



# REFOREST

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## D5.5

### Report of AF Financing Model Application

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## EXECUTIVE SUMMARY

### **Objective**

The current report (*D5.5*) evaluates the practical relevance and on-the-ground application of *ReForest Sustainable Financing Scheme*. Introduced in *Deliverable D5.4*, this Scheme combines ex-ante, action- and result-based payments with continuous access to regional advisory services, as main pillars, in a structured five-year prototype suited to the unique conditions of agroforestry (AF) systems.

Designed to support the wider adoption of AF across Europe, the Scheme was tested across a diverse set of farms, including ReForest Living Labs and a broad external network of AF practitioners. In this regard, primary data was gathered from these sites to assess the Scheme's feasibility in a variety of regional and farm-level contexts, while secondary data from EU and national policy frameworks served as a solid foundation for a systemic macro- and country-level analysis.

D5.5 aims to assess how well the Scheme meets the needs of farmers and stakeholders; identify real-world implementation challenges; and receive feedback for improvement before incorporating them into policy recommendations under *Deliverable D5.6* (to be published in June 2026).

### **Main findings**

Survey and interview insights from thirty-eight farms reveal that most agroforestry practitioners are not satisfied with their current financing schemes. Through their responses, three critical systemic gaps emerged:

- **Insufficient and unsatisfactory financing schemes:** Less than 30% of respondents reported that their current funding is enough to cover and maintain agroforestry activities.
- **Low engagement with private, banking, and philanthropic finance:** Less than 40% of respondents reported receiving support from private sources, including commercial and development banks, nature capital credits, green bonds, ESG investments, or philanthropic funding.
- **Lack of access to advisory services:** Around 40% of respondents reported no access to agroforestry-specific advisory services.

A recurring concern of farmers was around the five-year timeframe of the proposed Scheme. Many felt it was too short to capture the full returns of AF systems, which often require 10–15 years to reach maturity. Respondents stressed the importance of long-term and flexible financing schemes that cover not only establishment costs but also maintenance, monitoring, and adaptive management over time. In this context, Action- and Results-Based Payments were well received, but stakeholders emphasised the importance of simple, cost-effective, and user-friendly monitoring, reporting, and verification (MRV) procedures.

Institutional and regulatory conditions were also identified as key factors influencing AF adoption. Most respondents still rely solely on public subsidies, as engagement with private finance remains low. Besides growing interest in alternative finance, such as nature capital credits, for example, private actors often perceive these investments as high-risk. Part of the explanation comes from barriers such as information asymmetries, uncertain return profiles, and long investment horizons with delayed breakeven.

Reliable and regional advisory services were also identified as a critical missing link. Respondents often requested better technical assistance on the system's design, species selection, funding opportunities, regulatory compliance and MRV processes. Where advisory services do exist, they are often fragmented, underfunded, or lacking in AF-specific expertise. This absence is expected to hurt farmers by increasing transaction costs, prolonging their learning curve, and reducing the likelihood of successful project implementation.

At the same time, primary data reveals a strong appetite for collaboration and knowledge exchange. Many farmers expressed enthusiasm for peer-to-peer learning, on-farm demonstration sites, and co-creation approaches that focus on sharing technical know-how and building trust. These practices are seen as pulling factors, particularly in contexts where farmers are navigating new practices, funding models, and policy frameworks.

Secondary-level data analysis echoes these findings by highlighting systemic barriers at the EU and national levels. While agroforestry aligns with major EU policy goals (such as the Green Deal and the 2030 Climate Target Plan), it remains inconsistently integrated into Member States' CAP Strategic Plans. National-level data revealed a fragmented policy landscape, with disparities in legal recognition, funding arrangements, and credit access criteria. These challenges are often worsened by bureaucratic procedures and limited institutional capacity. Additionally, findings show how land ownership patterns constrain farmers' ability to invest in agroforestry due to insecure tenure, collateral requirements, and financial risk aversion.

### **Implications for ReForest Sustainable Financing Scheme**

Field-level testing across Living Labs and external farms confirms the Scheme's overall strength but highlights areas for refinement. To fit into real-world dynamics, the Scheme should shift toward a longer and more flexible funding model that aligns with the slower growth cycles and delayed returns typical of AF systems. MRV requirements must remain simple and cost-effective, with results-based payments linked to practical indicators. These can be supported by accessible digital tools that help farmers track progress without adding an administrative burden.

To be more inclusive and effective, the Scheme must accommodate diverse farm sizes, tenure models, and non-standard AF designs. Support should extend beyond initial setup to include maintenance and adaptive management, which are often underfunded. Strengthening advisory services, improving access to decision-support and digital planning tools, and addressing market barriers are also essential. Peer learning and co-creation platforms were widely valued and should be recognized as critical for scaling agroforestry in practice.

### **Next Steps**

D5.5 findings will help shape future policy recommendations aimed at improving agroforestry financing at the European level. Key focus areas are expected to include improving institutional coordination, promoting regional advisory services, expanding access to MRV systems, and linking agroforestry practitioners to innovative blended funding mechanisms.

Finally, the report concludes that by integrating lessons from the ReForest Living Labs and incorporating direct farmer feedback, the Scheme can be further refined to reflect the specific needs and local conditions of practitioners. This would provide a more practical and responsive solution to the financial barriers currently hindering agroforestry adoption across Europe.



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## LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
<b>ABP</b>	Action-Based Payments
<b>AF</b>	Agroforestry
<b>APA</b>	Advanced Purchase Agreement
<b>CAP</b>	Common Agricultural Policy
<b>CAP SP</b>	Common Agricultural Policy Strategic Plan
<b>CEB</b>	Council of Europe Development Bank
<b>CRCF</b>	Carbon Removal Certification Framework
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EIB</b>	European Investment Bank
<b>EMEA</b>	Euro-Mediterranean Economists Association
<b>ESG</b>	Environmental, Social, and Governance
<b>ETS</b>	Emissions Trading System
<b>Ex-ante</b>	Ex-ante Payments (advance financing)
<b>IB SAF</b>	Impact Bridge Sustainable AgriFood Fund I
<b>JNR</b>	Jurisdictional and Nested REDD+
<b>LL</b>	Living Lab(s)
<b>MRV</b>	Monitoring, Reporting, and Verification
<b>RBP</b>	Results-Based Payments
<b>REA</b>	European Research Executive Agency
<b>VCS</b>	Verified Carbon Standard
<b>WBG</b>	World Bank Group

## 1. INTRODUCTION

### 1.1 BACKGROUND AND MOTIVATION

Agroforestry (AF), a strategic integration of woody perennials into agricultural landscapes, is increasingly being recognized as a high-impact nature-based solution for promoting sustainable, climate-resilient, and productive land use management in response to climate change. As a multifunctional system, AF delivers a wide range of ecosystem services, including carbon sequestration, biodiversity enhancement, soil/water conservation, and increased landscape resilience (Jose, 2009; Torralba et al., 2016; Kay et al., 2019). In addition to its environmental co-benefits, AF also supports farmers with more diversified economic income streams, enhances farms' adaptive capacity to climate and market shocks, and provides significant social and cultural value through rural job creation, community revitalisation, and environmental education (McDonald et al., 2021).

Despite strong alignment with the EU's agrifood policy objectives (such as those outlined in the Green Deal, Farm to Fork Strategy, and climate neutrality targets), AF is only marginally and inconsistently implemented by its Member States. This low uptake is due to persistent financial, regulatory, and institutional barriers, such as high initial investment costs, delayed return on investment, insufficient advisory services, and fragmented eligibility under current policy frameworks (Hajdukovic, 2023). While AF is included in the 2023-2027 CAP under both Pillar I (income support) and Pillar II (rural development), its implementation is seen as administratively burdensome and unsuitable for the realities of small and medium-sized farms.

The current **D5.5: “Report of AF Financing Model Application”** expands on these findings by evaluating the Scheme in real-world settings, with ReForest Living Labs serving as experimental sites. The report aims to test the presence of previously identified barriers and perceptions, gathering insights directly from AF practitioners to validate and refine the proposed financing scheme. First introduced in *Deliverable D5.4*, the scheme combines ex-ante, action-based, and result-based payments with continuous access to regional advisory services in a structured five-year prototype to lower upfront costs while encouraging continuous improvement in regenerative performance. Consequently, its goal is to make AF projects more viable for farmers by helping them to implement new projects or maintain existing ones, by recognizing and rewarding them for providing ecosystem services.

This report also highlights the necessity of incorporating agroforestry's range of ecosystem services into financial valuation models by moving beyond traditional subsidy-based approaches toward a blended one. This holistic approach is expected to: (1) encourage AF adoption by increasing farmers' risk-adjusted returns; (2) demonstrate to investors the resilient and long-term value of mature, well-managed AF systems; and (3) assist agrifood businesses in improving supply chain impact by meeting environmental, social, and governance (ESG) commitments.

These principles are sustained by the economic-policy foundations established in *D5.3: “Mapping Report on AF Sector Finance and Policy”*, which examines the implications of updated EU agrifood regulations for AF sector, reviews academic literature on cost-benefit analysis, ecosystem service valuation, and payment schemes, and maps innovative financing mechanisms to improve financial valuation (e.g. net present value (NPV) projections) of AF systems.

D5.5 Mapping Report is motivated by the limited vision presented by conventional agricultural finance, that is, the fact that mainstream agrifood valuation tends to prioritise short-term profitability and market outputs over ecological resilience. Such models frequently underestimate AF's long-term benefits due to the difficulties involved in monetizing ecosystem services and the high transaction costs associated with monitoring, reporting, and verification (MRV). Standard cash flow projections

frequently treat land as a short-term and extractive asset, ignoring its regenerative potential and compounding returns from well-managed agroforestry systems. Consequently, this structural bias continues to favour intensive monocultures and large-scale operations, discouraging farmers who fight for regenerative and sustainable practices.

## 1.2 METHODOLOGY AND LIMITATIONS

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This report combines policy analysis with on-the-ground insights to assess the practical application of the ReForest Sustainable Financing Scheme. The Living Labs methodology provides real-life examples of AF systems operating under diverse farming and policy conditions. This approach also allows for collaborative spaces for co-creation, contributing critical feedback and helping refine and improve the Scheme based on practical experience.

