



Towards harmonised forest monitoring and reporting for the EU

– Swedish Presidency Summary from the workshop arranged on 1-2 February 2023, Uppsala, Sweden

Executive summary

The objective of the workshop was to contribute to an exchange of ideas, knowledge and expertise, in light of the upcoming proposal on an EU legislation on forest monitoring and integrated long-term forest planning, as outlined in the EU Forest Strategy adopted in 2021. The meeting was arranged as a follow-up to the workshop held in Kutná Hora in September 2022 during the Czech EU Council Presidency, to build on the outcomes of that meeting. About 90 people participated in the Uppsala workshop. The participants were representatives of Member States, stakeholder organisations, the European Commission, the General Secretariat of the Council, the European Environment Agency, as well as forest inventory experts.

The Presidency Summary reflects the general discussion and includes various points raised during the workshop in Uppsala. Therefore, all points are not necessarily supported by all participants. This summary should be seen as a complement to the Czech Presidency Summary from the workshop held in Kutná Hora.

The workshop focused on three areas: (i) users, areas of uses, and ways of presenting forest information, (ii) components and governance of a forest information system for the EU, and (iii) relevant monitoring methods. The long-term forest planning component of the upcoming legislative proposal was not addressed.

The main observations from the workshop are as follows:

- Several areas of uses and users of forest information at EU level derive directly from existing legislation (e.g., the LULUCF regulations and the Habitats Directive).
- Information should be tailored for specific users and areas of uses. A main objective would be to guide EU-level policy implementation and development, but EU level forest information could also serve other stakeholders and actor needs.
- New EU legislation and several EU strategies could benefit from a common core set of indicators. Further analysis is needed to specify these indicators and their definitions. Coordination with Forest Europe, FAO/FRA, ENFIN and ICP Forests, as well as Eurostat, EEA, CBD, and UNFCCC would secure consistency with existing definitions and other established, international processes.



- Coherent information between EU and Member State levels is important to avoid confusion, when information on the same features originate from different sources.
- A stepwise approach could be recommended for building a forest information system for the EU, where the vast amounts of data and information available from existing national and multilateral programmes would be the foundation. Cost-efficiency is important to take into account, as well as financing.
- Increased harmonisation of results from existing inventories could be needed. Efforts to standardise core parts of forest inventories between Member States could possibly be considered in the long-term perspective.
- Building trust is imperative - through openness, transparency and data availability for research. Strict procedures for quality assurance and quality control should be adopted in all parts of a future EU forest information system, e.g. through local level validation.



Full summary

Background

The objective of the workshop was to contribute to an exchange of ideas, knowledge and expertise in light of the upcoming proposal on an EU legislation for forest monitoring and integrated long-term forest planning, as outlined in the EU Forest Strategy adopted in 2021. The meeting was arranged as a follow-up to a workshop held in Kutná Hora in September 2022 during the Czech EU Council Presidency, to build on the outcomes of that meeting. The Swedish University of Agricultural Sciences arranged the workshop, in collaboration with the Swedish Forest Agency. About 90 people participated in the Uppsala workshop. The participants were representatives of Member States, stakeholder organisations, the European Commission, the General Secretariat of the Council, the European Environment Agency, as well as forest inventory experts.

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The workshop focused on three areas: (i) users, areas of uses, and ways of presenting forest information, (ii) components and governance of a forest information system for the EU, and (iii) relevant monitoring methods. The long-term planning component of the upcoming legislative proposal was not addressed. The main observations from the workshop are summarised under their respective headings, below.

Users, areas of uses, indicators and ways of presenting information

During the first part of the workshop, relevant users, areas of uses, indicators and ways of presenting information were discussed. Following keynote presentations, eight groups discussed these topics within four thematic areas: biodiversity, climate change, forest health, and bioeconomy. Each of the groups focused on one of the thematic areas. An expert panel discussed the workgroup outcomes.

A general conclusion was that many users and areas of uses of forest information at EU level are already specified in existing or soon-to-be-adopted legislation, such as the Habitats Directive, the LULUCF regulations and the Nature Restoration Law. In order to ensure cohesion between existing and upcoming legislation, establishing a core set of indicators could improve complementarity and support EU decision-makers in legislative processes. In developing this set of indicators, further analysis is needed to identify the relevant areas of uses and indicators. This work should be conducted considering the substantial work that has already been undertaken by Forest Europe, FAO/FRA, ENFIN, ICP Forests, Eurostat, EEA, CBD, and UNFCCC in this area. A core set of EU indicators should preferably apply



already existing definitions to ensure coherence and coordination with existing programmes and processes. Participants also suggested that all indicators would not need to be identified from the start, but that the list of relevant indicators could be expanded over time.

