



**DI.6 Final report on
the stakeholder's
dialogue and updated
stakeholder database**

**Report on three workshops
and portal co-design activities**

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Abstract

Report on the stakeholder engagement, including their preferences for management options, markets (D7.1), policy goals, design of the ForestNavigator Portal, validation of quantified pathways (D7.2 and D7.4) and capacity building on the ForestNavigator Portal, as in T1.1 and T1.3.

Keywords

Stakeholder, engagement, participation, input, feedback, policy relevance, co-development, co-design, forestry, decision support tools

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Nature of the deliverable *

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I. Introduction

ForestNavigator maximises policy relevance of its results by bringing together diverse minds and perspectives on EU forests with planned engagements at key project progress points. Forest community feedback is secured by repeated planned and unplanned stakeholder dialogues with a diverse forest audience.

This report provides a concise overview of stakeholder board engagements and how they informed three key themes: i) forest policy, management, and markets, ii) quantified EU forest pathways, and iii) the development of an associated webtool to access results, the ForestNavigator Portal. For more detail on individual stakeholder board engagement, see the workshop reports available at <https://www.forestnavigator.eu/resources/> and the [interim report on stakeholder dialogues](#), which this report complements.

As a key activity, engagement was planned to be achieved through three stakeholder workshops carried out at critical points in the project’s timeline. The [first workshop, held on 19-20 June 2023](#), gained stakeholder perspectives on i) alternative forest storylines that boost adaptation and mitigation across the EU, ii) elements of cultural ecosystem services and their potential trade-offs, and iii) a forest Policy Tracker. The [second stakeholder workshop, on 15-16 September 2024](#), focused on i) future forest scenarios, ii) the coherence of current EU policies, and iii) the content, design, and functionalities of the ForestNavigator Portal. The [third and final workshop](#), on 27-28 April 2026, focused on i) forest monitoring results through national GHG inventories and EO data, ii) exploratory future forest scenarios, iii) alternative pathways of future EU forest policy, and iv) the design and functionalities of the Pathways Explorer, a main component of the [ForestNavigator Portal](#). Overall, 39 stakeholders attended at least one workshop, despite a high number of unforeseen last-minute cancellations for the final workshop.

Additional engagement activities were carried out, including three cross-project webinars (to date) through the Forest Talks webinar series. A closed, remote meeting and several bilateral exchanges specific to the ForestNavigator Portal have also been carried out, on an ad hoc basis. An overview of the workshops and other engagement events is provided in Table 1.

Table 1: Overview of each engagement event which informed topics of focus of this report

Event title	Date	No. attendees	Reference
Stakeholder Workshop #1	19-20 Jun 2023	19	Report
Webinar #1: Towards a Common European Forest Monitoring System	30 Apr 2024	165	Recording
Stakeholder Workshop #2	15-16 Sept 2024	23	Report
Webinar #2: EU Forest Policy and Pathways in a Changing World	17 Mar 2025	105	Recording
Data Explorer first beta access	14 May 2025	5	N/A
Webinar #3: Integrating EO Data in National Forest Monitoring and Assessment	23 Feb 2026	105	Recording
Stakeholder Workshop #3	27-28 Apr 2026	12	Report

Source: WP1

ForestNavigator stakeholders

A stakeholder mapping exercise in the initial project phase is described in [D1.1](#), which ensured participation across five stakeholder categories (policymakers and agencies, experts and researchers, environmental and sociocultural NGOs, forest owners and managers, and business and industries), five geographic scales (European, national, global/international, sub-national, European regions), and gender (woman, man, non-binary). By identifying a diverse mix of stakeholders at the start of the project, this activity aimed to promote inclusion of a representative combination of perspectives and priorities to inform research development. After the mapping, a diverse set of stakeholders were invited to join the Stakeholder Board and workshop. Throughout the project duration, the stakeholder mapping was referred to when there was availability for the inclusion of additional, new stakeholders in engagement activities. The exercise improved a representative balance between various forest and forestry perspectives, for more even engagement with a diverse and relevant subset of forest stakeholders.