Desk research involved in this report expands on previous and parallel Mapping reports (D5.1, D5.2, and D5.3) by reviewing relevant EU policy documents, national CAP Strategic Plans, and recent developments in agroforestry finance. It also considers data from other EU-funded projects, including AGROMIX and AGFORWARD, as well as reports on sustainable finance, carbon farming, and ecosystem services. All this helped to map the broader policy context and identify the main barriers and opportunities for promoting AF in Europe.

To complement the policy analysis, primary data were collected through surveys and interviews with AF practitioners involved in agroforestry. A total of 38 responses were gathered using both long and short survey formats, adapted to national contexts and distributed across ReForest-affiliated and external farms in the EU and the UK. The surveys explored farmers' financial needs, perceived barriers to agroforestry adoption, and their views on the feasibility of the proposed financing scheme.

To gain a deeper understanding, a total of 6 follow-up interviews were conducted with selected ReForest farmers in Bulgaria, Czechia, Hungary and England. These discussions centred on participants' experiences with ecosystem service payments, asking what sort of payment systems they value the most and suggestions for improving the proposed scheme. The interviews relied on a flexible format to allow farmers to freely share their perspectives, reflecting the variety of regional conditions and individual needs.

As previously mentioned, the co-creation and real-world testing methodologies generate a unique value for the study. However, they also presented a few challenges. The study's limitations include its reliance on a vast network of research institutions, farmers, and stakeholder engagement channels. Budget and time constraints influenced the scope of engagement activities, and limited outreach capacity in some ReForest-affiliated countries limited the geographic representation of the data. Language barriers and translation costs restricted data collection and analysis, while seasonality made it difficult to engage with farmers during critical agricultural periods. Lastly, the length and depth of survey and interview responses varied, which influenced the consistency and level of detail, especially in the primary data collection.

## 1.3 OBJECTIVES AND EXPECTED OUTCOMES

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The current report aims to:

- Test the feasibility and relevance of the scheme in real-world settings, considering different farm typologies, operational models, and geographic conditions.

- Evaluate how policy frameworks, local agro-ecological factors, and farm-level realities affect the scheme's implementation, identifying barriers, enabling factors, and regional differences.
- Gather feedback from farmers, researchers, advisors, and potential investors on the scheme's design, financial logic, and practical usability.
- Adapt the financing scheme to the specific needs and local conditions of farmers, ensuring it is context-sensitive and farmer-friendly.
- Refine the scheme's structure and implementation approach based on field-level insights, ensuring its adaptability, scalability, and readiness for policy translation in Deliverable D5.6.

## 1.4 REPORT STRUCTURE

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This report is part of ReForest Working Package 5 (WP5): *Finance and Policy*, which aims to strengthen the enabling environment for agroforestry by addressing key financial and policy barriers. WP5 follows a progressive sequence: Deliverables D5.1, D5.2, and D5.3 map the existing EU regulatory and financial landscape; D5.4 presents the design of the ReForest Sustainable Financing Scheme; D5.5 applies the scheme in practice; and D5.6 will translate the findings into actionable policy recommendations.

The present report is structured as follows:

**Chapter 2** summarizes the core structure of the ReForest Hybrid Sustainable Financing Scheme, including its pillars, design principles, methodological foundation, and links to complementary financial tools.

**Chapter 3** highlights the data analysis and results. It includes five levels of integrated research: EU policy mapping, country-level CAP integration, farm-level data from ReForest partners, survey results from internal and external farmers, and qualitative findings from stakeholder interviews.

**Chapter 4** discusses the practical application of the financing scheme across Living Labs. It brings together expectations, adoption challenges, payment preferences, advisory needs, and risk perceptions to enrich the Scheme's implementation.

**Chapter 5** concludes with key takeaways from the analysis and describes how these findings may guide the development of policy recommendations in the upcoming D5.6.

## 2. REFOREST SUSTAINABLE FINANCING SCHEME

*Chapter 2* presents a summary of **ReForest Sustainable Financing Scheme**. It outlines the structure, purpose, and guiding principles of the scheme and provides the foundation for its practical application within the Living Labs. For full technical specifications and design details, readers are encouraged to consult past *Deliverable D5.4*.

### 2.1 AIM AND SCOPE

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Developed in close collaboration with ReForest partners, Living Labs, and agroforestry stakeholders, the Scheme supports the co-design and early testing of a hybrid model based on payments for ecosystem services (PES). It focuses on improving the financial viability of agroforestry by compensating farmers not only for the adoption of sustainable practices but also for the broader environmental co-benefits.

By addressing persistent barriers such as high upfront costs, delayed returns, and limited long-term support, the scheme is designed to work across diverse farm types and policy settings. It builds on existing public instruments while encouraging private-sector engagement, positioning agroforestry as a resilient and investable land-use strategy in Europe.

### 2.2 BENEFICIARIES, DESIGN PRINCIPLES, AND CHALLENGES

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#### Beneficiaries

The main beneficiaries of the scheme are farmers and land managers implementing or transitioning to agroforestry systems. The model also supports advisors, cooperatives, local authorities, policymakers and private investors engaged in regenerative agriculture.

#### Design Principles

The scheme is underpinned by key design principles that build on the foundations laid by Cowi, the Ecologic Institute, IEEP (2021), McDonald et al. (2021), and Scheid et al. (2023):

- **Additionality and permanence** must be ensured so that the scheme delivers environmental results that would not have happened without support, while also maintaining the long-term provision of ecosystem services.
- **Robust MRV** systems are needed to ensure that agroforestry practices have real, positive, and measurable impacts on the climate and biodiversity.
- **Recognising all the co-benefits of agroforestry practices** and rewarding farmers for delivering them will be important for scaling up agroforestry.
- **Stakeholder engagement** plays a critical role in the success of the scheme, requiring the active participation of farmers and ongoing access to advisory services.
- **Clarity and accessibility** are essential, with the scheme offering straightforward guidance on project design, eligibility, implementation procedures, and funding pathways.
- **Flexibility** is required to adapt the scheme to diverse agroecological conditions, farm typologies, and administrative contexts across Europe.
- **Blended finance** combining public subsidies with private capital and market-based tools;
- **Action and result orientation** must be embedded in the scheme, linking payments both to the adoption of sustainable practices and the delivery of verified ecosystem services.
- **Support infrastructure** to assist farmers with planning, execution, and monitoring.

### **Main Barriers for AF uptake**

Agroforestry adoption remains constrained by a range of practical and structural barriers:

- Uncertainty around land classification and the legal and economic implications of converting land use
- High upfront investment requirements and ongoing operational costs
- Financial risk and income variability, especially in early years
- Complexity in system design, requiring specialized knowledge and long-term planning
- Limited access to agroforestry-specific advisory services
- Fragmented policy frameworks and weak alignment between agricultural and forestry regulations, particularly under the CAP

In addition, financing schemes face operational/ administrative challenges, such as:

- Difficulty ensuring the long-term delivery and permanence of ecosystem services
- Challenges in designing cost-effective and credible MRV systems
- Limited methodologies for accurately valuing co-benefits such as biodiversity, carbon storage, and soil health
- The need to maintain simplicity in scheme design while adapting to regional diversity in farm systems and policy environments

## **2.3 ReForest FINANCING SCHEME STRUCTURE**

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The ReForest Sustainable Financing Scheme is structured around 3 main pillars:

### **1. Advisory Services**

The scheme emphasises the need for continuous and reliable technical support beginning from the earliest stages of agroforestry project development. Advisory services can help farmers find the best solutions for their farms and ensure the effective planning and implementation of projects, covering the following activities:

- Site selection and planting techniques
- Soil and water management
- Pest and disease control
- Design and implementation of monitoring, reporting, and verification (MRV) systems
- Navigation of CAP instruments and funding access

These services are typically delivered by a mix of public and private actors, including extension agencies, universities, NGOs, and consultants. Funding is available through CAP rural development measures and national schemes, but coverage and quality vary widely.

As shown in D5.3, well-developed regional advisory systems are expected to reduce barriers to agroforestry, particularly when connected to demonstration sites and peer learning. Living Labs illustrate how local, hands-on support can improve farmer decision-making and project outcomes. This analysis will be further developed through Task 6.5 of WP6, which examines advisory systems in the UK, Belgium, Denmark, and Poland through stakeholder interviews.

### **2. Upfront and Action-Based Payments**

To address the financial burden associated with establishing agroforestry systems, the scheme proposes an initial round of **ex-ante payments**. These are intended to cover early-stage costs such as feasibility assessments, land diagnostics, infrastructure setup, and planting.

Building on this, **action-based payments** are further designed to complement regular compensation for the implementation of sustainable land management practices. These include intercropping, soil

regeneration, and tree maintenance, which support biodiversity, carbon retention, and water regulation. Importantly, these sorts of payments are made irrespective of measurable outcomes, considering the time lag of environmental returns.

### **3. Results-Based Payments**

To encourage long-term environmental stewardship, the scheme also introduces **results-based payments** that are disbursed following verified improvements in key indicators. Typically assessed after five years, these payments are performance-linked and tied to outcomes in: Soil health, Biodiversity, Carbon sequestration, and Water retention or quality.

Farmers who meet or exceed predefined environmental thresholds receive higher payments, while partial compensation may be awarded for meaningful progress even if targets are not fully achieved. This approach combines early-stage financial support with accountability, ensuring that farmers are rewarded for both implementing practices and delivering results.

#### **Payment Logic and Valuation Framework**

The scheme applies a dual-criteria approach to determine payment levels:

- **Cost-based:** Reflecting the actual expenses incurred in implementing and maintaining agroforestry systems.
- **Value-based:** Tied to the societal and environmental value of ecosystem services provided.

To put this payment structure into practice, the scheme relies on a holistic valuation approach that captures both measurable outcomes and broader environmental benefits. Payments should be linked to indicators such as the amount of carbon stored in soils and biomass, levels of biodiversity, and improvements in soil organic matter.

When clear market values for these services are not available or are too unstable, the scheme may draw on alternative methods like estimating opportunity costs or applying values from similar contexts. This helps ensure that important benefits, even if not traded in markets, are properly recognized and rewarded. The indicators and thresholds used in the scheme are also designed to remain flexible, so they can adapt over time as scientific understanding advances and EU policy goals evolve.