According to the participants, information should ideally be tailored for specific users and areas of uses. A main focus of EU-level forest information would be informing EU-level policy making, but many co-benefits are likely to arise for other users. Some indicators related to biodiversity, climate change, forest health, and bioeconomy could possibly be needed. These should describe biophysical features of the forests as well as socio-economic parameters and effects of areas of uses of forest products, etc. Finding relevant biodiversity indicators is complex but important. Participants suggested that an increased focus on species in addition to habitats and structures would be an important way forward. Disturbance indicators are increasingly demanded, with high spatial and temporal resolution, whereas features related to other indicators vary more slowly and thus may not require high frequency updating.

Regarding relevant spatial resolution, opinions varied. Whereas some participants called for a high degree of spatial resolution, other participants argued that for informing EU policy, national or (coarse) subnational information would be sufficient. Some participants highlighted that the degree of spatial resolution could differ between the data source and the information published on its basis. Others underlined that the spatial scale /frequency depends on the desired information. Further, it was proposed that selected indicators should take into account differences between different parts of the Union. That is, some important indicators might only be relevant for some parts of the EU.

In presenting information, it was suggested that estimates based on statistically rigorous methods should underpin all formal assessments of state and change. Maps are important complements providing a more intuitive understanding of conditions, key input to landscape analyses, and information supporting local and regional planning. However, some participants argued that data should not only be used for displaying state, trends and maps of indicators. In addition, integrated analyses would be required for assessing the consequences of different options for sustainable use and conservation of forests, to inform decision makers before legislation and policies are adopted.

Cost-efficiency is important, as there should be a balance between the costs of gathering new data and the benefits from using them. Further, the importance of coherent information between Member State and EU level was stressed, in order to avoid confusion or distrust.

Components and governance of a forest information system for the EU

During the second part of the workshop, potential components and governance of a forest information system for the EU were discussed. Initial keynote presentations were followed by an expert panel and workgroup discussions.



One conclusion was that a stepwise approach should be adopted for building a forest information system for the EU. The vast resources of data and information from ongoing national and multilateral monitoring programmes should be the foundation of a potential EU system. Building the system largely bottom-up, through reporting from Member States, would ensure consistent information between different levels. However, building bottom-up would also require intensified efforts to harmonise information between countries, building on methods and experiences from existing programmes and networks. In the longer run, standardising core parts of national inventories might possibly be considered.

A central information system node would need to be established. This node could be the Forest Information System for Europe (FISE), which has been developed by the European Environment Agency and is currently being expanded. National inventories in Member States, and other programmes, would report to this system, which would compile and display EU level information in terms of statistics and scaled maps. Ideally, reporting to this system would be coordinated with reporting to Forest Europe and FAO/FRA. Existing key actors should receive a clear mandate through the initiative to trigger further development, integration, and capacity building of existing data collection streams. In the longer run, this system might also facilitate access to microdata for research or other in-depth studies, although data storage and curation should either remain a responsibility for the Member States collecting the data or ensure them adequate control over these processes.

As a result of increased demands for maps, not least related to disturbances and forest damage, another part of a comprehensive forest information system for the EU could be a node for mapping, combining field and remotely sensed data. Combining these data sources also holds a potential to increase the accuracy of statistical estimates. Different organisational options for this node were briefly discussed.

Building trust for a potential EU forest information system is important. Openness, transparency, and data availability for research are important components. Strict procedures for quality assurance and quality control should be adopted in all parts, including the individual inventories that report to the EU system. The meeting also discussed if it would be a good idea to link an advisory expert panel on forest monitoring to the system but did not reach a conclusion.

Monitoring methods

The third part of the workshop discussed relevant monitoring methods. A keynote presentation was followed by comments from an expert panel.

It was concluded that many biophysical features of forests could only be monitored through field inventories. For several features, however, the combination of field inventories and remotely sensed data would allow for more accurate and frequent statistical estimates, as well as for mapping. Furthermore, field-collected data have an important role to verify remotely sensed data.



Additionally, it was observed that some methods relying on remote sensing data could be applied in practice already today, whereas other methods would require further development. Methods of the former kind typically rely on techniques known as model-assisted estimation, whereas methods of the latter kind typically are purely model based. Regardless of technique, it was proposed that local validation, e.g. by national experts and/or data, would be an important part of any large-scale forest mapping programme, as part of quality assurance and quality control.

The meeting also discussed if it would be relevant to establish a central platform for joint processing of field and remote sensing data. Such a platform could be a means to overcome survey integrity issues that might arise if sample plot location alternatively would need to be made openly available. A centralised platform function could also make an overall forest information system more efficient, since all Member States would not need to invest in expert knowledge or technical infrastructure for combining field and remote sensing data. However, it would be important that Member States with existing technical infrastructure would be allowed to continue using it, and link it to the centralised system.

Lastly, since the most useful type of remote sensing data currently or potentially available for forest monitoring is perceived to be data from airborne laser scanning, it was proposed by some meeting participants that it could be relevant for the EU to establish a programme for recurrent laser scanning of the forests within the Union.