I..1. Stakeholder Board

The Stakeholder Board was established at the start of the project, based on initial stakeholder mapping. The scope, themes, and planned outcomes of the project were summarised alongside Stakeholder Board invitations. All stakeholders who opted to join completed a consent form to confirm their interest. Formalised members were the first to receive invitations to each workshop and had the opportunity to suggest their colleagues in their place when unavailable. The creation of this long-term project group offered committed and fixed perspectives through the development of research results and reduced the amount of review required to understand project progress in later engagements. All preparatory materials, workshop outputs, and relevant reference materials were shared with the Stakeholder Board and made accessible through the Miro board (Fig. 1) and SharePoint platforms.

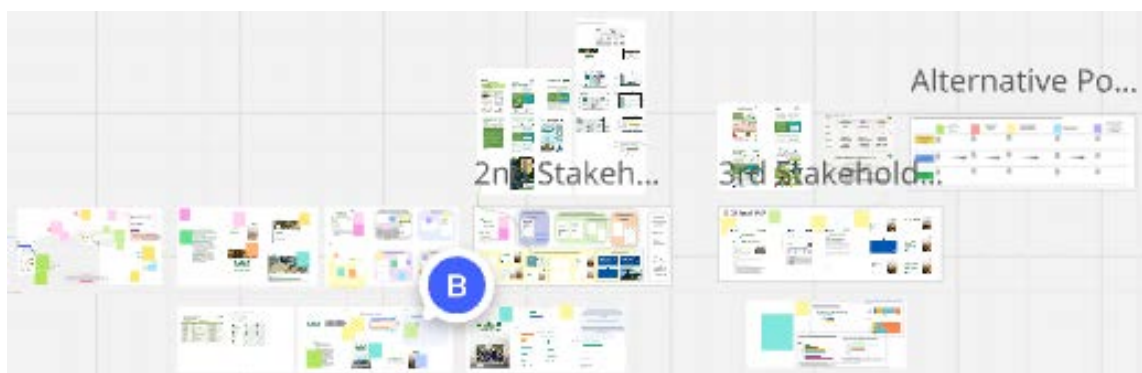


Figure 1 The online Miro whiteboard used with the Stakeholder Board to capture workshop content and outcomes (Source: WP1).

I..2. Portal interest group

Among the Stakeholder Board members, a subgroup was created to provide feedback on the ForestNavigator Portal and simultaneously avoid stakeholder fatigue. After the public launch of the Portal's [Data Explorer](#), a [Portal interest group sign-up survey](#) was shared via social media to reach further, new audiences.

1..3. Other stakeholders

While the Stakeholder Board served as the main and prioritised attendee group for workshops and received first invitations to other engagement opportunities, the schedule and responsibilities of each Stakeholder Board member served as an externality in terms of their availability. To avoid stakeholder fatigue, other stakeholders were identified and invited to participate in workshops, webinars, and other engagements as possible and appropriate. This added further diversity to opinions collected and widened the overall audience of ForestNavigator. Members of the Forest Policy Modelling Forum and Policy Steering Committee were also considered in workshop/webinar engagements, where and when suitable.

2. Key messages

Stakeholder dialogues and engagement throughout the project duration aimed to inform three key themes: i) preferences for management options, markets, and policy goals, ii) quantified future pathways, and iii) Portal preferences, including those related to capacity building toward its uptake. Each workshop included these three main focuses, with the inclusion of additional themes as relevant and available. Other engagements, such as webinars and targeted consultations, often focused on a single theme. Here, we summarise stakeholder preferences expressed relevant to these focus areas. These summaries should serve as an overview, rather than as exhaustive. Detailed workshop results and further detailed notes of comments and feedback are available in the [workshop reports \(under “Stakeholder Meeting Reports” on the ForestNavigator ‘Resources’ page or as linked in the above section, specifically Table 1\).](#)

Forest policy, market, and management preferences

Stakeholder preferences and interests in terms of forest management, policy, and related markets were primarily captured through workshops, though some webinars also prompted stakeholder responses on the topics. While all three subthemes are interrelated, we aim to divide statements into their most relevant topic in the subsections policy, markets and forest management below.