## **2.4 FIVE YEAR AF SYSTEM PROTOTYPE**

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The financing scheme is structured around a five-year project prototype, providing a practical timeline for establishing agroforestry systems. This timeframe allows certain trees and crops to mature and creates the conditions needed to evaluate long-term impacts. During the pre-project phase, farmers (supported by advisors) should develop a detailed agroforestry project plan that serves as a roadmap for implementation, financing, and monitoring.

The first year (Year 1) focuses on laying the foundations for sustainable land use practices and establishing agroforestry systems. This may include, for example, conducting site assessments, collecting baseline data, establishing an MRV system, capacity building, pilot planting, securing funding, establishing partnerships, and maintaining communication with stakeholders.

As the project progresses into subsequent years (Years 2-5), activities shift towards the management of agroforestry systems. This phase may include scaling tree planting, community engagement, regular monitoring and evaluation, adaptive management, system optimization, financial analysis, stakeholder engagement, market linkages, long-term planning, risk management, documentation, and reporting.



At the end-of-project activities (Year 5), the scheme refers to activities that may include project review, conducting environmental impact assessments, monitoring and verifying results, documenting and reporting findings, and ensuring compliance with standards. After project completion, farmers should maintain the practices implemented and monitor environmental impacts to ensure the long-term sustainability of their agroforestry systems.

*Table 1* provides an overview of the potential financing mechanisms and sources by payment type, developed in D5.4.

Payment Type	Financing mechanisms/sources
<p>Financing the <b>up-front costs</b> of an agroforestry project (Year: 0)</p> <p>Farmers receive an initial payment to compensate for planning and initial investment costs</p>	<p><b><u>Potential public financing mechanisms</u></b></p> <ul style="list-style-type: none"> <li>• CAP Pillar I: Eco-schemes and other direct income support schemes such as basic income support for sustainability (BISS) and complementary income support for young farmers (CISYF)</li> <li>• CAP Pillar II: Agri-environmental-climate measures (Article 70), Natural or other areas with natural constraints (Article 71), Area-specific disadvantages resulting from certain mandatory requirements (Article 72), Investments (Articles 73 and 74) and Setting-up of young farmers and new farmers and rural business start-up (Article 75)</li> <li>• State aid for the establishment, regeneration or renovation of agroforestry systems</li> <li>• Other: Grants and subsidies from national or local governments, research institutions and universities</li> </ul> <p><b><u>Potential private financing mechanisms</u></b></p> <ul style="list-style-type: none"> <li>• Agri-food companies in the supply chain, impact investors, private banks, some private foundations and NGOs</li> </ul>
<p><b>Advisory services</b> (Years: 1-5)</p> <p>Farmers receive advice and technical support from a reliable source</p>	<p><b><u>Entities providing advisory services</u></b></p> <ul style="list-style-type: none"> <li>• Agricultural extension services, agri-food companies, private consultants or companies, NGOs, research institutions and universities, national or local government agricultural agencies</li> </ul> <p><b><u>Policies providing advisory services</u></b></p> <ul style="list-style-type: none"> <li>• CAP Pillar II (rural development measures), State aid for the establishment, regeneration or renovation of agroforestry systems</li> </ul>
<p><b>Action-based payments</b> (Years: 1-5)</p> <p>Farmers receive an annual action-based payment to cover ongoing costs</p>	<p><b><u>Potential public financing mechanisms</u></b></p> <ul style="list-style-type: none"> <li>• CAP Pillar I: Eco-schemes</li> <li>• CAP Pillar II: Agri-environmental-climate measures (AECMs)</li> <li>• Other: State aid for the establishment, regeneration or renovation of agroforestry systems, research institutions and universities</li> </ul> <p><b><u>Potential private financing mechanisms</u></b></p> <ul style="list-style-type: none"> <li>• Agri-food companies in the supply chain</li> </ul>
<p><b>Result-based payments</b> (Year: 5)</p> <p>Farmers receive an additional payment based on results</p>	<p><b><u>Potential public financing mechanisms (to be developed)</u></b></p> <ul style="list-style-type: none"> <li>• CAP Pillar I: Eco-schemes</li> <li>• CAP Pillar II: Agri-environmental-climate measures (AECMs)</li> <li>• Other: Government or public funds</li> </ul> <p><b><u>Potential private financing mechanisms (to be developed)</u></b></p> <ul style="list-style-type: none"> <li>• Agri-food companies in the supply chain, voluntary carbon markets</li> </ul>

*\*Table 1: Financing mechanisms and sources by payment type. Source: Deliverable 5.4.*

The prototype project described is for illustrative purposes only, as duration and activities may vary in practice, depending on the type of system being considered and the local conditions.

## 2.5 METHODOLOGICAL APPROACH

The Scheme's six-step methodology is built on cost estimation, ecosystem service valuation, and monitoring criteria to design a payment system that supports agroforestry adoption while rewarding environmental outcomes.

Implementation challenges include variability in farming systems and conditions, the complexity and cost of monitoring and verifying multiple ecosystem services, and the need for long-term institutional support.

This methodology is summarised in *Table 2* below:

Step	Description
<b>1. Identification of key ecosystem services relevant to agroforestry (carbon, biodiversity, soil health)</b>	This first step involves identifying and defining environmental results that are measurable, quantifiable, and related to the provision of ecosystem services by agroforestry systems. These may include, for example, enhanced soil health and biodiversity, or carbon sequestration.
<b>2. Mapping of land management practices that contribute to these services</b>	The specific land management practices (e.g., tree planting and soil management techniques) required to achieve these environmental results are identified.
<b>3. Cost estimation for establishing and maintaining these practices</b>	The costs associated with implementing or changing land management practices are then estimated. These include direct costs associated with establishing and managing agroforestry systems, and other indirect costs, such as opportunity costs and income foregone.
<b>4. Development of MRV criteria to track outcomes</b>	Measurable indicators are developed to assess the effectiveness of the land management practices implemented in achieving the desired results. They should be quantifiable, verifiable, and scientifically sound to assess the environmental impact of agroforestry practices.
<b>5. Mapping of existing public and private funding sources</b>	Financing mechanisms and sources are identified to cover the costs of establishing and managing agroforestry systems and to reward farmers for the environmental results achieved.
<b>6. Setting result-based payments based on a valuation of ecosystem services</b>	An economic valuation derived from a quantitative assessment of the ecosystem services provided by agroforestry systems will determine payment rates for environmental results.

**\*Table 2:** ReForest Financing Scheme 6-step methodology. Source: own elaboration, Deliverable D5.3

## 2.6 COMPLEMENTARY AND INNOVATIVE FINANCING TOOLS

While public funding through the Common Agricultural Policy (CAP) provides a crucial foundation, scaling up agroforestry requires blended finance that mobilises private capital, philanthropic funding, and nature capital market-based solutions (Deliverable D5.3).

Table 3 summarises key findings from D5.3 by presenting a curated set of financial and institutional accelerators that can complement the Financing Scheme. Each accelerator is briefly described and linked to real-world case studies that demonstrate its concrete application in supporting agroforestry initiatives.

AF Accelerators	Brief Discription	Real Case Study - Examples
<b>Regional Advisory Systems</b>	Regional advisory systems improve the design, implementation, and performance of AF systems. The Living Lab methodology link scientific research to field-level practices through participatory experimentation and site-specific data.	ReForest Living Labs; Savory Institute; Climate Farmers; Life Terra; Alvelal; Åland; CREAM; Agroforestry Research Trust; Association Française d'Agroforesterie; Agroforst Deutschland
<b>Guarantee Institutions</b>	These institutions reduce investment risk by covering potential early losses or providing collateral. They help attract private capital and are often backed by public or philanthropic support.	European Association of Guarantee Institutions – AECM; (AVGHA, ISMEA); Green Guarantee Company
<b>Development banks</b>	Credit Lines and funding could be directed for essential infrastructure such as irrigation and transport systems, for example, crucial for supporting extensive AF operations and ensuring their sustainability.	European Investment Bank (EIB), European Bank for Reconstruction and Dev (EBRD), Council of Europe Dev Bank (CEB), World Bank Group (WBG), Hellenic Dev Bank
<b>Venture Capital and Seed Funding</b>	Suitable for early-stage and growth-phase AF projects that fall outside traditional lending. These funds enable pilots, de-risk innovation, and accelerate scalable solutions in regenerative land use, carbon monitoring, and sustainable supply chains.	The Yield Lab Europe, Campo Impact Fund, Propagate (The Nest, AgFunder), reNature, Future Food Fund, Impact Bridge Sustainable AgriFood Fund I (IB SAF I), AirForestry, Agroforestry Partners, CarbonFarm Technology
<b>Nature Capital (Carbon + Biodiversity Markets)</b>	Accredited systems that certify carbon removals and biodiversity co-benefits in agroforestry. Increase project credibility, access to carbon markets, and investor confidence.	European ETS and voluntary schemes, EU CRCF Regulation, Verra (VCS), Gold Standard, Jurisdictional and Nested REDD+ (JNR)
<b>Advance Purchase Agreements and ESG Investing</b>	Long-term sourcing agreements with ESG minded corporations that want to create positive impact within their supply chain, ensuring market access and financial predictability for AF farmers.	Landbanking Group, Soil Capital, RobinFood, Fairtrade International, Nestlé Sustainable Sourcing, Cocoa Life (Mondelez), Propagate Ventures, Forest Carbon Partnership Facility; Naturise
<b>Impact Investment and Crowdfunding Platforms</b>	Funds looking for positive social and environmental returns. Crowdfunding platforms pool small-scale investments for local or cooperative projects related to AF.	Terra Bella Fund, Moringa Fund, Greenmatch; Sitawi Finance for Good; The Yield Lab Europe; AgFunder; Crowdfarming; GrowAhead; Arara Seed
<b>Philanthropy and Networks Supporting AF</b>	Grantmaking, advocacy, knowledge exchange, and technical innovation. Support ecosystem restoration, farmer capacity, climate resilience, and the integration of trees into sustainable land use systems.	EFSAF, Fondation de France, European Climate Foundation, The Nature Conservancy, WWF, Macdoch Foundation, EURAF A4AE, INNOAF
<b>Partnerships with Startups and Financing Tools</b>	Collaborations to scale digital MRV, farm planning, and fintech tools that support agroforestry adoption. Tailored decision-support platforms and remote sensing integrations.	FarmTree; DeepRoots; INTACT; FarmSafe; and many others - check: Tools, Data and Projects Catalogue - DigitAF

**\*Table 3: Summary of ReForest Innovative AF Financing Mechanisms. Source own elaboration, Deliverable D5.3**

### 3. DATA AND METHODOLOGY

*Chapter 3* outlines the structure and research design of this report. The methodology follows a funnel approach: moving from broad to specific levels of analysis. This does not imply that the work was necessarily completed in this order; rather, it was a parallel activity that highlighted the importance of combining both primary and secondary data.

