

ALPINE REGION MULTI-LEVEL POLICY FORA AND DIALOGUE PROCESS

D.3.1.2

RESPONSIBLE PARTNER: NATIONAL RESEARCH INSTITUTE FOR
AGRICULTURE, FOOD AND ENVIRONMENT – INRAE PP4

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Interreg Alpine Space Programme 21-27

Carbon neutral and resource sensitive Alpine region

SO 2.2: Promoting the transition to a circular and resource efficient economy

Forest EcoValue:

Supporting multiple forest ecosystem services through new circular/green/bio markets and value chains

Project ID: ASP0100005

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Document information

Work package:	Transfer and take-up of the proposed solutions WP3
WP lead:	Number of the partner leading the WP: PP7
Activity:	A.3.1.
Authors:	Deliverable edited by the Forest EcoValue project partners under the supervision of WP leaders (PP7 and PP4)
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Reviewers:	FINPIE
Document version:	1
Due date (month)	M36
Actual delivery date (month):	29/11/2025
Deliverable number:	D.3.1.2
Dissemination Level:	PU: Public (available on the project website)
Type	Report

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1 Introduction

This deliverable represents the report of the dialogue activities undertaken under A.3.1: Policy Inventory and policy Fora, the first part of WP 3, transfer and take up of the proposed solutions. In the continuously changing climatic, technologic and economic context, new challenges are emerging and new solutions are required; this applies for the technical and business models, but it is also relevant for the policy aspects. Governments need to undertake innovative actions to foster the adaptation to the new challenges, and to continuously update the legislation to keep up with a changing world.

To help address the need for policy innovation, the project developed a twofold activity:

- the first part is the policy inventory, reported in D3.1.1, dedicated to analyse and present the state of the art of the legislation in the states and regions interested by the pilot actions;
- the second part, reported in the present deliverable, dedicated to a multilevel dialogue with relevant stakeholders, aimed at identifying the main challenges and obstacles met by who works on forest ecosystem services, collect experiences and proposals for overcoming these obstacles and challenges, and identify concrete proposals for policy innovation.

The two activities and deliverables have been developed in strict cooperation and coordination.

2 Project overview

Forests of the Alpine Space play a key role in climate change mitigation and resilience, providing multiple ecosystem services (ES) and environmental and social benefits such as CO₂ absorption, air pollution reduction, biodiversity enhancement, and protection against natural hazards. However, they are threatened by abandonment, climate change, and territorial degradation, which progressively reduce natural resources and the provision of ES. Maintenance costs of Alpine forests are high, and public funds and traditional wood value chains are insufficient to cover them. Economic valuation and payment schemes for ES are widely discussed but rarely successfully applied.

The Forest EcoValue project addresses this challenge by developing innovative, sustainable business models for forest management and maintenance, supporting new bio-based value chains and ES markets, and involving different sectors, public and private actors, and citizens. Restoring and maintaining healthy forests has been recognized as a source of value for the Alpine region, while also creating business opportunities and green jobs for Alpine communities.

The project focuses on a subset of Forest Ecosystem Services (hereafter referred to as FES) from the following categories:

- **Provisioning** (e.g., biomass, raw materials, chemicals) with a specific focus on non-timber forest products, and on the production of woody biomass for energy, integrated into circular energy markets.
- **Regulation** (e.g., biodiversity, natural risk reduction, CO₂ absorption) concretely working on carbon and biodiversity credits, natural risk management through protective forests, and innovative environmental finance instruments such as green bonds and reverse auctions.
- **Cultural** (e.g., recreation, habitat experience, health) particularly enhancing recreational and tourism services and spiritual and cultural services.

These services were explored and tested in five pilot Living Labs, located in different Alpine territories and representing diverse ecological and socio-economic contexts:

- **Italy – Valle Tanaro, Piedmont:** The Living Lab in Valle Tanaro explores innovative approaches to valorising chestnut groves, promoting non-timber forest products, developing carbon and biodiversity credits, and fostering experiential activities linked to forest and rural heritage.
- **France - Haute-Savoie:** Grand Annecy and Thonon Living Lab focuses respectively on two aspects 1) recreational ecosystem services, enhancing the value of forests through the sale of experiences such as ecotourism, outdoor activities, and educational programmes 2) enhancing the value of water regulation services through a public-private partnership.
- **Slovenia – Karavanke Mountains, Northern Slovenia:** The Slovenian Living Lab addresses natural risk management through protective forests and develops models for producing woody biomass for energy, integrating forest resources with local energy markets.
- **Austria – Province of Styria:** The Styrian Living Lab concentrates on biodiversity and habitat conservation through innovative financing mechanisms such as reverse auctions, while also testing carbon sequestration and stability tools like green bonds.
- **Germany – Tegernsee Valley, Upper Bavaria:** The German Living Lab explores spiritual and cultural services, such as forest cemeteries with biodegradable urns, while also fostering habitat and biodiversity conservation through collaborative public-private partnerships.

Accordingly, the project is aiming to:

- Map and analyze the Alpine Space Forests (ASF) delivery capacity of FES;
- Identify and estimate the economic potential, define business models and FES market frameworks;
- Test the models/tools developed by the consortium in pilot living labs (LLs) involving local players;
- Compare results at transnational level, identifying obstacles and facilitating factors;
- Analyze the need for innovative policies to foster forest maintenance, ES markets, and new value chains;
- Elaborate refined transferable tools/models and policy proposals to enable new markets and value chains and ensure the expected ES.

Throughout the project, a continuous participatory process is carried out within the five pilot Living Labs. Stakeholders' active involvement in these labs is essential for co-designing and testing models and tools, ensuring that the innovative approaches are rooted in local realities. In parallel, public events and capacity-building workshops have strengthened engagement, supported knowledge transfer, and provided regular updates on project activities. This participatory and long-term approach, tested across the five territories, is paving the way for refined, transferable tools and policy proposals that can unlock new markets and value chains while safeguarding the provision of ecosystem services in the Alpine Space.

Project duration: 36 months

3 Objectives

The Forest EcoValue project aims to contribute to promoting new markets for Forest Ecosystem Services across the entire Alpine Region and beyond, with the goal of expanding sustainable and affordable forest management and improving the quality and resilience of this vital asset.

The specific objectives of the policy activities are as follows:

3.1 Acknowledge the key role of FES in the Alpine Region

Raising awareness of the importance of FES is essential at every level of society, and it is particularly crucial at the political level. At present, there is insufficient knowledge about the range and quality of the ecosystem services provided by forests, as well as about the need for appropriate care and management to actively protect and enhance their functions.

3.2 Identify common principles for a coordinated action at transnational level

Many FES, such as carbon sequestration, biodiversity, water quality, natural risks prevention, can impact on the wider scale. A coordinated action is necessary to ensure effective policies, sound cooperation between public and private actors, and a balanced market environment. Sharing common principles is the foundation for a synergic action even with different legislative and cultural contexts.

3.3 Promote and disseminate concrete proposals for policy innovation throughout the Alpine Region

The project aims to offer concrete and feasible solutions to address the emerging challenges related to climate change, urbanisation, cultural change, and market globalisation. Dialogue with policy makers responsible for territorial management, as well as with multiple stakeholders involved in the Living Labs, enables the identification of realistic and actionable solutions. These aim to improve the economic sustainability of forest maintenance by introducing new revenue sources in addition to traditional ones.

3.4 Offer to policy makers in the Alpine Region and beyond possible solutions that can be selected and adapted to the national and local territorial and market structure

The Alpine Region comprises states and regions with diverse legislative systems, cultural contexts, and traditions. Consequently, the project does not propose a “one-size-fits-all” approach; instead, it identifies key policy aspects capable of making a difference and presents a set of concrete, adaptable solutions that can be tailored to local legislative, cultural, and territorial conditions.

The transnational dialogue revealed both shared challenges and differing levels of progress. While the main factors influencing the sustainability and affordability of FES are similar across regions, some challenges have already been addressed in certain areas but persist in others. The proposals emerging from this process stem both from new ideas designed to tackle evolving challenges and from mutual learning through the exchange of existing best practices.

4 The Policy Dialogue methodology

Activity 3.1 of the Forest EcoValue project work plan aims at identifying concrete proposals to promote and facilitate the development of new Forest Ecosystem Services Markets (FESM), through a sound

cooperation between different sectors, between public and private actors and between different government levels.

The main instrument for achieving this goal is a structured and continuous dialogue involving all relevant actors, aimed at identifying problems and obstacles and exploring possible solutions, with each participant contributing their specific expertise and capacities. The Living Labs engaged stakeholders from different sectors and organizations, including some policy makers from regional and national level. They developed a policy dialogue, aimed at identifying the main opportunities for creating new FES markets in their territories and, at the same time, discussing on the main difficulties and obstacles met in the process. This joint work led to the identification of possible solutions and highlighted the need for policy innovation.