Policy

Stakeholders expressed a range of views on the role of carbon sinks and carbon dioxide removal (CDR) in achieving climate objectives. The discussion centred around ensuring durable carbon storage, strengthening market credibility, improving greenhouse gas (GHG) accounting practices, and maintaining policy flexibility in response to emerging evidence and technological developments.

- The long-term resilience of carbon stocks is generally of higher interest as compared to increasing the number or capacity of carbon sinks, specifically in consideration of future climate change-induced forest disturbances.
- The need to attract voluntary financing for beneficial natural carbon projects in the EU is pronounced, with emphasis placed on avoiding greenwashing.
- There are some critical sentiments toward geological carbon dioxide removal (CDR) within the EU Emissions Trading System, specifically referring to lobbyists who argue against forest-based credits, though these other CDR technologies may still be nascent.
- A need for greater accounting capacities for biobased product lifetimes in GHG inventories is recognised. Specifically, advanced recycling systems are yet unaccounted for, though wood circularity is recognised as pivotal both for nature and the bioeconomy.
- Adaptable processes should be considered within CDR policy, considering the ongoing verification of potential technologies, to ensure CDR goals can be accomplished even if some methods are proven ineffective or inefficient. One example offered was that if Direct Air Carbon Capture and Storage (DACCS) potential is weaker than expected, simultaneous advancements in the accounting for cascading wood use can allow flexibility in options to achieve climate goals.

Markets

Stakeholders discussed the interplay between forest resource availability, product markets, and economic incentives. The main themes included the implications of increasing wood circularity and competing uses of wood, the need to maintain the economic viability of forest management, the importance of EU competitiveness, and concerns related to energy prices and carbon leakage.

- Stakeholders suggested that if secondary wood use increases, this could reduce recyclable wood availability for the sawmill industry. The sawmill industry reportedly can use cheaper industrial roundwood, which could also be used for energy and paper production.
- The importance of wood use circularity was brought up many times, indicating high interest in its impacts for wood and product markets.
- Carbon leakage was of interest to participants, signalling concerns for the future functioning of the EU Carbon Border Adjustment Mechanism.
- Energy price changes and the impact of these changes were of high interest, considering energy crises and the implementation of the Nature Restoration Law which occurred during the project's duration.
- Increased hardwood use was reported in some regions, as well as beechwood for plastics.
- There is broad interest in protecting EU innovation and competitiveness in global markets.
- Preference was stated for the current economic viability of forest management levels to be maintained at a minimum in future scenarios. Interest was also expressed for future scenarios to explore additional financial incentives (e.g., taxes, subsidies, revenue-producing cultural/recreation activities) to increase the economic value of forest management and financially support the application of new practices or methods to improve forest adaptive capacity.
- Heavy industries, such as the cement industry, are understood to have greater impact on future energy prices than forest harvest, though such exploration is outside of ForestNavigator's scope.
- In terms of leakage, some potentially 'disastrous' GHG budget effects and increased pest risks were noted in regard to EU wood exports that use sulfuryl fluoride pesticides. These pesticides are reported to have several thousand times their carbon dioxide equivalent.

Forest Management

Stakeholders highlighted the need for approaches that are adapted to local conditions and regional priorities across the EU. Discussions centred on improving forest resilience through adaptive management, maintaining diverse forest structures, balancing multiple forest functions, and exploring management options suited to different ecological and socio-economic contexts.