The methodology is structured around five main stages, capturing perspectives from the EU, Member States, and individual farms, as shown below:

#### **Secondary Data**

1. **EU policy mapping** to understand the regulatory and financial architecture shaping agroforestry across Europe, including instruments under the CAP, the European Green Deal, the Farm to Fork Strategy, the Biodiversity Strategy, and emerging climate finance regulations. For more detailed information, readers are welcome to consult Deliverable D5.3.
2. **ReForest Country-level analysis** to examine how AF is recognised, supported, and implemented across ReForest-related countries. This included a comparative review of CAP Strategic Plans, focusing on definitions, eligibility criteria, and budget spending. The analysis also considered land ownership patterns, farm typologies, and advisory structures, highlighting how institutional legacies and disparities in land concentration and tenancy limitations affect AF uptake.
3. **ReForest Farm-level analysis** to profile Living Lab farms and inform the scheme adaptation. This phase presented all 14 ReForest-related farms, detailing their objectives, agroforestry practices, and Living Labs' research goals. Descriptive statistics on area, adoption year, organic status, livestock presence, and system type were used to capture the diversity of real-world conditions and ensure the scheme reflects the practical needs of different farm models.

#### **Primary Data**

4. **WP5 Surveys** to assess financing needs, barriers, and the scheme's feasibility. Conducted with 38 respondents from inside and outside the ReForest Living Labs scope, this survey gathered quantitative data on farms' characteristics, access to funding, risk exposure, advisory support, and first reactions to the proposed financing scheme from the farmers' perspective.
5. **WP5 Interviews** to capture deeper, qualitative insights from AF practitioners and other key actors on what is needed to make agroforestry work in practice. Six guided interviews explored contextual challenges, financing expectations, and practical enablers of agroforestry adoption beyond what surveys could capture.

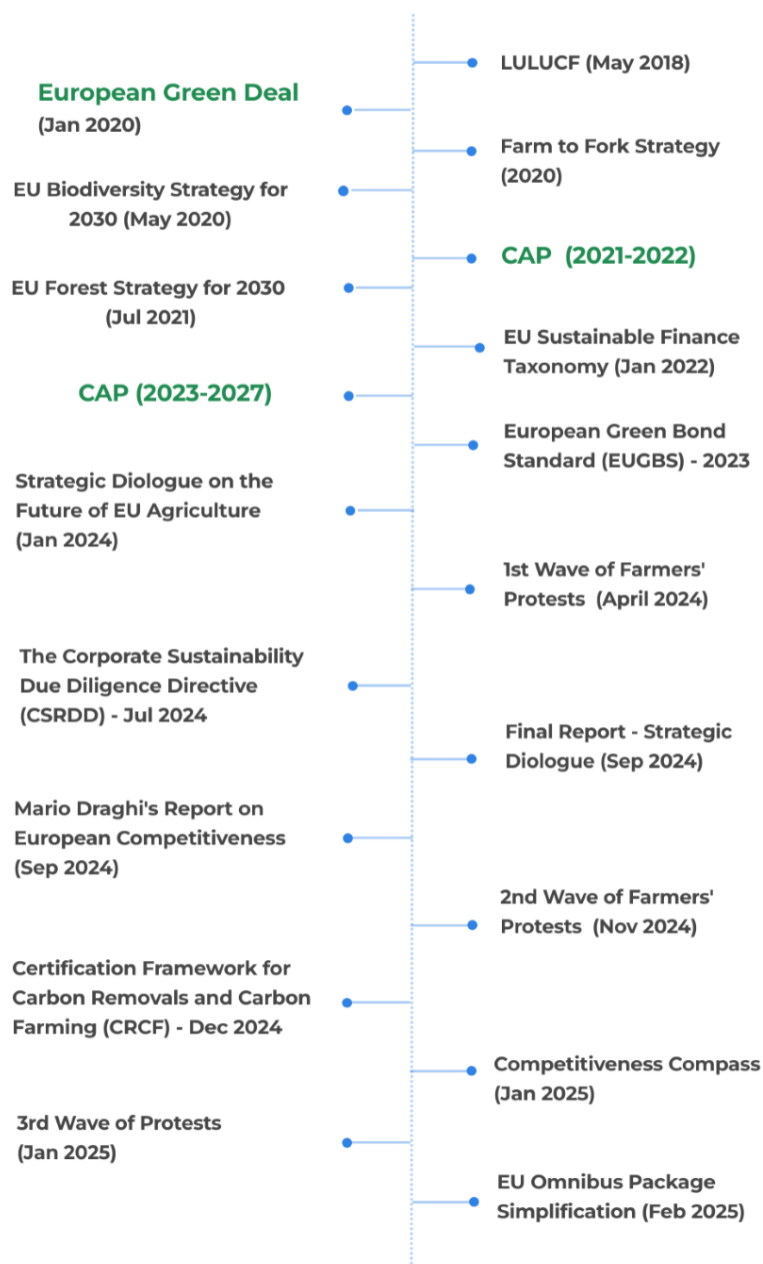
## 4. SECONDARY DATA ANALYSIS AND RESULTS

### 4.1 EU- POLICY LEVEL RESEARCH

The first stage of the D5.5 analysis focused on mapping the EU policy landscape relevant to agroforestry. This involved desk research to identify recent regulatory developments with potential implications for the sector.

## EU Policy Updates

Timeline and Implications to Agroforestry



**Fig1.** Timeline of relevant EU policies updates shaping AF finance. Source: own elaboration, D5.3

The findings are summarised in *Figure 1*, which presents a chronological overview of key policy shifts affecting agroforestry. This timeline, originally developed in *Deliverable D5.3*, is backed up by a detailed discussion in Section 2 of that same report. It highlights how EU-level reforms directly shape the enabling environment for agroforestry, particularly given the sector's dependence on public funding and alignment with climate and agrifood objectives.

Establishing such a timeline study is important for several reasons. First, it offers a historical archive of relevant climate and agrifood policy actions, making it easier for readers to connect the dots and create cohesive narratives. Second, it provides a road map for AF stakeholders to better understand the recent past trajectory and current state of AF at the EU level. Third, it proposes better conditions for projecting future scenarios on AF feasibility once it is shown how the majority of current AF funding relies on subsidies and is heavily influenced by state policies.

### **EU-Policy Research - Main Findings**

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Our findings suggest that the EU is currently in a pivotal situation. On the one hand, the EU tries to keep its promises and goals related to the Green Deal agenda, such as achieving net CO<sub>2</sub> removals of 310 million tons by 2030 and further Climate Neutrality in 2050. On the other hand, the EU also recognizes the urgent need to promote competitiveness, innovation, and food security, not to mention recent concerns about security spending in the aftermath of the Ukrainian-Russian war (D5.3, Section 2).

D5.3 highlights the need for a more coherent policy implementation across Member States. While instruments like the 2023–2027 CAP, CRCF, and Omnibus Package offer potential support for agroforestry, their impact depends on administrative alignment, simplified procedures, and stronger links between public and private funding streams.

Agroforestry aligns well with the EU's vision of a sustainable and resource-efficient economy. Its multifunctionality promotes climate action, biodiversity conservation, and rural development, capable of addressing both climate adaptation and mitigation. Nevertheless, to play a bigger role in the Green Agricultural Transition, agroforestry must be fully integrated into blended finance instruments and modern policy frameworks. This requires a flexible approach that can respond to policy shifts and account for both regulatory change and financing behaviour at public and private scales.

## **4.2 COUNTRY-LEVEL RESEARCH IN REFOREST**

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The second stage of the research focused on comparative country-level studies across the eight ReForest partner countries: Belgium, Bulgaria, Czechia, Denmark, Germany, Hungary, Spain, and the United Kingdom (England). This analysis examined how agroforestry is recognized, funded, and implemented within different national frameworks and CAP Strategic Plans, offering a detailed view of territorial and institutional conditions.

As also mentioned in D5.3, the most recent reform of the CAP has given Member States more flexibility in how they support agroforestry, leading to wide variation in recognition and funding mechanisms. Some countries, like Belgium (Flanders) and Czechia, formally integrate agroforestry into their strategic plans through direct measures. Others, including Germany and Denmark, support it indirectly via eco-schemes or biodiversity incentives. England, operating outside the CAP post-Brexit, follows its own Environmental Land Management scheme, with emerging but still limited provisions for agroforestry.

To better understand these differences, we applied Guiomar et al. (2018) typology representation of European agricultural regions, which classifies areas based on farm structure and economic characteristics. This lens helps us to identify where agroforestry is most viable and where policy gaps remain.

Research also assessed how subsidy structures, access criteria, land ownership, and CAP budget allocations may affect agroforestry uptake. While some countries have well-defined payment systems and grant management frameworks, others struggle with fragmented implementation, limited advisory services, or a lack of operational clarity, for example.

## **Country-Level Research - Main Findings**

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### **Agroforestry Typology and Regional Clusters**

Understanding regional farming typologies is key to designing effective agroforestry policies and financing tools. Following Guiomar et al. (2018), we applied a cluster approach that groups European regions by socio-economic, structural, and land-use characteristics. This territorial perspective helps identify where agroforestry is most viable and what types of support are needed, reflecting differences in farm scale, market access, and institutional capacity, in a more organised way.

