue on forest monitoring with Member States and their competent authorities including in the framework of relevant expert groups and committees; report to EP and Council Prepare and coordinate the adoption of Commission implementing and delegated acts provided for in the FML
Officials and temporary staff JRC	Operate the European Forest Science Partnership, develop Earth Observation-based monitoring tools, support the upgrade of FISE, facilitate harmonization of methodologies.

3.2.4. Compatibility with the current multiannual financial framework

The proposal/initiative:

– ☒ can be fully financed through redeployment within the relevant heading of the Multiannual Financial Framework (MFF).

The additional tasks the Commission has to assume, require an additional needs for resources as regards the amount of the Union's contribution and the establishment plan posts of the European Environmental Agency. The increase of the EU contribution to the EEA in relation to the forest monitoring tasks will be offset half/half by the budget lines 09.0201 – LIFE Nature & Biodiversity and 09.0203 – LIFE Climate. The increase of the EU contribution to the EEA in relation to the soil monitoring tasks will be offset from the budget line 09.0201 – LIFE Nature & Biodiversity.The costs foreseen under the budget line 09 02 01 will be borne by the LIFE programme and will be planned under the annual management plan exercises of DG ENV. The human resources required shall be preferably met by an additional allocation under the annual allocation procedure of human resources

– ☐ requires use of the unallocated margin under the relevant heading of the MFF and/or use of the special instruments as defined in the MFF Regulation.

– ☐ requires a revision of the MFF.

3.2.5. Third-party contributions

The proposal/initiative:

– ☒ does not provide for co-financing by third parties

– ☐ provides for the co-financing by third parties estimated below:

Appropriations in EUR million (to three decimal places)

	Year **N**[31]	Year **N+1**	Year **N+2**	Year **N+3**	Enter as many years as necessary to show the duration of the impact (see point 1.6)			Total
Specify the co-financing body								
TOTAL appropriations co-financed								

[31] Year N is the year in which implementation of the proposal/initiative starts. Please replace "N" by the expected first year of implementation (for instance: 2021). The same for the following years.

3.3. Estimated impact on revenue

– ☒ The proposal/initiative has no financial impact on revenue.

– ☐ The proposal/initiative has the following financial impact:

  – ☐ on own resources

  – ☐ on other revenue

  – please indicate, if the revenue is assigned to expenditure lines ☐

EUR million (to three decimal places)

Budget revenue line:	Appropriations available for the current financial year	Impact of the proposal/initiative[32]						
		Year **N**	Year **N+1**	Year **N+2**	Year **N+3**	Enter as many years as necessary to show the duration of the impact (see point 1.6)		
Article ……								

For assigned revenue, specify the budget expenditure line(s) affected.

Other remarks (e.g. method/formula used for calculating the impact on revenue or any other information).

[32] As regards traditional own resources (customs duties, sugar levies), the amounts indicated must be net amounts, i.e. gross amounts after deduction of 20 % for collection costs.