Given that the topic is relatively new and cuts across multiple sectors, it was necessary to explore a variety of policy areas. The most relevant is the forestry legislative framework, but many other sectors have a strong influence on FES Markets development, such as environment and natural resources protection and valorisation, climate change adaptation, landscape regulation, natural risks prevention and management, but also tourism and green economy.

In this context, a bottom-up approach proved to be the most effective for designing shared solutions. Starting from the problems and opportunities identified within the Living Labs, and through a series of bilateral dialogues (interviews) with selected policy makers, the project identified the main obstacles encountered by those attempting to create or promote new FES markets. It also produced a list of existing good practices and potential solutions, resulting in concrete proposals for policy innovation. The active involvement of policy makers and stakeholders in a multilevel dialogue aimed to gather insights behind legislative processes — to look “behind the scenes” and better understand the daily challenges faced in implementation. This open and participatory discussion fostered the exploration of potential solutions from a broader, more creative perspective. In parallel, the Forest EcoValue project also developed an inventory of existing policies, collecting information at national and regional level, on the state of the art; the inventory is mostly based on literature information, and has a systematic approach dedicated to each Living Lab, with reference to the specific FES selected by each of them. The results of the policy Inventory are reported in the deliverable D.3.1.1.

What is a policy?

- **a set of principles, guidelines, rules, financial instruments or regulations** established by an organization, institution, government, or other authoritative entity **to guide decision-making, actions, and behaviours in a particular context.**
- typically designed to achieve specific objectives, **ensure consistency, manage risks, and promote compliance with laws, regulations, or ethical standards.**
- covering a **wide range of areas**, including but not limited to governance, operations, finance, human resources, cybersecurity, and environmental sustainability.
- often **documented and communicated to stakeholders to provide clarity and transparency about expected behaviours** and procedures within an organization or community.

What is a policy maker?

A policy maker is a person responsible for, or involved in, developing legislative instruments or plans and strategies that can influence the life and behaviour of citizens, enterprises, and civil society. They can be

both elected politicians or public officials and executives. In this project, most of the participants in the dialogue were technical staff from public administrations, primarily for practical reasons, such as time availability, and because of their in-depth, hands-on knowledge of the legislative framework and its concrete implementation.

The policy makers contributed in different ways: through bilateral interviews, submitting written experiences or proposals on specific topics (e.g., carbon credits market). Then, part of them also participated to the Regional Dialogue and/or the transnational Forum.

The dialogue methodology included three instruments: a series of bilateral dialogues with the selected policy makers; Regional Policy Dialogue, i.e., the discussion of policy aspects with the stakeholders and policy makers at Living Lab level; transnational policy Fora. Particularly valuable contributions emerged from presentations of local experiences during the study visits held as part of project partner meetings. Forest owners, local enterprises, and local and regional authorities presented their perspectives on current situations and challenges, sharing experiences and lessons learned that enriched the transnational dialogue.

4.1 Bilateral dialogues with relevant policy makers

The Lombardy Foundation for Environment (FLA) prepared two templates to support the policy dialogue processes.

The first template was designed for the identification and mapping of policy makers. The project's partners identified a sound group of policy makers following common criteria and using the template annexed. (Appendix 1) The selected policy makers represent different government levels and different sectors, in order to ensure a multilateral and multidisciplinary vision for the selected FES, but also a strategic approach to the relevant topics. The template included key information about each organisation and its designated contact person. The second one is the template for the interview, (Appendix 2) and contains the following main sections:

- Identification of the policy maker, with the data about the policy level, sector, organisation, role
- Policy framework, with the main legislative and planning instruments and responsibility pattern
- Relevant positive practices
- Relevant obstacles

The template also contained a list of the main instruments that public authorities can use to influence public behaviour, together with information on how these instruments are or could be implemented.

These direct interviews aimed at: Collecting knowledge on the general legislative framework; collect information on existing good practices that can be borrowed, adapted and transferred; collect feedbacks on possible solutions coming from the project pilots.

The interviews were conducted in the national language of the partners' regions and translated into English for transnational sharing the outcomes within the partnership; the original content of the single interviews is not available to the public.

A total of 16 interviews, each of which was summarized in a concise report, were conducted. In accordance with the General Data Protection Regulation (GDPR) and given the nature of these interviews, they cannot be published, as their content does not allow the anonymity of the interviewees to be guaranteed.

The policy dialogue involved representatives from a wide range of public authorities, research institutions and technical agencies operating at national, regional and local level across Germany, Austria, France, Slovenia and Italy, ensuring a comprehensive multi-level governance perspective on forest and climate-related policies.

From **Germany**, the dialogue included:

- A representative from a leading technical university, with expertise in forest strategy, forest management and environmental policy, also linked to the coordination of a Bavarian nature park.
- A representative of the Federal Ministry of Food and Agriculture, responsible for national forest policy, forest strategy, ecosystem services and climate adaptation within a multi-level governance framework, including the implementation of the German Forest Strategy 2050.
- A representative of the Bavarian Office for Food, Agriculture and Forestry (AELF), contributing experience in regional forest management, direct support to forest owners, reforestation, forest infrastructure and funding mechanisms under Bavarian and federal legislation.

From **Austria (Styria)**, the dialogue involved:

- Representatives from the Styrian regional forestry administration, contributing expertise on sustainable forest policy, legislative implementation, regional and national forest strategies, and multi-level coordination, with reference to the central role of the Forest Law, EU biodiversity and climate strategies, and rural development funding schemes.

From **France (Auvergne-Rhône-Alpes)**, contributions came from:

- The regional forest owners' centre (CNPf/CRPF), with expertise in regional forest policy implementation, sustainable management of private forests, and coordination between national legislation and regional and departmental levels.
- The Regional Council – Environment Department, with competence in biodiversity, water management and environmental policy, including the management of regional and ERDF-funded calls for biodiversity, natural hazard prevention, agroforestry and forestry-wood sector development.
- The decentralised services of the Ministry of Agriculture and Food Sovereignty (MASA), responsible for the application of the national Forestry Code and for managing funding schemes for the forestry-wood sector, with a focus on forest ecosystem service valorisation.

From **Slovenia**, the dialogue included:

- A representative active in the national water governance system and in international macro-regional and Alpine cooperation frameworks, contributing expertise on torrent and flood risk management, natural hazards, and multi-level water governance, where national authorities define policy and implementation is ensured through the Slovenian Water Agency and multiannual concessions.

From **Italy**, contributions covered several institutional levels:

- Representatives involved in regional forest policy and strategy in Piedmont, working on the implementation of the National Forest Strategy (approved in 2022) and the Consolidated Forest Act (TUFF) within a multi-level governance system involving national and regional authorities.

- Experts responsible for regional strategies on climate change, carbon-related activities, biodiversity protection and ecosystem service valorisation, including the development of voluntary carbon credit frameworks and the application of the 2024 Nature Restoration Law at regional level.
- A representative from the national agricultural research council (CREA), coordinating activities on carbon monitoring, decarbonisation, carbon markets and ecosystem service valorisation, within a multi-level national and regional governance framework.
- Representatives from the national Directorate-General for Agriculture, Food Sovereignty and Forests, contributing expertise on forest management strategies, as well as from regional forestry administrations (e.g. Lombardy).
- A representative involved in the Alpine Convention Working Group on Mountain Agriculture and Mountain Forests (MAMF), contributing expertise on forest strategy, ecosystem services and the wood value chain.
- A regional representative responsible for climate emissions and physical agents, with long-standing experience in atmospheric emissions, climate change and energy, currently contributing to the development of a regional climate law.

4.2 Multi – level Policy dialogue and transnational Fora

The work conducted with policy makers aimed to develop a structured multilevel policy dialogue on how to create enabling conditions for FES markets.

Stakeholders and policy makers from different levels were invited to discuss together, exchanging experiences and proposals; the confrontations ensured a cross - level and cross - sector character, as required by the main aspects of the challenge faced by the project.

Only by directly involving stakeholders from different areas and working together, it is possible to share knowledge on the different aspects involved and find common solutions.

The policy makers selection was based on the following criteria: ensure that different government levels and different policy sectors were adequately represented; ensure the participation of representatives from different sectors for EUSALP and the Alpine Convention; cover the states and regions from the project partners; include, if possible, representatives from transnational organisations supporting the private sector. This last aspect was the most difficult to fulfil at transnational level, while many enterprises and local organisations participated through the meetings organised at Living Lab level.

The Policy Fora were held at the transnational level, with the goal of discussing strategic and relevant proposals to be disseminated throughout the Alpine Region and beyond. These Dialogues brought together experiences and perspectives from different sectors, converging on the shared objective of promoting and facilitating the development of FES as instruments for creating healthier and more resilient forests, better adapted to changing climate conditions, and contributing to an improved quality of life in Alpine territories. At regional level, a less formal but high participatory dialogue addressed the opportunities, the obstacles encountered while trying to develop new FES and new markets in the test areas, and to discuss possible solutions.