- **Cluster 1:** Found in parts of Bulgaria and Hungary, this cluster is characterised by fragmented, low-income smallholders. Agroforestry has potential as a tool for diversification and land rehabilitation, but faces serious institutional and financial constraints.
- **Cluster 2:** Denmark, Germany, and parts of Belgium fall into this industrialised, large-scale agriculture cluster. Agroforestry is limited in scope and typically viewed through a compliance or biodiversity lens, rather than as a production strategy.
- **Cluster 3:** Some regions in Spain and England align with this cluster, where small-scale AF farms hold economic potential. These areas tend to be well-positioned for agroecological innovation and market-based AF mechanisms.
- **Cluster 4:** Applies to portions of Czechia and Hungary, where economically vulnerable farming systems persist. These transitional regions require institutional strengthening and tailored policy tools to support AF uptake.
- **Clusters 5 & 6:** Upland and mountainous zones in Spain and Bulgaria are frequently associated with silvopastoral systems. These areas are ecologically suitable for agroforestry and provide strong environmental justification, but support is very weak.

### **Land Ownership Patterns and Institutional Legacy**

Land ownership structures and institutional history strongly influence agroforestry adoption. Patterns of land consolidation, restitution, and reform heavily influence access to land, capital, and subsidies, determining which farm types and national contexts are better positioned to engage with agroforestry. In most cases, concentrated ownership and limited support for smallholders impede diversification and innovation, exacerbating barriers to agroforestry adoption.



Aside from ownership patterns, differences in tax policies between leased and owned land, as well as collateral requirements in agricultural contracts, introduce an additional layer of complexity for farmers. Leasing arrangements may limit farmers' ability to secure loans or access specific subsidies, while land ownership is often a prerequisite for collateral-backed financing. These dynamics can have a significant impact on a farmer's ability to implement long-term systems like agroforestry, as it requires careful consideration of the trade-offs between leasing or owning land.

In terms of scale, smaller farms may face unique challenges when implementing AF practices, especially in areas with high land concentration, entry barriers, and capital-intensive production models. In contrast, areas with fragmented farm structures may provide a more solid foundation for agroforestry integration if appropriate policy frameworks, financing mechanisms, and support services are in place.

Key national findings include:

- **Bulgaria and Hungary** have high land concentration due to collectivization and post-socialist land reforms, resulting in large-scale farms dominating agriculture. In these contexts, smallholder access to land, credit, and advisory services remains limited, hindering the diversification potential of agroforestry systems. Short-term leasing is common, but collateral requirements for loans are frequently rigorous, making it difficult for non-landowners to obtain financing for long-term investments. The collateral requirements for agricultural loans are stringent, favouring landowners who can pledge their property, while tenants have limited access to credit or subsidies. Tax incentives and financial instruments favour landowners, exacerbating disparities in access to public support and capital for sustainable land use transitions.
- **Czechia** exhibits regional variation: the western regions are more consolidated and aligned with Cluster 5 (intermediate-scale systems), while eastern areas remain fragmented and economically vulnerable. Leasing is common, but short-term contracts and limited tenure security pose challenges for agroforestry. Financial institutions are frequently hesitant to accept leased land as collateral, limiting tenants' access to credit for long-term investments. Tax policies favour owners, while tenants face structural barriers to accessing credit and public support mechanisms, limiting their ability to invest in diverse systems such as agroforestry.
- **Germany and Denmark's** agricultural sectors have consolidated and specialised as a result of decades of land reform and mechanisation. In Germany, credit access is typically linked to land ownership because land serves as primary collateral for loans, putting tenants at a disadvantage when seeking financing for agroforestry. Tax breaks, such as deductions and exemptions, tend to benefit landowners, exacerbating disparities. In Denmark, the regulatory framework promotes land mobility, and long-term leases are available. However, despite these formal structures, tenants frequently face higher risks and have less access to credit than owners, particularly for collateral-backed loans or agroforestry subsidies.
- **The UK (England)** reflects a dual landscape, with both large estate agriculture and smaller diversified holdings. Tenant farmers face systemic challenges: shorter lease terms and limited collateral options reduce their ability to secure credit, while restrictive tenancy conditions often preclude participation in environmental schemes that require long-term land commitments. Tax policies generally favour landowners, further constraining tenants' access to financing and subsidies necessary for agroforestry adoption. This structural imbalance undermines the viability of long-term, multifunctional practices for tenant farmers.
- **Spain and parts of Belgium** maintain a mixed land structure, with traditional agroforestry systems still active in some regions. In Spain, leasing agreements often restrict tenants' ability to access subsidies or use land as collateral for loans, making it difficult for non-owners to invest in



agroforestry. Tax incentives, such as deductions for land improvements or income from agricultural activities, typically favour landowners, further limiting tenants' financial flexibility. In Belgium, strict rental market regulations—such as limits on rent increases and strong tenant protections—combined with tax treatments that benefit owners, discourage long-term leasing. This disincentivizes tenants from undertaking long-term land improvements like agroforestry, which require secure tenure and sustained investment.

*Table 5* summarizes these national land ownership structures alongside farm typologies from Guimar et al. (2018), highlighting how these factors may impact agroforestry potential across ReForest representative countries.

Country	Land Ownership Patterns and Institutional Legacy	Guimar et al. (2018) - Farm Typology
<b>Belgium</b>	Highly consolidated market. Agri-business dominates peri-urban zones. Wallonia and Flanders both show intensification and regional disparities.	Flanders is considered to fall under Cluster 2, while Wallonia is linked to Cluster 6. Small farms play a marginal role in Flanders (<25% <8 ESU or <5 ha).
<b>Bulgaria</b>	82.4% of Utilised Agricultural Area (UAA) is held by farms over 100 ha. Land consolidation is driven by domestic corporate actors and foreign funds. Post-socialist restitution enabled rapid land concentration, often bypassing local ownership and weakening tenure security in common lands.	Falls primarily under Clusters 6 & 7. High density of structurally small farms (<5 ha, <8 ESU), often subsistence-based. Small farms may face exclusion from CAP benefits and limited market access, despite their significant rural and cultural role.
<b>Czechia</b>	Czechia's agricultural landscape is shaped by post-collectivisation dynamics. Large cooperative successors dominate, maintaining some of the EU's largest average farm sizes. About 75% of farmland is cultivated by large farms, concentrated in lowland zones. The legacy of collectivised land management continues to influence both ownership structures and agri-political influence.	The western regions fall under Cluster 5, which includes small and medium mixed-use farms in upland terrain. Although the number of smaller holdings has slightly increased since the 1990s, overall trends favour large-scale cereal and livestock operations. Small farms persist in marginal, mountain, or less accessible zones but face challenges in modernisation and competitiveness.
<b>Denmark</b>	Denmark exhibits long-term land consolidation, with large holdings dominating due to early 20th-century reforms. The average farm size is ~75 ha. High land prices and advanced mechanisation shape a competitive, export-driven farming model. Pig meat and dairy sectors are particularly dominant, contributing significantly to the national GDP.	Mostly falls under Cluster 2. Small farms are rare, often declining, and face major entry barriers due to capital intensity and structural concentration. The regulatory environment favours scale, technology, and export efficiency, with minimal multifunctional or part-time farm support.
<b>Germany</b>	Germany is marked by a strong East-West divide. In the East, land privatisation post-reunification led to large-scale holdings, absentee ownership, and land speculation. Western and southern regions host more diverse, family-based mixed farms. Corporate actors dominate large plots in the East, while small-to-medium farms remain politically and culturally important in southern Länder such as Bavaria or Baden-Württemberg.	Eastern states are largely Clusters 2 and 4, with highly concentrated land. Southern regions reflect Cluster 5 characteristics, small to medium farms in uplands or peri-urban areas with multifunctional and ecological roles. Although family farms remain visible, their economic weight is declining amid intensification and market pressure.

<b>Hungary</b>	Hungary's land structure reflects the legacy of post-socialist transition. Land privatisation during the 1990s, coupled with the use of compensation vouchers and long-term leasing, enabled the emergence of large-scale farming enterprises and real estate holdings. Legal caps on ownership and leasing are prevalent.	Most regions fall into Cluster 4, characterised by economically small, semi-commercial farms relying on family labour and low inputs. These farms often serve both productive and social roles but struggle with limited access to credit, markets, and CAP funding. While small farms remain numerous, their long-term viability is uncertain in the face of structural consolidation and policy bias toward larger holdings.
<b>United Kingdom</b>	The UK has one of the most concentrated land ownership structures in Europe. An estimated 1% of the population controls over 70% of the land, much of it held through anonymous or corporate entities. Transparency and public access to land ownership information remain limited, particularly in England and Scotland, reinforcing long-standing barriers to entry for new and small-scale farmers.	England and southern regions largely align with Cluster 2, marked by large, capital-intensive farming systems. In contrast, upland areas of Wales, Northern Ireland, and parts of Scotland fall under Cluster 3, where structurally small farms persist. These are often part-time, multifunctional holdings engaged in conservation, tourism, or heritage-based land stewardship.
<b>Spain</b>	Spain's land structure reflects a historic North–South divide. In the South, large estates and dehesa systems dominate, rooted in longstanding landholding traditions. In contrast, the North is characterised by fragmented, family-run farms in mountainous or less accessible areas. This duality leads to persistent land inequality, with limited access for smallholders, particularly in southern regions.	Spain spans Clusters 3, 5, and 7, reflecting its diverse geography. In the South, dehesa farms are extensive but economically modest, while in the North, small-scale, multifunctional farms contribute to ecological stewardship and rural identity. Despite their importance, these farms face challenges from market pressures, ageing demographics, and policy structures that favour larger, more capitalised operations.

**\*Table 5: National Land Ownership Structures and Farm Typologies in ReForest Countries.** Source: own elaboration based on Guiomar et al. (2018)

These findings highlight the complex interplay between land ownership structures, institutional legacies, and farm typologies across Europe, underscoring the need for tailored financing models and policy frameworks that address structural inequalities and create enabling conditions for agroforestry adoption in diverse regional contexts.

### **CAP Budget Integration**

Quantifying available CAP funding is essential to understanding each country's capacity to support agroforestry. While all European ReForest countries rely on CAP as the primary funding source, the allocation and integration of funds for agroforestry vary a lot from country to country. These differences in magnitude affect the scale and effectiveness of AF funding, particularly under eco-schemes and rural development measures.