- Stakeholders were clear throughout engagements and workshops that forest management practices differ between regions, and best future management practices would continue to differ based on local conditions across the EU. Various examples were presented and discussed throughout to confirm assumptions made within policy storylines and associated modelling.
- Risk management and adaptive forest management are of high interest; however, what is most adaptive or a best practice has not been clearly established across EU forests. Perceptions of potential options or best practices varied widely between different stakeholders.
- There was broad support for future maintenance of unevenly aged forests, considering differentiated species and age classes as a cornerstone for adaptive forest management.
- Planting was a suggested additional option to support the creation of unevenly aged forests where there are currently monocultures, in addition to or as an alternative to the implementation of shorter forest rotation periods. Some beliefs were shared that shorter forest rotation periods within monoculture forests may increase forest ecosystem pressure, which could be adverse for greater forest resilience. Modelling assumptions are being reviewed against these concerns.
- The importance of forest multifunctionality was advocated for, considering that increasing forest provisioning service demands could decrease the supply of cultural and/or ecosystem services.
- Real material use options for short-term products and intensified but shorter forest rotation periods may be popular in Southern Europe, to reduce fire risks and offer positive environmental impacts.

Future forest scenario preferences

Input and interests for the ForestNavigator scenarios were collected in each workshop and one webinar. There was a particularly high amount of scenario feedback from the second workshop, due to a dedicated session within the workshop which aimed to co-develop various scenario aspects. The second Forest Talks webinar was also most aligned to prompt aspects of interest for scenario development, given discussion on potential impacts of geopolitical shifts. Key feedback is summarised below:

- In modelling more resilient and adaptive forests in future scenarios, ideal model levers would include forest structural complexity, silvicultural measures for species mix, measures which improve age structures, and assisted species migration.
- The historical development of forest protection was recommended as a best reference in determining future trends by EU regions, specifically in terms of management, ecosystem connectivity, and management synergies between forest-relevant goals.
- Determination of a minimum number of species per forest region was suggested in consideration of future regional species compositions and biodiversity in scenarios.
- While the impact of greater wood construction appeared minor in preliminary scenario results, increasing the average size of living spaces, increasing the use of low-quality timber in construction, and greater wood reuse could be further included within scenarios.
- Generally, stakeholders believed that the EU textile industry is unlikely to increase significantly, though demand for wood-based textiles may increase somewhat. EU market demand for synthetic fibres may reduce. It is plausible that textiles are primarily imported in the future.
- Many assume that the role of wood may increase in packaging material production, though experts in this field were hard to identify and engage with.
- It was suggested that scenarios should consider the results of other studies, which commonly suggest future increases in bioenergy demand, roundwood demand, and implementation of cascade approaches in circularity, for best plausibility.
- Scepticism was shared in terms of alternative scenarios which include rapid rates of change, considering the importance of regional economic stability, which suggested a review of regional industry change rates to ensure they are plausible.
- A constant rate of rapid industry changes was deemed unrealistic, specifically when radical changes are accomplished uniformly between 2026-2030, considering broad system inertia.
- Considering that Germany could easily implement Bioenergy Carbon Capture and Storage (BECCS), but application across available plants would overwhelm national storage capacity within a year, checking model assumptions on BECCS storage capacity was recommended.
- There is interest in potential EU forest sector impacts from global geopolitical and trade shocks. ForestNavigator can model demand elasticity and demand changes; however, these exercises have not shown significant forest sector impacts because associated models suggest that a trade shock with the USA would simply increase wood imports from elsewhere (e.g., Brazil, Canada).
- In adaptation-relevant scenarios, which include accelerated harvesting and the replacement of monoculture stands with more climate-adapted species, there was skepticism over whether such narratives abide by constraints set by Natura 2000 Habitats and Bird Directives. It was suggested that storylines clearly state how Natura 2000 areas are represented and how increased harvest and species conversion are applied, considering site-specific conservation requirements.
- It is recommended that future scenarios do not assume bioenergy use for electricity, but rather that future bioenergy use is prioritised for heating, as it is a more efficient energy source for this. National scenarios in Germany apply this assumption to how future bioenergy can be used.