The ideas and evaluations emerging from the different levels of discussion were analysed to identify key structural elements on three levels:

1. Principles guiding policy actions;
2. Challenges faced by those seeking to improve ecosystem services in an environmentally and economically sustainable way;
3. Concrete initiatives that public administrations can adopt to foster such development.

The points emerging from these analyses were presented at the **first Transnational Policy Forum** and subsequently shared with the five **Living Labs** as a second level of discussion. The feedback collected from this process helped select the most significant elements, which were consolidated into the **draft Policy Memo**. This draft was then discussed at the Second **Transnational Policy Forum**, circulated among selected stakeholders, and shared with participants from the five Living Labs.

4.2.1 Transnational Policy Fora (TPF)

The Transnational Policy Fora had the objective to capitalise the project results at political level and build a common strategic proposal to be disseminated to the entire Alpine Region and beyond. Most participants were previously involved in a bilateral dialogue, in order to acquire relevant inputs on the main challenges and problems at territorial level, the existing solutions and the policy needs, i.e. the new areas that need to be taken care of and where new legislative and administrative instruments are needed.

The discussions covered the various sectors involved in an interdisciplinary manner, revealing broad agreement on the strategic issues to be addressed. However, the relevance of these issues varied among regions. For instance, forest management abandonment emerged as a major concern in Italy and France, while it was less significant in Austria and Slovenia, and almost absent in Germany. In the Forum we invited representatives from the Forest EcoValue project countries or Regions, different EUSALP Action Groups, representatives from the Alpine Convention, relevant national and transnational associations, like the Italian Association of Municipalities. During the project's implementation, some changes in participation occurred due to retirements or organisational restructuring. Given the senior roles of many representatives, time constraints limited their availability. Nevertheless, many actively participated in meetings. In several cases, contact persons within the same organisations were appointed to support practical coordination and ensure continuity, which proved very useful during organisational transitions, as these individuals facilitated communication and the handover process. All meetings were conducted in English.

Initially, for the policy fora two in-person meetings were planned with the option of online participation. However, it soon became clear that to ensure the participation of key stakeholders, meetings needed to be held entirely online. For the first meeting, two sessions were organised to allow wider participation.

The first online Policy Forum was structured into 2 sessions (12/2024 and 05/2025) and gathered 11 organisations: Alpine Convention Secretariat; EUSALP AG6 + Task Force MFSUT; German Federal Ministry for Agriculture; Munich Technical University; Bavarian State Ministry for Agriculture and Forestry; Piedmont Region + IPLA; Lombardy Region; Italian National Association for Mountain Communities; Hidrotehnik (SI). Additional inputs were provided from SERFOB Auvergne-Rhône-Alpes; French National Forest Office; French Agency for Territorial Cohesion; Municipality of Tržič (SI).

The final online Policy Forum, held on 16/10/2025, brought together the Alpine Convention Secretariat, EUSALP AG2, AG6, AG8, and regional authorities from Lombardy and Auvergne-Rhône-Alpes.

Direct contact with policy makers through personal calls and bilateral meetings proved highly effective in deepening specific topics. Some participants submitted written contributions or shared existing policy documents produced by their organisations, which provided valuable input. In general, participants showed strong interest and offered insightful reflections on the current situation and future perspectives.

The methodology for the transnational dialogues and fora included the following stages:

- Preparation phase: identification and mapping of relevant policy makers, direct contact by the living Lab coordinators or Project Partners, bilateral dialogues and interviews, collection of contributes and documents; in this phase we also collected inputs from the policy inventory activity.
- First round of transnational meetings and first Policy Forum: agreement on the structure and contents of the Policy Memo, discussion on specific aspects.
- Preparation and dissemination of the first Policy Memo draft.
- Second Policy Forum: discussion and validation of the final Policy Memo.

4.2.2 Regional Policy Dialogues

The regional Policy Dialogues were held at the scale of the Living Labs and focused on the specific Forest Ecosystem Services each of them had selected.

Stakeholders engaged in bilateral discussions and participated in four meetings dedicated to selected policy aspects. FLA (Fondazione Lombardia per l'Ambiente) prepared a dedicated template and methodology covering general issues related to different FES. Based on the initial inputs collected through bilateral dialogues with policy makers and reports from Living Lab coordinators, each Living Lab selected topics of particular relevance to its territory and developed them further.

The objective of the dialogues was to identify the **problems and obstacles** encountered or anticipated in the process of FES market creation and to propose possible **solutions**.

Starting from a shared methodology, each Living Lab addressed policy aspects through a different approach, depending on its legislative framework, selected FES, and stakeholder perspectives.

Regarding scale, the main reference point was the Living Lab territory; however, in some cases, policy makers from regional or national levels were also involved.

The meetings were conducted in the **national language** of each Living Lab. Four out of five Living Labs held at least one meeting dedicated to policy aspects, involving private and public stakeholders, representatives from vocational schools, enterprises, public administrations, and regional or national agencies. These meetings generated valuable inputs and proposals, which are presented in Chapter 5.

During the activities to gather materials and inputs for the policy inventory, the **Slovenian Forest Service** organised a brainstorming session involving Living Lab coordinators and project partners, collecting insightful evaluations and proposals arising from the various project activities.

All this information and the resulting proposals contributed to the analysis of obstacles and opportunities and to the preparation of the project's policy proposals.

5 Dialogue outputs

5.1 Key inspiring principles

From the dialogue and the project experience, especially in the Living Labs, we focalised some important principles that should inspire the actions dedicated to forest development and protection.

- **Forests offer a wide set of ecosystem services, and are a relevant economic resource, but only if they are in good health**

There are two main reasons why forests are a resource of public interest. First, they have long been and still remain a significant source of renewable products: traditional ones such as timber, firewood, fruits, mushrooms, and game, as well as innovative ones, including bio-based chemicals that can substitute fossil-derived products and renewable energy sources. Second, there is a growing awareness of the crucial ecological functions performed by forests: they are biodiversity-rich ecosystems, key landscape elements, carbon sinks, providers of recreation and sport opportunities, protectors against natural hazards, and regulators of water quality, among many others.

All these functions constitute **ecosystem services**, which ensure employment, protection, and health benefits for Alpine communities. However, the capacity to deliver these services is closely tied to the **state of forest health**.

For example, **aged or overly dense and thin trees** not only fail to provide adequate protection against hydrogeological instability, but when they fall, they may trigger landslides, rockfalls, or obstruct riverbeds. In **mountain areas with difficult access**, the uncontrolled expansion of forest cover is causing the disappearance of open meadows, which serve as habitats for many species, thereby impoverishing the landscape. Likewise, the **carbon sequestration capacity** of forests is directly linked to their overall condition and vitality.

- **They are threatened by multiple natural and anthropic menaces: climate change pressures, diseases, abandonment.**

In the Alpine Region, as in much of Europe, the last century witnessed a significant increase in forest cover, mainly due to the abandonment of agriculture in peripheral, hilly, and mountain areas. However, this natural heritage is now endangered by climate change impacts and by the loss of forest management traditions in many regions, exacerbated by rural depopulation. In recent years, we have seen the rising frequency and severity of forest fires, the spread of invasive alien species and new pests, and the widespread damage caused by windstorms.

Passive protection policies — consisting mainly of restrictions and limitations — are no longer sufficient in this changing context. **Active policies** are needed to improve forest quality and restore both its productive and environmental functions.

- **To improve and preserve FES we need to invest in appropriated forest management, increasing resilience, and a strong, well skilled, enterprise system**

We need to intervene to support and accelerate the natural evolution of forests, guiding them toward ecosystems better adapted to new climatic conditions and more resistant to external threats. In most cases, forests require active cultivation, involving careful management that works with natural dynamics to preserve and enhance forest heritage for future generations.

Forests should neither be overexploited nor abandoned; instead, they must be managed according to targeted criteria that consider territorial characteristics, climate adaptation needs, and the types of ecosystem services to be enhanced.

In this context, the existence and development of a strong, competent, and safety-conscious forestry enterprise sector play a fundamental role

- **To cover the costs for appropriated management private and public cooperation is crucial**

Ensuring the **economic sustainability** of forest maintenance is crucial, especially in morphologically challenging areas with limited accessibility, or where forest age, degradation, or fragmented ownership increase costs relative to revenues.

Experience from the regions involved in the project — and elsewhere — has shown that in many cases, forest cultivation is not economically competitive and is penalised by market conditions. Therefore, public support and synergies between the public and private sectors are needed.

However, public funds are often insufficient to cover all needs, constrained by tight budgets and competing priorities. Hence, new sustainability models must be developed — ones that maintain public intervention in the most critical and high-priority situations, while strengthening the competitiveness of forestry activities.

Cooperation between public and private actors is also important at the property level. Merging or jointly managing forest parcels from different owners can create the critical mass needed to achieve economic sustainability and market access.

- **Promoting new market opportunities and strengthening the traditional value chains is the key for the economic sustainability in order to preserve forests and their ecosystem services**

Forest owners and enterprises can afford to continue taking care for forests only if they can obtain an adequate revenue, that can sustain job opportunities; this is especially relevant in peripheral affected by depopulation.