**Table 6** provides a comparative overview of CAP budget allocations (volume in Euros) across ReForest related countries.

Fund	Belgium	Bulgaria	Czechia	Denmark	Germany	Hungary	Spain	UK
EAGF: Direct Payments (2024–2028)	2.374.287.980	4.166.257.774	4.096.274.027	4.118.666.116	22.194.364.99	6.632.794.974	24.141.552.083	
EAGF: Sectoral Intervention (2024–2028)	337.519.213	109.346.634	118.517.918	34.328.456	310.720.251	177.064.923	46.843.087	

<b>EAFRD: Rural Development (2023–2029)</b>	517.023.310	1.380.198.574	1.383.779.353	694.785.115	11.664.127.69	1.572.616.223	5.290.159.979	
<b>Public Expenditure + EAFRD (2023 - 2029)</b>	1.119.943.477	3.450.496.431	3.740.625.384	694.785.115	11.664.127.697	3.167.056.340	8.160.914.026	

***\*Table 6: CAP Budget Allocation Overview (Volume in Euros) Across Countries. Source: own elaboration based on European Commission (2023).***

### 4.3 ReForest - FARM LEVEL RESEARCH

While EU- and national-level analyses provide essential policy and structural context, understanding agroforestry at the farm level is critical for designing financing models that reflect real operational needs. As part of ReForest's applied research, non-sensitive and publicly available data were collected from 14 participating farms across seven countries and are available for access under the ReForest website.

These case studies, summarised in Table 7, offer valuable insights into the diversity of Living Labs' objectives, management approaches, and monitoring priorities across different agroecological and socio-economic settings.

ReForest Farms	Country	Main Objectives	Research Goals and Monitoring Focus
Inagro Institute Research Plot	Belgium	To maintain a long-term agroforestry research and demonstration site that balances environmental sustainability with economic resilience.	Monitoring of soil health, crop yields, biodiversity indicators, and dissemination of results to stakeholders including farmers and advisors.
Bee Farm Strandzha	Bulgaria	To restore regional biodiversity and support local livelihoods through organic production of honey, grains, and vegetables, with emphasis on the conservation of donkeys.	Biodiversity assessment, productivity monitoring, soil property evaluation, and carbon measurement; potential integration of drone-based monitoring systems.
Daniel Pitek Farm	Czech Republic	To establish an ecologically sustainable agricultural system that integrates biodiversity conservation with commercially viable food production.	Policy engagement, biodiversity monitoring, and alignment of agroforestry practices with broader sustainability outcomes.
Forest-Agro Hrusky	Czech Republic	To enhance farm profitability while improving landscape diversity and contributing to microclimate regulation in South Moravia.	Policy evaluation, agroforestry system effectiveness, and the role of natural barriers in erosion control and climate mitigation.
Uni of Copenhagen Farm	Denmark	To explore the ecological and agronomic impacts of silvoarable systems through practical, field-based research and teaching.	Rotational cropping system analysis, biodiversity and soil assessments, and modelling of biomass using LiDAR and FarmTree simulation tools.
Hof Lebensberg	Germany	To operate a carbon-neutral farm system integrating food, fodder, and energy production within a regenerative ecological framework.	Research on soil fertility, yield stability, and system-level carbon neutrality through monitoring and modelling.
Zoldag Farm	Hungary	To trial integrated production of herbs, wood, and bee pasture while experimenting with soil cover techniques to enhance agroecosystem function.	Soil and microclimate assessments, biodiversity indexing (QBS), productivity evaluations, and environmental footprint modelling.

Bajti Breeding Yard	Hungary	To diversify production through fruit, fodder, and specialty crops while maintaining ecological functions in a drought-prone environment.	Biodiversity surveys, site condition assessments, soil testing, and remote sensing for ecological evaluation.
Valaha Tanya Farm	Hungary	To build a productive, resilient agro-ecosystem using syntropic and regenerative practices, supplying community-supported agriculture (CSA) boxes.	Development of benefit-cost-risk models for agroforestry, with long-term monitoring of productivity, ecosystem function, and climate adaptation potential.
Cockle Park Farm /Newcastle University	United Kingdom	To evaluate the performance of silvoarable agroforestry within a research environment focused on vegetable production and volunteer-supported CSA models.	Soil monitoring, reduced tillage strategies, weather data integration, and ecological-economic evaluation of agroforestry interventions.
Gibside CSA	United Kingdom	To apply holistic management to integrate livestock, soil health, and biodiversity enhancement, underpinned by agroecological principles.	Research on tree-livestock interactions, soil mineral balance, emissions impacts, and adaptive management for ecological performance and resilience.
Mindrum Farm	United Kingdom	To restore and manage traditional wood pastures while supporting biodiversity and integrating agroforestry within pastoral operations.	Studies on woodland grazing benefits, deer pressure management, and long-term ecological monitoring of pasture-woodland interactions.
Gowbarrow Hall Farm	United Kingdom	To implement a circular, regenerative system combining perennial crops, improved hydrology, and silvopasture for sheep.	Research on water and soil management, biodiversity outcomes of diverse swards, economic performance of perennial supply chains, and silvopastoral system optimization.
Biohub at Ings Farm /RegenGarmCo	United Kingdom	To develop a replicable, syntropic agroforestry model that integrates regional food systems through regenerative CSA and diversified crop-livestock production.	Model development for long-term agroforestry profitability, soil fertility restoration, and system design that aligns human inputs with ecological cycles.

**\*Table 7: Summary of ReForest Living Labs.** Source: own elaboration based on ReForest website: <https://agroReForest.eu/living-labs/>

## ReForest Farm's Descriptive Statistics and Main Findings

The ReForest Living Labs sample includes a wide range of farm sizes, management styles, research goals, and business models, which together provide essential context for designing financing tools that respond to on-the-ground needs.

To better understand this diversity, summary statistics were compiled from two datasets. First, the full sample containing all 14 farms, and then a cleaned version that excluded outliers (offering a more accurate reflection of typical AF farm sizes and structures). These statistics are presented in *Table 8* (full dataset) and *Table 9* (cleaned dataset).

### Final\_Data (14 observations)

Variable	Min	Q1	Median	Mean	Q3	Max	NAs
Area (in ha.)	0.5	8.00	17.53	100.34	27.00	600	1
Starting Year	1995	2009	2018	2015	2021	2023	0
Organic (0/1)	0.0			0.71		1	0
Livestock (0/1)	0.0			0.64		1	0

**\*Table 8: Summary Statistics for ReForest Living Labs – Full Dataset.** Source: own elaboration based on ReForest website: <https://agroReForest.eu/living-labs/>

### Clean\_Data (10 observations)

Variable	Min	Q1	Median	Mean	Q3	Max	NAs
Area (in ha.)	0.5	6.28	10.6	12.34	19.38	27	0
Starting Year	1995	2006	2013	2013	2021	2023	0
Organic (0/1)	0.0			0.60		1	0
Livestock (0/1)	0.0			0.50		1	0

**\*Table 9:** Summary Statistics for ReForest Living Labs – Clean Dataset. Source: own elaboration based on ReForest website: <https://agroReForest.eu/living-labs/>

After adjusting for extreme outliers, the average farm size in the ReForest sample drops from 100 hectares (full) to approximately 12 hectares (clean), while the median moves from around 18 to 10 hectares. At the full data, the average was much higher due to the inclusion of farms larger than 500 hectares. This discrepancy highlights the significant variation in land ownership and the presence of a few dominant landholders within the agroforestry space.

The oldest farm began integrating AF practices already in 1995, but most have done so only in the past 10 years. On average, ReForest LL's farmers started to adopt agroforestry practices in 2015, and half of the farms after 2018. By 2021, more than three-quarters had already introduced some form of AF. This recent growth could be partially explained by the increasing policy incentives, greater awareness of environmental challenges, and/ or the need for more resilient farming models.

Around 60% of these farms are either certified organic or follow organic practices, while half of them keep livestock, showing a mix of cropping-focused and integrated systems. In terms of system type, silvoarable agroforestry is the most common, used by 70% of farms. Silvopastoral systems, which integrate trees and livestock, are practiced by 20%. Only a small portion, around 7%, operate agrosilvopastoral systems that combine trees, crops, and animals. This breakdown indicates that simpler systems are more widespread, while more complex models remain less common, possibly due to higher labor requirements, costs or regulatory barriers.

These numbers help guide the refinement of the financing scheme, ensuring that it is adaptable enough to support a variety of farm sizes and systems. The ReForest sample of farms, with their various goals ranging from biodiversity conservation to community-supported agriculture (CSA) programs, offers a great opportunity to develop flexible finance models that work in different real-world settings.

## 5. PRIMARY DATA ANALYSIS AND RESULTS

### 5.1 SURVEYS

Questionnaires were further designed to better understand farms' operations and their existing financing schemes. Initially, this process was taught to include only the full sample of ReForest 14 farms. However, after consulting ReForest local partners (research/university centres), it became clear that there was room to expand the scope. We decided to open the survey to external agroforestry farmers from the EU and the United Kingdom networks. This helped us to increase our sample and improve the representativeness of the results to a total of 38 respondents.

The surveys were designed to explore several essential areas:

- Farmers' specific financial and operational needs
- Current challenges related to agroforestry adoption
- Local conditions affecting the uptake of agroforestry practices
- Preferences and expectations regarding financing mechanisms
- Feedback on the proposed ReForest financing scheme, focusing on its practicality, relevance to farm realities, and areas needing refinement

One important takeaway early on was the need to reduce the time of questionnaires. The full survey took around 45 minutes to an hour to complete, which proved to be too demanding for many farmers, even the most enthusiastic ones. To address this, we developed a shorter version that still captured key information but could be completed in about 15 minutes.

Given that the UK is no longer part of the EU (and therefore outside the scope of the Common Agricultural Policy (CAP)), we created two survey versions to reflect the different policy contexts. One set was developed for the EU countries, and another for the UK, with questions adjusted to account for differences in subsidy structures and national policies.