ForestNavigator Portal preferences

The ForestNavigator Portal was discussed in each workshop, as well as through surveys and bilateral communication with Portal interest group members. Greater focus and detailed feedback was captured in later workshops and engagements, alongside the availability of increasingly precise examples and materials. The following is a high-level summary of main feedback points from all engagements.

Additional layers and information

Considering the range of external factors which affect forests, a range of additional optional layers are generally of interest to be included in such web tools, such as water bodies and protected areas. When possible, such elements were incorporated into the Data Explorer.

Indicator definitions, data sources, and measurements

Many points of specific feedback were highlighted regarding definitions, sources, and measurements of displayed indicators. This suggests misunderstandings may be common due to the varying use of similar terminology between fields. The following lists several such examples:

- Participants reference unclear definitions/explanations for forest cover, classification systems, forest cover, wood product units of measure, conversion factors, forest age, forest connectivity, species distribution, and high conservation values, as barriers to full utilisation of other available forest data sources and webtools.
- Gaps in geographic coverage and a lack of detail for small countries can also prevent data hosted on webtools from being used.
- Differing forest-relevant definitions between IPCC and FAO were a noted challenge.
- A lack of differentiation in available data between forest disturbances and deforestation can be a barrier to the uptake of results.
- Early versions of the Portal received suggestions to clarify indicator definitions, such as whether
 - o ‘Emissions’ includes land use, land use change, and forest (LULUCF), forest land, and/or harvested wood product emissions
 - o ‘Forest age’ refers to only even-aged forests and what source supplied uneven-aged forest reporting,
 - o ‘Removals’ refers to atmospheric carbon emission removals specifically, and
 - o ‘Harvest’ considers over and/or under bark, whole timber yield and/or salvage logging
- There are preferences for background information to be directly linked within indicator definitions.
- There is a preference for the term ‘observational’ rather than ‘historical’, in terms of data categorisation.

Guidance and usability

Thorough guidance is needed to ensure best usability, so that users can find the information of interest to them efficiently. Specific suggestions included:

- It is preferred for models and scenarios to include descriptions or guidance, where users have the option to select between these options, considering they may not know the difference between model options in terms of the relevance of their results.
- There is a clear preference for indicator/scenario descriptions included next to their selection rather than ‘hidden’ behind the ‘i’ icons or separate ‘about data’ tabs.
- Users can sometimes misunderstand indicator categories, leading them to miss the indicators most relevant for them. Overview guidance on data available within the Pathways Explorer could in theory help users to more quickly identify information most relevant to them. If it is not possible to implement such guidance in the tool directly, dissemination events and promotion will aim to guide content expectations and exploration.

3. Conclusions

Engagement with the ForestNavigator Stakeholder Board and other stakeholders has informed the project of policy-relevant interests for further investigation. Stakeholders rated all three workshops positively in feedback surveys, particularly in terms of content relevance and opportunities for networking with others in their field. The responsible work package team takes this feedback into account for the final capacity building and dissemination opportunities.

As the ForestNavigator project continues until December 2026, several engagement opportunities with stakeholders will still take place, focusing on:

- The ForestNavigator MarketPlace and Pathways dissemination events taking place on 13 and 14 October 2026 in Brussels, targeting policymakers, NGOs, businesses, academia, and ForestNavigator consortium partners.
- Two further episodes of the *Forest Talks* webinar series in Fall 2026, which will be organised by ForestNavigator and focus on both the Data Explorer and Pathways Explorer alongside relevant components of the sister projects.
- The project [LinkedIn page](#), [YouTube channel](#), and [newsletter](#), which will continue to share final outputs and outcomes until the end of the project.

While this report summarises dialogues throughout most project engagements, there may still be further ForestNavigator Portal engagements, as the Portal is envisioned to be completed by early Fall 2026. A later deliverable report, the D10.6 Report on capacity building and outreach activities for the ForestNavigator Portal, will summarise additional elements to those captured in this report and is estimated to be published in December 2026.