Nowadays we can count on three categories of opportunities, to be promoted and facilitated.

First of all, strengthening the traditional value chains, in this field relevant policies are already in place.

The second one is promoting new value chains, the most relevant is green chemistry, i.e. chemical industry based on biomass and wood components; this new value chain is growing in all Europe, but its potentialities are not known to many actors. The use of biomass for energy production, especially for heating multiple buildings, is growing together with appropriated technology to minimize emissions. Forest minor products like fruits, mushrooms and game can contribute to the economic balance.

The third one is based on acknowledging the value Forest Ecosystem Services are giving to the territories and their population and set payment models for them.

- **To ensure healthy forests and benefit from their ecosystem services we need a long-term, large-scale vision and strategy, integrating policies from different sectors.**

The policy makers and stakeholders involved in the project insisted on the importance of valorising the multiple functions offered by forests; at the same time, many sectorial policies other than the

specific forest laws and strategies have a direct impact on the actions taken in this area. To influence forest evolution towards more resilient and adapted forest takes time, and a gradual cultural change.

This implies creating a shared vision and common objectives, bringing together actions from different policy sectors, involving public and private stakeholders; in the implementation phase, flexibility must be ensured to enable adaptation to unforeseen changes in natural conditions and market dynamics.

5.2 Main obstacles and challenges

5.2.1 Property fragmentation

Private forest properties are often very small, mainly due to **inheritance chains** that have progressively subdivided land among heirs. Three main situations can be identified, each with a significant impact on the development of forest-related markets:

1. **Fragmented ownership through inheritance registration**

When heirs formally inherit property, they often divide it into as many parcels as there are heirs and register them individually in the land registry. As a result, properties become increasingly small and scattered, even though each heir may own multiple, often non-contiguous, plots.

2. **Shared ownership without formal division**

In other cases, the heirs share ownership of a single undivided property. In such situations, **no single owner has decision-making authority**. As the property may be collectively held by dozens of co-owners, making management and investment decisions nearly impossible.

3. **“Silent properties”**

This is the most problematic case. Some owners have died or moved away without maintaining contact with their place of origin. Since the economic value of such plots is generally low, many heirs do not formally declare the succession, and the land registry remains outdated.

In some cases, **owners are unaware** that they even possess forest land, as former agricultural or meadow areas abandoned decades ago have naturally reverted to woodland.

This **fragmentation** strongly affects market development potential in multiple ways:

- For **provisioning services**, markets require a stable and sufficient supply that can only be ensured through larger areas (the “critical mass”).
- For **all types of services**, working on small, scattered plots undermines cost-efficiency and prevents economies of scale.
- For **regulatory, supporting, and cultural services**, the presence of too many owners complicates negotiations and makes payment mechanisms overly complex.

A **minimum “critical surface area”** is needed to ensure effective management, functional ecosystem service delivery, and economic sustainability. This threshold varies depending on the selected FES (or combination of FES), local territorial conditions, forest type, and market dynamics. Reaching this critical surface is a fundamental condition for unlocking the full potential of FES.

5.2.2 Multiple legislation from different sectors

Forest protection, management and exploitation are regulated by specific forest laws and strategies at European, National and in some cases regional level, but there are also other sectorial regulations that influence what can be done in forest areas. The most relevant include: the landscape protection and valorisation laws and plans, the environmental laws and climate change adaptation strategies.

Considering forests in their multifunctional dimension and promoting new market opportunities requires interaction with many other regulatory domains — such as water resource management, natural risk prevention, carbon footprint control, green and circular economy, enterprise regulation and innovation policies, and tourism and recreation.

In some cases, regulations from different sectors contradict one another, creating a complex framework where owners, enterprises, and even public administrations struggle to find viable solutions and legal clarity.

5.2.3 Land morphology and accessibility

A significant portion of Alpine forests is located in mountainous areas, characterised by steep slopes and difficult terrain. These morphological conditions limit the use of modern machinery and complicate timber extraction, which may be further hindered by overhead infrastructure such as power lines. This makes forest work more complex and hazardous, increasing costs and reducing the competitiveness of Alpine timber on the market.

Nevertheless, local enterprises have developed efficient, innovative solutions, and possess strong expertise in techniques designed specifically for mountain environments — such as the use of cable systems to transport timber down slopes, even in the most challenging conditions.

Despite being rich in forests, many Alpine countries still import timber from abroad, where forests are exploited more intensively and management costs are so low that they offset higher transport expenses

Management costs are also influenced by accessibility conditions: a solid infrastructure network is essential for efficient forest operations. In flat areas, this is relatively easy to achieve, while in hilly or mountainous regions, the creation and maintenance of forest roads are more expensive and may also impact slope stability and landscape quality. In any case, building a new forest road requires significant investment, and its maintenance further increases production costs.

Property fragmentation can also affect accessibility, as a non-cooperative landowner may deny passage across their land, complicating access to neighbouring plots.

5.2.4 Economic sustainability

In many cases no single FES can ensure enough revenue to cover maintenance costs; public funds not sufficient. If the overall objective for forest policies is to ensure in the long term healthy, well adapted forests, together with the provision of the ecosystem services more needed in the different territories, the economic problem we are facing is not only the specific cost/benefit balance of each single service per se, but it's capacity to contribute to the costs for proper forest maintenance. In the best accessible and favourable areas, the provisioning services can usually ensure the economic sustainability of the necessary exploitation practices, but where these conditions are lacking or there is need to limit the economic exploitation in order to ensure regulation or cultural ecosystem services, no single FES can ensure enough revenue to cover all the costs.

In areas where forests are in an abandonment state, the productive value of the aged trees is poor; to restore their productive capacity a first investment is necessary, to start cleaning, rational cutting, planting new trees, sometimes introducing new, more adapted species, guiding the evolution towards healthier and more productive forests. In the initial phase, the cost/income ratio can be negative.

The Alpine states and regions are allocating specific funds to support forest activities, especially in difficult area; they support mainly investments in production equipment capacity building, and give support to forest activities in difficult areas. However, funding is **limited and inconsistent over time**, covering only a fraction of the forested territory. Given public budget constraints, it is unrealistic to expect full or continuous coverage. This leads to the conclusion that in many cases we need to identify an appropriated combination of different ecosystem services that together can bring to the economic sustainability of the most appropriated forest maintenance.

5.2.5 Lack of knowledge about opportunities; lack of cooperation between different actors

Most stakeholders have limited knowledge of market opportunities and existing experiences in valorising forest ecosystem services and by-products.

The owners of small properties rarely consider valorising them, since they cannot make a living out of it and are concentrated on their main activities.

Cooperation among enterprises is active inside specific, consolidated value chains, but cooperation between different sectors is rare.

Looking for new solutions is a very time-consuming task; small enterprises can't do it by themselves.

In this context, the public sector can play a decisive role, fostering cross-sectoral knowledge exchange, organising B2B meeting opportunities, and promoting cooperation initiatives that involves diverse stakeholders.

5.2.6 Awareness and willingness to pay for the services

There is a widespread recognition of the relevance of forest area for a healthy environment, especially regarding air quality, natural risks prevention and recreation, but most people are not aware that to maintain healthy forests a constant maintenance work is needed, nor that in the last century the wooded surface increased dramatically, due to the abandonment of peripheral agriculture, especially in mountain areas.

And there is no awareness of the fact that to increase forest resilience against the challenges posed by climate change, diseases, forest aging, rockfall, landslides and avalanches we need to invest in appropriated management practices. This has a cost, while the general perception is that ecosystem services are something nature offers to us for free.

While the public is somewhat familiar with certain types of FES, many others remain poorly understood and undervalued.

It is therefore challenging to convince the citizens that they should pay for something that is taken for granted, or in certain cases to convince them that they should pay more than they pay now for public services like water provision, in order to support forest maintenance.

On one hand, given the current economic situation, increasing the cost of public services could burden families already under financial pressure. On the other hand, citizens are, in fact, willing to pay for quality services, including those linked to a healthy and well-managed natural environment.

5.3 Policy proposals

5.3.1 *Foster public-private property cooperation and limit further property fragmentation*

There is an active debate on the possible solutions to ensure the critical surface needed for appropriated management and economic sustainability; this matter has sensitive aspects since impacts on property rights and responsibilities. In principle, the owners have the right to dispose of their property as they wish, unless there is a prevailing public interest. On the other side, they held responsibility for possible damages incurring to third parties due to negligence in the maintenance of their belongings.

The instruments for addressing this fragmentation are of two main types: legal and financial. In both cases, the cultural context and social perception play a crucial role, and it is necessary to raise awareness on the value of FES and on the importance of territorial maintenance.