In total, six versions of the survey were developed and translated into the languages of the respective Living Labs:

1. [EU] Full ReForest survey (~1 hour) – translated for all LLs native languages
2. [EU] Short ReForest survey (~15 minutes) – translated for all LLs native languages
3. [EU] Short anonymous survey (~15 minutes) – translated for all LLs native languages
4. [UK] Full ReForest survey (~45 minutes)
5. [UK] Short ReForest survey (~15 minutes)
6. [UK] Short anonymous survey (~15 minutes)

### 5.2 BARRIER ANALYSIS

A key element of the survey was a dedicated Barrier Analysis section, designed to capture the most pressing challenges faced by AF practitioners. This section asked respondents to rank the relative importance of different barriers, focusing on both agroforestry implementation and the integration of robust MRV systems. Respondents were asked to rate the importance of each barrier on a scale from 0 to 5, where 0 means "I don't know"; 1 = "Not important"; 2 = "Low importance"; 3 = "Somewhat important"; 4 = "Fairly important"; and 5 "Crucial".

**Table 10** presents the aggregated rankings of agroforestry (AF) and monitoring, reporting, and verification (MRV) barriers, based on responses from the full sample of 38 farmers across the EU and the UK. Results are shown as both weighted averages (W. Average) and simple country averages (Average).

Ranked - whole sample (ranked)		
AF Barrier	W. Average	Average
Subsidy Misalignment	4,16	3,69
Lack of supportive regulatory and policy framework at the national level	4,06	2,81
Lack of access to suitable funding options	3,96	3,30
Absence of standardized environment impact measurement framework (MRV)	3,83	3,44
Income Instability	3,68	3,92
Lack of Market Access for Agroforestry Products	3,60	2,50
High costs of borrowing	3,38	3,98
Lack of advisory services	3,27	3,47
High risk and long timelines required for agroforestry to become profitable	3,21	3,22
Lack of Agroforestry-Specific Implementation Knowledge or Skills	3,04	3,65
Lack of Strong Agroforestry Support Network or Community	2,89	3,10
Insufficient insurance offers	2,61	4,16
Extreme events due to Climate Change	2,58	4,27
MRV Barrier	W. Average	Average
High costs of MRV	4,39	3,71
Insufficient knowledge or expertise	3,90	4,50
Time constraints	3,86	3,98
Lack of tools or equipment	3,74	3,87
Difficulty accessing data	3,50	3,90

**\*Table 10:** Barriers to agroforestry adoption and MRV implementation (whole sample). Source: own elaboration

For agroforestry barriers, the top-ranked challenges were: (1) subsidy misalignment; (2) lack of supportive regulatory and policy frameworks; and (3) limited access to suitable funding options. In the MRV barrier category, the highest-ranked issues were the high costs of monitoring, insufficient technical expertise, and time constraints.

In addition to this whole-sample overview, a more detailed breakdown is available by country and cohorts. **Table 11** allows us to explore barrier rankings across nine specific groups, including: EU, UK, ReForest, AF, NON-AF farmers; as well as FIRST, EARLY, MID and LATE adopters.

Per Cohort									
AF Barrier	EU	UK	ReForest	AF_yes	AF_no	First	Early	Mid	Late
Absence of a standardised environment impact measurement framework (MRV)	3,86	3,89	3,25	3,33	4,36	3,50	3,67	4,29	3,67
Extreme events due to Climate Change	2,55	2,38	3,50	2,13	2,70	5,00	3,00	2,29	2,00
High costs of borrowing	3,41	3,11	3,00	3,00	3,80	2,50	4,33	3,57	2,83
High risk and long timelines are required for agroforestry to become profitable	3,58	2,22	4,00	3,40	3,58	4,00	3,75	3,86	3,00
Income Instability	3,91	3,11	4,75	3,50	4,18	4,50	4,00	4,57	3,17



Insufficient insurance offers	2,71	2,89	2,00	2,63	2,92	5,00	3,00	2,57	2,67
Lack of access to suitable funding options	3,77	4,00	4,50	3,78	3,64	3,00	3,50	4,14	3,33
Lack of advisory services	2,95	3,33	4,50	3,25	2,50	2,00	2,00	3,00	3,00
Lack of Agroforestry-Specific Implementation Knowledge or Skills	3,04	3,11	4,00	2,80	3,27	4,00	3,00	2,71	3,33
Lack of Market Access for Agroforestry Products	3,73	3,13	4,00	3,88	3,92	5,00	4,50	3,57	3,67
Lack of Strong Agroforestry Support Network or Community	2,86	2,67	4,25	2,67	3,09	3,00	3,25	2,71	3,00
Lack of supportive regulatory and policy framework at the national level	3,91	4,00	4,75	4,11	3,55	4,50	3,25	3,83	3,67
Subsidy Misalignment	4,28	3,22	5,00	4,57	4,09	4,00	4,33	4,33	4,17

MRV Barrier	EU	UK	ReForest	AF_yes	AF_no	First	Early	Mid	Late
Difficulty accessing data	3,45	3,00	3,38	3,71	3,36	5,00	3,75	2,80	3,50
High costs of MRV	4,23	5,00	4,50	4,50	3,91	4,67	3,50	4,50	4,20
Insufficient knowledge or expertise	3,83	4,25	4,00	4,27	3,55	5,00	3,25	3,29	4,20
Lack of tools or equipment	3,87	4,00	3,88	4,18	3,45	4,33	3,50	4,00	3,83
Time constraints	3,79	4,25	4,00	4,55	3,00	4,67	3,75	3,14	3,80

**\*Table 11:** Barriers to agroforestry adoption and MRV implementation by cohort. Appropriate Governance Body.

Data is presented by geographic context (EU, UK, ReForest, Living Labs), agroforestry adoption status (AF\_yes, AF\_no), and timing of adoption (First adopters: pre-1995; Early adopters: 2006–2010; Mid adopters: 2017–2019; Late adopters: 2021–2023). Values represent average barrier scores as reported by respondents, reflecting perceived challenges in financing, policy, market access, technical support, and MRV processes.

This cohort approach reveals how barriers shift depending on a farm’s experience, region, and exposure to agroforestry policies. For example, early adopters expressed greater concern about market access for AF products than later adopters. This could indicate that their systems have matured and are now facing commercial integration challenges, whereas newer adopters may still be in the early stages of implementation, where market dynamics are less relevant.

Moreover, early adopters also showed higher concern about climate-related risks and limited data access. Their longer involvement with agroforestry may indicate that these farmers are more sensitive to the effects of climate variability and the difficulties of operating without reliable environmental data. Late adopters, on the other hand, rated these issues as less critical, possibly because they had shorter operational timelines or less exposure to long-term system impacts.

In terms of regional differences, UK farmers operating outside the Common Agricultural Policy (CAP) reported higher MRV costs and less access to financial assistance. This may indicate structural differences in funding mechanisms and support infrastructure, but the specific drivers are unknown and would benefit from additional research and discussion.

There are also significant differences between farmers who already practice agroforestry (“AF\_yes”) and those who do not (“AF\_no”). Farmers who are not yet involved in agroforestry rated most barriers higher, particularly those related to funding, income stability, and policy support.



This suggests that the challenges of getting started may seem more difficult than those encountered once a system is in place.

Farmers who already practice agroforestry, on the other hand, reported lower levels of concern in many areas, suggesting that some barriers become easier to manage with experience. It could also indicate improved access to support or information. These differences highlight the need for more targeted assistance for new or potential adopters, particularly in lowering financial and information barriers.

### 5.3 COUNTRY LEVEL – CASE STUDY ANALYSIS

To better understand how agroforestry adoption and financial barriers differ across Europe, survey responses were disaggregated by country. The following case studies focus on five countries with sufficient survey data: Bulgaria, Czechia, Germany, Hungary, and the United Kingdom. Each profile is structured around key themes from the ReForest survey, including funding sources, risk perception, policy alignment, and advisory support.

It is important to acknowledge, however, that the survey sample did not capture sufficient responses from three ReForest countries (Denmark, Belgium, and Spain) due to limitations in collaboration and a lack of established local networks during the data collection period.

**Table 12** provides a snapshot of respondent profiles by country, including *average farm size, year of establishment, current engagement with agroforestry (AF), and access to advisory services*. The table also shows whether farmers expressed interest in adopting AF in the future, in case they are not currently doing so. The last column shows an average for the whole sample.

	Bulgaria	Czechia	Germany	Hungary	UK	W. Average
Responses	10	5	11	3	9	<b>38</b>
Avg Farm Size in (Ha)	93	203	36	11	148	<b>97</b>
Date of Establishment	2014	2007	2008	2014	1993	<b>2006</b>
AF_yes	0%	100%	82%	100%	89%	<b>66%</b>
AF_Date of Establishment		2012	2019	2015	2015	<b>2016</b>
Want to become AF in the future?	30%		100%		100%	<b>60%</b>
Current Financing Scheme enough?	20%	40%	36%	0%	33%	<b>29%</b>
Access to Private Sector	40%	40%	82%	0%	0%	<b>39%</b>
Access to Advisory Services	50%	60%	82%	67%	33%	<b>58%</b>

**\*Table 12:** Case Study – Country Level Statistics Snapshot. Source: own elaboration.

#### 5.3.1 Key Systemic Gaps

The results of the WP5 survey highlight three critical systemic gaps that continue to hinder the widespread adoption of agroforestry (last three rows marked in red in Table 12).

##### 1. Respondents are not satisfied with their current finances

Only 30% of respondents across the full sample stated that their current financing scheme is sufficient to cover and maintain all agroforestry activities.

- Bulgaria and Hungary fall below this average, with only 20 per cent and 0 per cent of farmers, respectively, reporting sufficient funding.

- The UK aligns closely with the average, at 33 per cent.
- Germany (36 per cent) and Czechia (40 per cent) are slightly above the average, although still low.

## 2. Farmers are not fully connected with private, banking and philanthropic finance

Less than 40% of farmers reported receiving support from private sources, which include traditional banks, development banks, informal loans, or mechanisms like green bonds and ESG investments.

- Germany stands out, with 82% of farms engaging with private finance, well above the average.
- Bulgaria and Czechia are close to the average at 40%.
- In contrast, Hungary and the UK report no private sector involvement, signalling a complete lack of market linkage or access to non-public financing mechanisms.

## 3. Respondents are not completely integrated to advisory services

Across the sample, only 58% of farmers reported having any form of advisory support related to agroforestry.