The policy dialogue allowed to identify three possible lines of legal action:

Legal Frameworks for Public-Private Cooperation

In most Alpine countries, legal instruments already exist to enable cooperation among forest owners — such as forest consortia and owners' associations — but private owners rarely take the initiative to join forces and create the necessary conditions for effective management. Successful examples are generally initiated and supported by public authorities, particularly at the local level.

Establishing such cooperation requires time, persistence, and negotiation skills. The preparatory phases are complex and demand solid technical support. Since these early stages of setting up forest management or ecosystem markets are long and demanding, projects must adopt a long-term perspective, ensuring sustainability and flexibility to adapt to natural events and market changes. Efficient governance and decision-making procedures are essential for success.

Voluntary consortia are already feasible in most contexts, while the introduction of mandatory consortia would require very strong justification — for instance, to ensure protection from natural hazards or environmental degradation — and should only be applied in limited and well-defined situations.

Two types of leverage can be used to foster cooperation:

- On one hand, by emphasising landowners' responsibility to maintain their properties so as not to cause damage to others. Fiscal disincentives (e.g., taxation for neglected land) could also be effective.
- On the other hand, by recognising the right to income, which in the most critical cases may derive from public funding, at least during an initial phase, while in more favourable conditions it could result from profit-sharing arrangements.

A crucial factor remains cultural: the persistence of a personal connection with the land, even among people whose lives and main activities now take place in urban areas. Those who still feel tied to the land understand the need to care for it, while those who have lost this connection often fail to recognise the importance of landscape and territory maintenance.

Legal Framework to Reduce Further Property Fragmentation

This issue touches upon sensitive aspects related to property and inheritance rights. Reducing property fragmentation requires limiting, in certain ways, the freedom to dispose of private property in inheritance or real estate transactions.

In Italy, a law once existed prohibiting the sale of land parcels smaller than a defined minimum size, but it was never effectively implemented. Difficulties in determining this threshold and the complexity of the related legal implications eventually led to its repeal.

A concrete example can be found in France, where, when a forest property is put up for sale, a pre-emption or preferential right is granted to neighbouring owners, municipalities, or other public administrations capable of managing the land effectively. This is a soft measure, not always decisive, but it contributes over time to reuniting fragmented properties or at least preventing further division.

A particularly noteworthy case, linked to strong cultural heritage, is the “maso chiuso” tradition still in force in the Province of Bolzano (South Tyrol, Italy). Originating from medieval German inheritance practices, it was codified into modern law by Empress Maria Theresa of Austria. The *maso* is an agricultural unit comprising both land and farmhouse that cannot be divided among heirs, in order to preserve its productive capacity and avoid impoverishment. Upon the father’s death, the property would pass to a single heir, typically the eldest son, while the others either worked on the farm or found employment elsewhere. When the area became part of Italy, locals continued to apply the system even though it was not formally recognised by law. Today, a specific provincial law, enabled by Bolzano’s autonomous status, formally regulates the system, and since 2001, women have enjoyed the same inheritance rights as men.

Legal Solutions for Unknown, Unreachable, or Inactive Owners

This issue concerns “silent properties” or cases where owners remain inactive despite repeated invitations to participate in management initiatives. Such situations hinder proper forest management, as these properties may block access routes or disrupt integrated territorial planning and efficient operations.

Any intervention must be grounded in the legal principle that allows public administrations to act on private land when it serves a public interest. The first step, therefore, is to establish that a prevailing public interest exists — for instance, the need to maintain or enhance one or more significant ecosystem services.

A distinction should be made between unknown or unreachable owners and inactive owners:

- Unknown or unreachable owners: procedures could draw inspiration from expropriation frameworks, which permit action even when ownership cannot be verified. In such cases, the situation can be certified and action authorised, with decisions duly published and any corresponding financial entitlements held in escrow for potential claimants. When the objective is to enable collective forest management, property rights must remain protected — for example, by preventing adverse possession. A possible mechanism could allow the competent public body to certify the non-identifiability or unreachability of the owner and entrust the land’s management to a consortium of neighbouring owners.
- Inactive owners: a similar procedure could be established, but with structured dialogue and formal communication with the identified owners before any administrative action is taken.

Legislative competence for such actions primarily lies at the national level, as the matter falls within civil law. However, regional authorities can play an important role in developing incentive schemes and guidelines, while local administrations are essential for their proximity to landowners and their ability to engage stakeholders effectively.

5.3.2 Forest management specialised guidelines for the different FES, including cost and benefit evaluation methodology

Living tools that can be updated following market and local evolution.

It is essential that forest management be carried out according to long-term sustainability principles and through methods capable of ensuring the effectiveness of the ecosystem services provided. Proper management can gradually improve forest quality, resilience, and overall ecological functionality.

Defining such management criteria is not among the specific objectives of the present project; however, several valuable experiences have been developed in other European projects — such as Manfred, ROCKtheAlps, GreenRisks4Alps, co-financed under the Interreg Alpine Space Programme — which have elaborated management models aimed at maintaining and enhancing protection forests, particularly against rockfalls, avalanches, and shallow landslides.

Several countries, such as France, have already issued guidelines for forest management, differentiating between public and private ownership frameworks.

During the implementation of the Forest EcoValue project, it became evident that management practices can vary significantly depending on which ecosystem services are prioritised in a given territory. This underscores the need to carefully evaluate the compatibility among different FES and to balance diverse management requirements through practical and effective solutions.

When defining management guidelines, it is important to assess their impact on operational costs, to avoid discouraging forest cultivation, which remains necessary. Moreover, a gradual introduction of new measures is advisable to allow enterprises sufficient time to adapt to the new requirements. An accompanying phase involving training and technical support is also essential to ensure the long-term effectiveness and acceptance of these measures.

5.3.3 Dedicate environmental impact compensation funds and carbon credits for forest recovery and maintenance

Forest strategy is experiencing a disrupting change, from traditional tools of protection expressed in rules (i.e.: landscape, hydrogeological, ecological constraints) to a new role through the economic value of the service to the community that the forests can perform.

The new approach aims to support this change of perspective promoting “green economy measures” to reduce “the excessive use of natural resources” and considers the carbon fixation of forests and forestry as one of the ecosystem services that must be remunerated.

In the Alpine Region there already are laws that introduce compensation measures in case of environmental or territorial impacts that can be avoided (residual impacts) this is often included in Environmental Impact assessment procedures that can apply both to projects and plans; this compensation can consist both in concrete actions to improve the environment situation in areas different from the one interested by the intervention and in payments that can be used for actions of public interest.

The carbon credits market can be a relevant source of funds supporting forest recovery and maintenance.

As for the forestry sector, these funds are mainly used for planting new trees in non-forested areas, but in many cases, it could be more effective to invest in the restoration and maintenance of degraded existing forests. The best way to use this money would be to boost recovery actions that can improve the forest quality, promote the provisional and other ecosystem services, increase the forest value and foster new markets that in the medium – long term can stand by themselves on the economical point of view.

To implement this legal framework specific support is needed to overcome relevant constraints:

- Support the owners and connected actors in the preparation and initial decisional phases, through specific guidelines and methodology support, market evaluation models, technical guidelines and technical practical support. Forest Ecovalue project offers a sound contribute to these aspects.
- Allocate dedicated funds to support the preparatory and start-up phase of new initiatives
- Providing practical tools to forest owners for a robust implementation of legal principles including methodologies for FES valuation, market creation and quantitative assessment of benefits.

As for the carbon credit market, we need to take into consideration a specific, constraining aspect: the carbon accumulated by forests in their natural growth process in some states is used as an emission offset within the framework of the achievement of the objectives subscribed at European and international level and **cannot determine economic advantages for forest owners**.

To address these issues, a possible innovative solution is the one developed in recent years by Piedmont Region: a “Voluntary Forest Carbon Market” as a contribution to regional policies for sustainable development and fighting climate change.

The Regional Strategy for Sustainable Development (SRSvS) is the operational tool used by the Regione Piemonte to achieve the sustainability goals of the 2030 Agenda and the National Strategy. for Sustainable Development. This strategy integrates all regional programs to define policies and actions for economic growth in harmony with the integrity of ecosystems and social equity.

The regional “Voluntary Forest Carbon Market” considers that only credits generated "beyond" the natural growth of the forest can be marketed, as the natural part is already considered in the international agreements.

The word "voluntary" highlights precisely that a specific management choice is asked to forest owners, as the natural growth of the forest, because it is natural, is "involuntary" and does not depend on the owner's choice.

The Region has developed a **calculation system** that estimates the quantity of carbon credits based on forest type and the regional **silvicultural regulations**. The approach is founded on **reduced harvesting practices**, cutting less than the legally allowed baseline for that forest type, thus ensuring measurable carbon savings. Participation in this system is entirely **voluntary**, not mandatory. Regione Piemonte and IPLA, the in-house regional company for environmental and forestry activities, after setting up a working group with experts and stakeholders (university, professionals, companies, etc.), developed technical guidelines concerning carbon credits and the voluntary market.

To increase the voluntary market, Regione Piemonte also adopted award criteria in European Agricultural Fund for Rural Development (EAFRD) fundings for forest owners and managers that voluntarily adopt forest carbon credit schemes through forest planning and management.

Finally, a comprehensive evaluation of the carbon credit market potential is planned in the framework of the new round of forest planning, starting from the forest areas already certified according to the FSC and PEFC certification schemes.

5.3.4 *Dedicated value chain certification*

Certification plays a key role in highlighting the **added value** of products and services, in terms of quality, environmental, and social impact, that would otherwise remain unnoticed. This is true especially for innovative products; communication and promotion initiatives. Offering certified products not only guarantees compliance with specific standards but also helps **raise user awareness** about sustainability and responsible consumption.

In the forest sector, two main **international certification systems** are already in place:

- FSC (Forest Stewardship Council)
- PEFC (Programme for the Endorsement of Forest Certification)

Both systems ensure that wood and non-wood products come from **sustainably and responsibly** managed forests, which respect ecological, social, and economic principles. These voluntary certifications target forest owners, companies, and consumers, and cover both forest management practices and the chain of custody for forest-based products.

During the Forest EcoValue project, the usefulness of extending certification processes to new value chains — such as green chemistry and tourism or cultural ecosystem services — was discussed. Certification and branding initiatives were considered potential drivers of attractiveness for both service users and product buyers, while also serving as powerful awareness-raising tools in areas where such understanding is still limited.

It should be underlined that introducing new certification systems entails costs, time, and the development of new skills. For this reason, the process should be gradual and supported by specific actions aimed at strengthening the capacities of certification bodies, enterprises, and sectoral associations.

5.3.5 *Capacity building and raising awareness platform*

At present, the most effective and practical tool to reach a broad audience and disseminate knowledge and resources is a **digital platform**, accessible at any time.

The goal is not to create an entirely new platform, but rather to develop new content, connect existing ones, and establish a collaborative web-based network.

The objectives of this platform are multiple and should be structured according to the characteristics of the target groups:

- **Raise public awareness** about the value of forests, the ecosystem services they provide, and the conditions necessary to preserve and enhance forest heritage — while also debunking common misconceptions that hinder positive territorial management initiatives.
- **Facilitate connections among diverse actors:** forest owners, businesses in the wood and forest value chain, enterprises in emerging or lesser-known sectors that offer new income opportunities, public authorities from different policy areas, cultural and leisure operators, environmental associations, and citizens.

- **Promote new market opportunities** related to forest ecosystem services and sustainable products.
- **Interact with existing networks and applications** that already connect producers of recovered raw materials with organisations developing new value chains based on their reuse.
- **Disseminate technical knowledge and guidelines**, supporting the growth of professional skills and competencies within the forestry and related sectors.
- **Share examples and best practices** that can be **replicated** in territories beyond those where they originated.

5.3.6 *Integrating policies and fostering private and public cooperation on a territorial basis: a Forest Ecosystem Services Strategic Plan or Forest Contract*

Planning can serve as a powerful tool to foster **collaboration and policy integration** at the territorial level. Reflecting collectively on solutions, adopting a broader perspective, and considering the various aspects and potential of a territory can provide **added value** and promote the integration of different initiatives, including those related to diverse productive sectors. Such integrated planning can improve the sustainability of forest management, enhance and valorise ecosystem services, introduce new products and services, and create employment opportunities.

Given that territorial, cultural, and legal conditions vary across the regions of the Alpine macro-region, adopting a single model for all may not be appropriate. However, it is possible to build upon existing forest planning instruments already established in many countries, enriching them with participatory processes and new content. Alternatively, the model could take inspiration from tools already used in other sectors, such as River Contracts, which bring together diverse public and private actors to define and implement coordinated actions aimed at improving water quality and river ecosystems, particularly in critical areas.

Another option could be to establish a new instrument, referred to here as a Forest Strategic Plan (FSP), which integrates forest management and economic valorisation objectives. Such a plan would aim to develop multiple forest functions and identify a targeted mix of ecosystem services suited to the specific needs of each territory.

Regardless of the specific instrument chosen, several key aspects emerged from the project as fundamental success factors:

☒ **Multilevel governance**

It is essential that different government levels and policy sectors work together to identify and develop shared objectives that valorise forest multifunctionality and integrate diverse ecosystem services. Some services, such as protection forests that mitigate natural risks or safeguard water quality, must be recognised and managed by the relevant public authorities. However, it is equally important to establish facilitated procedures for the implementation of jointly agreed interventions.

☒ **Stakeholders as co-planners**

Involving local stakeholders, those who benefit from, contribute to, or manage ecosystem services, is crucial for multiple reasons. On one hand, participation enables the identification of better opportunities for action and helps assess the interest and demand for potential services. On the other, it supports the growth of awareness and shared responsibility, including financial responsibility, for maintaining these services. A positive example of such an approach is the Ricefield Park (*Parco delle Risaie*), a peri-urban

agricultural area in the southern part of the Milan metropolitan area. There, conflicts between farmers and citizens using the area for recreation were turned into an economic and social opportunity through a participatory process that involved dialogue, shared decision-making, and negotiated agreements on access and use.

☒ **Cross-sector policy objectives prioritisation**

Engaging multiple sectors in defining objectives and selecting concrete actions also enables the integration and harmonisation of sectoral regulations. This participatory process can help optimise territorial impacts, improve environmental compatibility, and enhance the economic sustainability of implemented measures.

☒ **Identifying and mapping forest functions; selecting the appropriate mix of Forest Ecosystem Services**

The strategic plan should identify and, if necessary, map the various functions performed by forests within the specific territory. Particular attention should be given to assessing “critical surface areas”, i.e. the minimum spatial dimensions required to ensure the effectiveness of each selected ecosystem service, bearing in mind that these thresholds differ among FES types.

☒ **Identifying accessibility needs and suitable solutions**

The planning process also provides an opportunity to assess and improve accessibility, both for forest operations and for users of ecosystem services. The presence of diverse stakeholders can facilitate the identification of appropriate, functional, and environmentally compatible solutions, ensuring proper integration within the landscape and ecological context.

☒ **Biophysical assessment**

Assessment of forest ecosystem service potential using the methodology and tools developed by the Forest EcoValue project: decision tree for data selection, service qualification, quantification, and mapping; tools for analyzing forest structure through key dendrometric parameters; and definition and mapping of major indicators to support forest policy.

☒ **Economic assessment and business model application**

Conducting an ex-ante evaluation of economic sustainability and developing a reliable business plan are key success factors. The Forest EcoValue project has developed a dedicated toolkit for this purpose, available to stakeholders wishing to apply it in their territories.

☒ **Co-Funding solutions (public and private)**

Involving key stakeholders, owners, operators, and end users, can also lead to the identification of shared financing mechanisms in various forms. The underlying principle is to attribute a monetary value to ecosystem services. For example, in the case of services such as water quality protection, agreements may be established to apply a small surcharge on water supply costs, ensuring that part of the revenue contributes to maintaining the forest functions that provide this essential service.

5.4 The Policy Memo

The Policy Memo was deliberately designed as a concise and accessible document, to facilitate its wide dissemination among decision-makers responsible for the various policies that impact forest

management, valorisation, and the promotion of ecosystem services, including green economy, tourism, cultural, and recreational activities.

The content was defined based on the insights emerging from the Living Labs and the dialogues with stakeholders and policy makers, both at regional and transnational levels.

The contributions collected were analysed and synthesised into an **initial list of contents**, organised into three main sections:

- **Common principles** concerning the value of forest heritage and the conditions necessary for its protection and valorisation.
- **Main challenges or obstacles** encountered in developing and maintaining the multiple functions offered by forests, with particular reference to ecosystem services and the economic sustainability of forest maintenance.
- **Policy innovation proposals**, addressing both forest management policies and other policy areas that influence or interact with forest-related activities.

This first draft of contents was discussed during the first Transnational Policy Forum, where the most widely shared elements were selected and refined, and the overall structure of the document was agreed upon.

For communication effectiveness and to ensure the document remained concise, it was decided not to include the section on challenges and obstacles, which are instead treated in detail within the present deliverable.

Once the contents were agreed, a draft version of the Policy Memo was prepared and circulated among the involved policy makers. The draft was subsequently discussed and validated during the second Transnational Policy Forum.

Finally, an even more concise version of the Policy Memo was developed, intended for broader and more agile dissemination. Both versions of the document — the complete and the abridged one — are presented below.

5.4.1 Forest Eco Value - Policy memo draft

About this document

This document collects existing good experiences and innovation proposals borne from a transnational and regional dialogue. While the selected main topics are relevant for all the participants, the implementation can differ following the local legislative, property, orographic cultural and knowledge conditions.

Principles

Forest offers a wide set of ecosystem services, are a relevant economic resource, supporting jobs and economic activities especially in peripheral areas, and ensure environment services plus landscape diversity that have a huge impact on the society.

But they ensure these benefits only if they are in good health; forests are threatened by multiple natural and anthropic menaces: climate change pressures, diseases, abandonment, natural risks, woodfires.

To improve, preserve and valorise FES we need to invest in appropriated forest management, increasing resilience, aware and well-prepared forest owners and a strong, well skilled, enterprise system; a principle of fair income for owners and enterprises is a must for economic sustainability.

To cover the costs for appropriated management private and public cooperation is crucial, together with acknowledging and assessing the economic value of FES and solidarity between forest owners and beneficiaries, to establish fairness and shared responsibility in payments and management.

Active action is necessary to guide the evolution of forests to climate change more adapted and resilient models, increasing biodiversity, supporting natural processes and fostering nature based and innovative, economic sustainable solutions.

Promoting new market opportunities and strengthening the traditional value chains is the key for the economic sustainability to preserve forests and their ecosystem services

Policy proposals

- **Foster cooperation between multiple ecosystem services**

In many cases no single FES can ensure economic sustainability; a good mix of FES, adapted to the local potential and needs, is the most appropriate solution. Legal and knowledge sharing instruments can support cooperation between owners, enterprises, NGOs, raising awareness in new value chains that can complement the traditional ones.

- **Foster cooperation between forest owners**

To ensure market sustainability a critical surface is needed; this surface is different for each FES; foster cooperation between Forest Owners, private and public, is a priority. Since the state of property is quite different in alpine countries and regions, a graduated toolbox of instruments is foreseen in the detailed project documents, from voluntary consortia to more mandatory instruments where property is very fragmented and there are unknown, unreachable or unactive owners. A dedicated legal framework is needed.

- **Identify strategic services**

Some services are of public relevance and quite localised, like water purification, protection forests (from natural risks); some services of public interest can be ubiquitous, like carbon sequestration; it is important to identify and map the localised ones and provide management criteria for all.

- **Dedicate compensation and carbon market money**

In many countries and at European level there are environmental compensation funds and carbon credits; part of this fund should be dedicated to compensation for production limitations, orographic difficulties, and for supporting the initial preparation of new private initiatives (feasibility, project, business models...).

- **Capacity building and raising awareness platform**

Capacity building actions dedicated to all components of the value chain: on opportunities, technical and safety formation, guidelines, management criteria, legal procedures.

A transnational platform for sharing market opportunities and information, to foster new partnership opportunities should be developed, in strong connection and cooperation with existing platforms and data bases.

The same platform could include a section with innovative actions dedicated to raising awareness for different stakeholders, including the general public.

- **Promote innovative products and services**

Innovative forest products and services should be promoted, through dedicated value chain certification and labelling opportunities. Some of them are not known neither to forest owners or to the public; one example is green chemistry, based on renewable biomass instead of fossil raw materials

- **Strategic and flexible planning and co-planning**

Forest planning can become a relevant instrument for integrating different aspects and opportunities and foster cooperation at different levels: between owners, to reach critical surface, between owners and enterprises, especially for new products and services, between private and public entities and in some cases including the final service users.

There is a wide toolbox of instruments, from the traditional forest plans to something new like a “Forest contract”, similar to the model of the existing river contract and many intermediate models.

The solutions can be different and adapted to the local framework, but the objectives can be: more flexibility, to adapt to market conditions and natural events; cross sector policy objectives prioritisation; cooperation with different governance levels and stakeholders; identify and mapping different forest functions (mix of FES following territorial needs and opportunities; identify accessibility needs and solutions; co-funding solutions.

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Appendix 1: Template for Policy Markers Mapping

Introduction

A **policy maker** is a person who is responsible for, or involved in, developing legislative instruments or plans and strategies that can have an influence on the choices, actions and behaviors of citizens, enterprises, and civil society.

The Living Labs are involving stakeholders from different sectors and organizations, including some policy makers from regional and national level. They will develop a policy dialogue, aimed at identifying the main opportunities for developing new markets in their territories and, at the same time, discussing on the main difficulties and obstacles met in the process: this will bring to work on the possible solutions, and the need for policy innovation will emerge.

The project's policy specific activity will involve the policy makers in two ways:

1. First, through a series of **direct interviews** aimed at:
 - a. Collecting knowledge on the general legislative framework;
 - b. Collect information on existing good practices that can be borrowed, adapted and transferred;
 - c. Collect feedbacks on possible solutions coming from the project pilots.
2. Secondly, a **Transnational Policy Forum** will be established, where problems and solutions will be discussed and elaborated in a common document of concrete proposals for new policies fostering the Forest Ecosystem Services Markets.

Policy makers identification and mapping

The first step is the policy makers identification and mapping. At this stage, we are looking for **actors who play a role of responsibility** in:

- a. Public governments at National or Regional level;
- b. In transnational cooperation organizations (EUSALP, Alpine Convention, Others)
- c. or in relevant stakeholders' organizations, mainly at transnational level.

Since we are dealing with a trans-sectorial issue, we will need agents from different sectors, among a pre-defined list, as proposed in the following paragraph. It is not necessary that all partners address all the sectors: *the policy sector can be selected on the basis of what is more relevant for each LL*. Nonetheless, it is also important to involve people who can bring interesting practices.

The **interviews can be held in the local language**, but we will need a translation for the analysis. The transnational forum will be held in English, therefore not all policy makers interviewed will be able to participate.

For each policy maker we ask to fill in the following form, a few simple identification data will be collected. We expect to involve public managers or workers of the public administrations rather than elected politicians, but we need to identify one person for each organization who can perform the steps needed for the policy memo approval by their organization.

Template for Policy Makers Mapping

Organization

Name of the organization: _____

Ministry/Department: _____

Level

- ☐ Transnational
- ☐ National
- ☐ Regional
- ☐ Other: _____

Nuts

Specify

Policy Sector of Interest

Specify

Policy Instruments of Competence

- ☐ Legislation
- ☐ Planning
- ☐ Programming
- ☐ Administrative
- ☐ Other (*specify*): _____

Contact Person

Name: _____

Role in the organization

Phone Number

mail

E-

Knowledge of English Language

- ☐ No knowledge
- ☐ Basic knowledge
- ☐ Intermediate/autonomous
- ☐ Fluent

Participation in transnational/crossborder cooperation associations

Specify which associations

Contact Details

Country

Region

Office Address

Website/Portal

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Appendix 2: template for Regional Policy Dialogue

Introduction

This introduction allows to frame the Regional Policy Dialogue (RPD) in the general context of the project and to introduce the main policy issues identified so far; it can be useful for the Living Lab Coordinators (LLC) in two ways: maintain a common approach to the policy issues at transnational level and give the stakeholders invited to the dialogue sessions a better insight on the topics to address and to the dialogue itself objectives.

Why do we need a policy dialogue?

We have five main reasons:

- Forest ecosystem services (FES) bring relevant benefits of public interest, and this means public governments and administrations need to find specific, concrete and feasible actions to support them
- The topic is relevant for the whole Alpine Region and involves multiple governance levels
- To ensure that forests can provide relevant FES, a constant and dedicated management is necessary, and in many cases the traditional forest value chains do not guarantee a sufficient income; economic sustainability is a relevant issue
- To create economic sustainability and a friendly environment for FES we need a sound and structured public private cooperation
- New FES markets creation involves actors from multiple sectors, from environmental protection, tourism and recreation to new innovative value chains e.g., green chemistry

The policy dialogue carried out by the project

In the policy dialogue relevant actors from different public and private bodies will share their experience and expectations regarding the better ways to unleash the potential form their territories in terms of FES, and to develop new market solutions to ensure their environmental and financial sustainability.

The dialogue will be held at two levels:

- the regional level, involving the stakeholders from the LL territories, plus some policy makers from the regional or national level. This dialogue is focused on identifying the territorial potential, the obstacle that can hinder the development of the FES and their market valorisation, and to propose possible solutions to overcome these obstacles.
- The transnational level, where policy makers from different nationalities and from transnational bodies in the Alpine Region will take stock of the results coming from the LL experiences and edit a short document with concrete proposals; this document will be disseminated in order to raise awareness on the opportunities and challenges coming from our forests and to promote innovative policies that can face the new challenges.

Principles

To start the dialogue, we propose a first list of ideas or principles that are the base for the innovation foreseen by the project and that we intend to disseminate to a wider audience; more of them can come from the discussion between the stakeholders; we ask for highlighting them in the meetings report:

- Forest offer a wide set of ecosystem services, but only if they are in good health
- They are threatened by multiple natural and anthropic menaces: climate change pressures, diseases, abandonment...
- To improve and preserve FES we need specific and objective oriented management criteria
- To cover the costs for appropriated management private and public cooperation is crucial
- Promoting new market opportunities is the key for preserving forests and their ecosystem services

Instructions

The activities of the Regional policy dialogue will be carried out on a regional scale, encompassing the Living Labs (LL) territories and involving relevant regional or national governments. The meetings will be conducted in the national language of the respective LL to ensure accessibility and effective communication.

Participants will include all stakeholders involved in the Living Labs, such as local actors, community representatives, and practitioners, as well as selected policymakers from different levels of government and administration. This diverse group is essential to fostering a comprehensive understanding of the project's challenges and opportunities.

The primary objectives of these meetings are twofold: first, to identify the problems and obstacles that have been encountered or are anticipated while creating the FES (Forest Ecosystem Services) market; second, to collaboratively explore and select potential solutions to address these challenges.

We recommend choosing a two-phase approach for the work, as follows:

First Meeting: This session will focus on brainstorming obstacles and possible solutions. Activity coordinators will begin with an introductory presentation that outlines the objectives and context. To facilitate discussion and gather diverse inputs, participants will be prompted with pre-prepared questions (the ones in this document) designed to capture stakeholder insights. Some of these questions will utilize a Likert scale for responses, allowing participants to express degrees

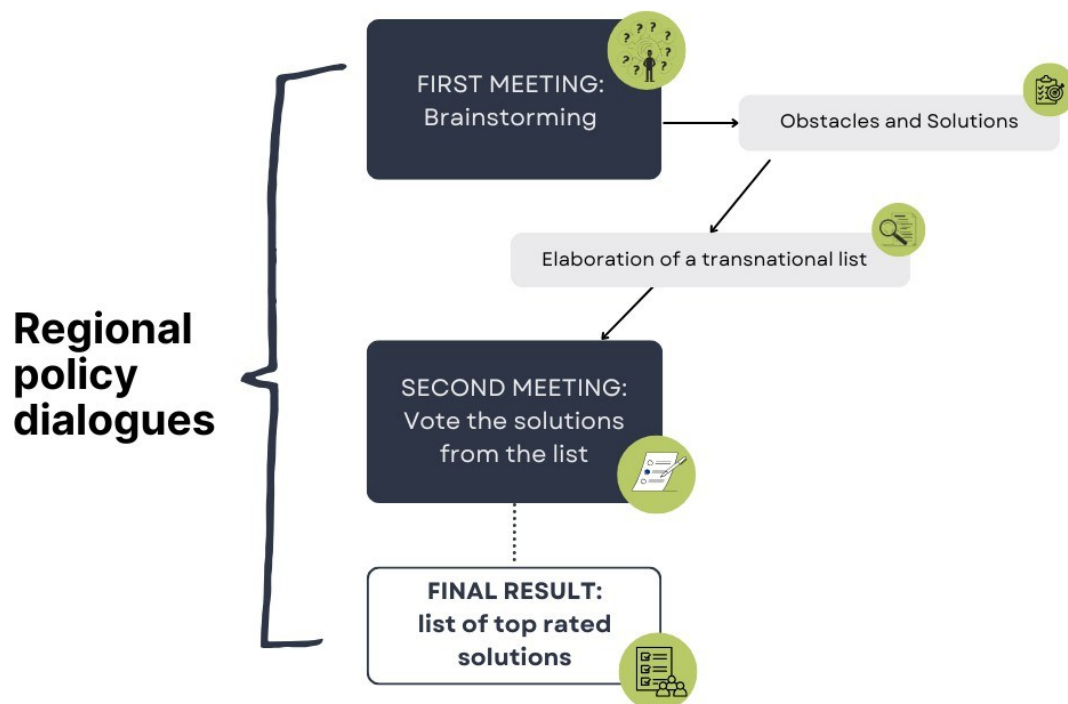
of agreement or preference. Additionally, space will be provided for comments and further elaboration, enabling participants to expand their perspectives and provide more detailed feedback.

Second Meeting: After the results from the five Regional Policy Dialogues (RPF) are consolidated at a transnational level. This meeting will focus on a detailed discussion of the main issues and proposed solutions. Participants can vote on the most suitable solutions that emerged across all five Living Labs. The goal is to establish a ranking and hierarchy of the solutions applicable to FES markets.

Between the first and second meetings, we will analyse and combine the answers coming from the discussion and prepare a transnational list of obstacles and possible solutions to be submitted to the stakeholders for further discussion and prioritisation.

For each meeting LL coordinators are expected to send a synthetic report of the dialogue; for the relevant obstacles and solutions, it will be useful to collect a short description of the stakeholder's perception and concrete proposals.

Through these structured engagements, the project aims to foster meaningful dialogue, refine solutions, and build consensus among all involved parties.



Questions

What additional Forest Ecosystem Services, not currently addressed in your Living Lab, could be relevant to your territory?

Check all that apply

Provision	Provision of timber wood biomass	
	Provision of fuel wood biomass	
	Provision of chestnuts /mushrooms/blueberries/...	
	Provision of habitats for wild plants and animals	
	Seeds and fruits for reproductive materials	
	Provision of other forest products of interest for biochemistry	
Regulation	CO2 storage and sequestration in forests / Climate Change Mitigation	
	Natural Hazards (rockfalls, landslides, snow avalanches, erosion) prevention/mitigation/control	
	Maintenance of high-quality fresh waters provided by plants and animal species	
Cultural services	Recreation and tourism	
	Beauty of nature, aesthetic value	

Other:

What are the main obstacles you foresee in developing new FES markets in your territory?

Obstacle	Description
Legislative	
Administrative	
Market-related (e.g. lack of markets for the good or service)	
Geographic (e.g. property fragmentation and morphological issues)	

Other:

What do you think the public government and Administration could do to remove the obstacles and foster new FES markets in your territory?

To provide an answer, please take into account the following categories:

Protection: *Norms or laws that aim at limiting actions with a negative environmental effect, e.g. limit to deforestation activities.*

Planning and programming *Administrative and legal instruments for planning and programming activities*

Standards setting: *they indicate the relevant quantitative and qualitative parameters enforced by law (e.g., about water quality, air pollutants limits, product quality standards...)*

Environmental assessment/certification procedures: *they indicate the processes for the analysis and evaluation of the environmental impact of a product, service, or value chain.*

Certifications and standards can be:

- **Value chain**
- **Product**
- **Service**

Promotional: *promotional activities enforced and write a short description in the box.*

- **Branding** *(promotion of the good or service through a unique name, message and image in a consumer's mind to differentiate a product or service from competitors)*
- **Labelling** *(verified labels and certifications have been obtained and reported in the product's description for marketing purposes)*
- **Proofs of Origin** *(international trade document which certifies that goods included in a consignment originate from a particular country or territory)*
- **Green Procurement** *(purchase of products and services that have a lesser environmental impact compared to other similar products and services)*
- **Other:**

Financial

- **Incentives** *(including public contributions and funding of different nature)*
- **Compensation** *(norms that require to enforce compensation activities for damages derived from a good or a service or a project, i.e. emissions compensation through carbon credits)*
- **De-Taxation** *(norms allowing access to tax relief in case of positive externalities of the production of a good, service or activity)*
- **"Purpose taxes"** *(taxes specifically aimed and bound to the provision a specific positive environmental outcome, e.g. payments for a specific ecosystem service).*
- **Other:**

Property: *Laws, instruments and activities aimed at overcoming property fragmentation and promote cohesion*

Digitalization: *Instruments aimed at increasing digitalization of the activities*

Add here your answer:

Category	Solution
Protection	
Planning and programming	
Standards setting	
Environmental assessment/ certification procedures:	
Promotional	
Financial	
Property	
Digitalization	
Other	

Would you be willing to invest some money for this purpose in new FES markets?

The question must be answered using the Likert Scale. Please consider that:

- Strongly Disagree: The participant completely disagrees with the statement or finds it entirely inapplicable.
- Disagree: The participant mostly disagrees with the statement but not entirely.
- Neutral: The participant neither agrees nor disagrees with the statement; they find it neither positive nor negative.
- Agree: The participant agrees with the statement to a significant extent but not fully.
- Strongly Agree: The participant fully agrees with the statement and finds it entirely applicable.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Comment:

Would you be willing to cooperate with other public and private actors for developing new FES markets?

The question must be answered using the Likert Scale. Please consider that:

- Strongly Disagree: The participant completely disagrees with the statement or finds it entirely inapplicable.
- Disagree: The participant mostly disagrees with the statement but not entirely.
- Neutral: The participant neither agrees nor disagrees with the statement; they find it neither positive nor negative.
- Agree: The participant agrees with the statement to a significant extent but not fully.
- Strongly Agree: The participant fully agrees with the statement and finds it entirely applicable.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Comment:

How important do you think good cooperation is among different levels of governance?

The question must be answered using the Likert Scale. Please consider that:

- Not Important at All: The participant considers the statement completely unimportant or irrelevant.
- Not Very Important: The participant finds the statement to be of low importance but not entirely unimportant.
- Neutral: The participant neither considers the statement important nor unimportant.
- Quite Important: The participant finds the statement important to a significant degree but not fully.
- Extremely Important: The participant considers the statement highly important and fully applicable.

Not important at all	Not very important	Neutral	Quite important	Extremely important

Comment:



Gefördert durch:



aufgrund eines Beschlusses
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