- Germany (82% ranks highest and performs well above the average.
- Hungary (67%) and Czechia (60%) are also above average.
- Bulgaria (50%) is slightly below, while the UK (33%) has the lowest advisory engagement

To round up the country-level analysis, **Table 13** presents the average scores for agroforestry- and MRV-specific barriers, for Bulgaria, Czechia, Hungary and the UK.

Per Country					
AF Barrier	Bulgaria	Czechia	Germany	Hungary	UK
Absence of standardized environment impact measurement framework (MRV)	4,22	2,25	4,11	4,00	3,89
Extreme events due to Climate Change	2,44	4,25	2,00	3,00	2,38
High costs of borrowing	3,78	3,60	3,33	2,67	3,11
High risk and long timelines required for agroforestry to become profitable	3,80	3,60	2,90	4,67	2,22
Income Instability	4,20	4,60	3,00	4,67	3,11
Insufficient insurance offers	2,90	2,25	2,44	2,00	2,89
Lack of access to suitable funding options	3,50	3,75	4,33	4,33	4,00
Lack of advisory services	2,56	3,33	3,44	4,67	3,33
Lack of Agroforestry-Specific Implementation Knowledge or Skills	3,20	2,00	2,78	5,00	3,11
Lack of Market Access for Agroforestry Products	3,70	2,75	4,00	4,67	3,13
Lack of Strong Agroforestry Support Network or Community	3,00	2,50	2,67	4,67	2,67
Lack of supportive regulatory and policy framework at the national level	3,70	3,75	4,33	5,00	4,00
Subsidy Misalignment	4,00	4,38	4,75	5,00	3,22
MRV Barrier	Bulgaria	Czechia	Germany	Hungary	UK
Difficulty accessing data	3,11	3,50	3,56	5,00	3,38

High costs of MRV	3,78	4,67	4,55	5,00	4,50
Insufficient knowledge or expertise	3,33	3,20	4,36	5,00	4,00
Lack of tools or equipment	3,30	3,25	3,91	5,00	3,88
Time constraints	2,78	4,20	4,55	4,00	4,00

**\*Table 13:** Barriers to agroforestry adoption and MRV implementation by country. Source: own elaboration

Country-level results from the full (38 observations) sample highlight the top concerns in each national context, ranging from subsidy misalignment and policy uncertainty to high MRV costs and lack of technical expertise. This is valuable material not only for the rest of this report, but also to feed upcoming policy recommendations (D5.6) studies.

### 5.3.2 Key Insights from External Farms

The following sub-section presents case-specific insights based on survey responses from the sample of **farms that are not affiliated with Reforest Living Labs** (32 observations).

It is important to note that these results are based on a limited number of responses per country. While not statistically representative, they still offer useful qualitative insights and hints into regional trends and farmer perspective, and to inspire future research.

The responses analysed in this section come from **external farmers** based in Bulgaria, Czechia, Germany, and the United Kingdom, made possible through the valuable collaboration of ReForest partners and their local networks, especially colleagues from Trakia University, Czech University of Life Sciences (CZU), the University of Bonn, the Organic Research Centre, and the University of Reading.

#### Case Study: Bulgaria

The Bulgarian agroforestry sector, as represented in the ReForest survey, is primarily characterised by external farms that are not yet engaged in agroforestry practices (still, 30% of the respondents expressed interest in adopting agroforestry in the future). The sample consists of 10 farms with an average size of 93 hectares. Most of these farms were established in 2014, and 50% of them reported having access to advisory services, suggesting that there is some level of support available.

#### Access to Public and Private Funding

Access to private financing remains limited. Only one farm reported working with a development or specialized bank, and none had received funding through private-sector mechanisms such as green bonds, ESG-aligned investment, or impact finance.

Instead, most rely on public sources, primarily CAP subsidies and state grants. Of those receiving CAP support:

- 7/10 farms were eligible for Pillar 1 (EAGF) direct payments
- 4/10 farms were eligible for Pillar 2 (EAFRD) measures
- Only 3/10 farms felt that CAP funding was sufficient for their needs

Additionally, half the farms reported loan repayment ratios below 10% of their income, suggesting a cautious borrowing profile. However, none reported being behind on loan payments, indicating relatively stable financial management.

### **Perception of Barriers and Risks**

Despite participation in public funding schemes, most farmers perceive current support as poorly aligned with agroforestry needs. Reported barriers included rigid eligibility conditions, lack of clarity on long-term benefits, and delayed disbursements. Subsidy misalignment received a moderately high average score, and concerns about insurance availability were also evident. Only two farms had any crop insurance, and none were familiar with parametric or climate-indexed products.

### **Advisory Support and AF Drivers**

Half of the Bulgarian farms reported access to advisory services, though most noted the lack of agroforestry-specific support. Farmers expressed interest in clearer guidance on system design, funding opportunities, and regulatory compliance. Motivations to adopt agroforestry were mostly linked to environmental goals and land diversification, but uptake remains low due to limited institutional support and weak policy incentives.

### **Case Study: Czechia**

The Czech agroforestry sample includes three external farms, all currently practicing AF. Farm sizes range from 3 to 41 hectares (average 20 ha). Farming systems span from conventional to ecological, with a shared commitment to sustainability. However, expansion remains constrained by land leasing limitations, policy uncertainty, and lack of suitable financial tools.

### **Access to Public and Private Funding**

All farms rely on public support through CAP.

- 3/3 farms receive Pillar 1 (EAGF) direct payments
- 2/3 are eligible for Pillar 2 (EAFRD) measures
- 1/3 farm accesses multiple CAP instruments, including eco-schemes and CIS
- None reported funding from private sources (e.g. ESG funds, green bonds).
- One farm used an informal loan; others have low borrowing rates (loan repayments <10% of income).
- No farms are behind on payments.
- Only one considers current public schemes sufficient for AF development.

### **Perception of Barriers and Risks**

Subsidy misalignment was a key concern, especially regarding restrictions on tree planting on leased land. Climate risk, income instability, and long AF payback periods also rated high. Insurance coverage is limited; only one farm has full coverage, while none are familiar with parametric insurance. All farms conduct informal environmental monitoring but lack access to MRV tools. Time, cost, and equipment constraints scored high. No farms spend income on formal MRV systems.

### **Advisory Support and AF Drivers**

Two farms report access to advisory services. All respondents expressed willingness to collaborate with other agroforestry stakeholders. Their motivation to pursue agroforestry is primarily internal, driven by values such as land stewardship, heritage preservation, and ecological restoration, rather than by financial or policy incentives.

### **Case Study: Germany**

We have received 10 German responses, ranging from small plots to 120 hectares, with an average farm size of 25 ha. These farms implement various agroforestry practices, including permaculture, ecological farming, and integrated systems. The farms were established between 2019 and 2023, with most adopting agroforestry soon after their start. The sample brings a mix of owned and leased land, with emphasis on biodiversity, reduced input costs, and sustainable practices.

### **Access to Public and Private Funding**

All 10 farms rely on public CAP support.

- 7/10 benefit from Pillar 1 (EAGF) direct payments, and four receive funding from Pillar 2 (EAFRD).
- Several farms also participate in eco-schemes, and one farm benefits from the Complementary Redistributive Income Support for Sustainability (CRISS).
- Despite the importance of CAP support, only two farms consider it sufficient for their agroforestry needs.

Private finance options are limited.

- 3/10 farms have secured philanthropic funding, and one used a family loan.
- None have engaged with green bonds or commercial agroforestry loans.
- Loan repayments are manageable, with most farms dedicating under 10% of income to servicing debt. However, one farm faces higher repayment pressure.

### **Perception of Barriers and Risks**

Farmers rate agroforestry's risk-return profile relatively high, citing upfront costs, long timelines for returns, and difficulty integrating agroforestry with CAP payments. Climate risks and income instability are also major concerns. Only three farms have adequate insurance coverage (crop or liability insurance). Environmental monitoring remains informal, and most farms lack access to standardised MRV tools.

### **Advisory Support and AF Drivers**

Most German farms (82 per cent) reported access to advisory services, making it one of the strongest-performing countries in this area. However, farmers noted that the support is often general and not specific to AF. Adoption is mainly driven by ecological goals such as biodiversity, soil health, and land stewardship. German farmers called for simpler grant procedures, clearer policy definitions of agroforestry, more flexible design standards, and better coordination with conservation authorities to support long-term system maintenance.

### **Case Study: UK**

The UK sample is composed of 10 farms, most (9/10) already engaged in agroforestry (AF), varying in size from 10 to 800 hectares and AF practices established between 1992 and 2023. The sample includes a mix of conventional, organic, and transitioning operations.

### **Access to Public and Private Funding**

All surveyed farms rely heavily on public funding, including schemes such as the Sustainable Farming Incentive (SFI), Countryside Stewardship (CS), and Environmental Stewardship (ESS HLS). However, only a third of the farms reported that their current schemes is sufficient to cover agroforestry needs. Access to private sector finance remains limited: none of the respondents reported engagement with green bonds, ESG investors, or specialized agroforestry loans. Loan repayment rates are low, with most farms dedicating under 5 percent of income to debt servicing.

### **Perception of Barriers and Risks**

UK farmers identified major barriers related to policy, finance, and technical capacity. The lack of supportive regulation and limited funding access were the most critical ones. On the technical side, the high cost of MRV, along with insufficient expertise and lack of tools, limits UK farmers' participation in environmental markets.

### **Advisory Support and AF Drivers**

Again, around a third of UK respondents reported access to agroforestry-specific advisory support. This lack of tailored guidance limits effective planning and monitoring. UK farmers called for clearer policy definitions, more flexible funding criteria, and support adapted to diverse landscapes. There is strong interest in better MRV tools, stakeholder collaboration, and linking payments to measurable environmental outcomes.

### **5.3.3 Key Insights from ReForest Farms**

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This section looks specifically at the sample of six **ReForest farms** that have participated in the Survey. Results are presented below as trends given the small sample size, and follow the original structure of the survey's guidelines, covering topics such as farm ownership and financing models; barriers to adoption; access to public and private funding; advisory services; MRV implementation; and feedback on the proposed Scheme.

#### **Farm Ownership, Structure, and Financial Flexibility**

All ReForest Living Lab farms are owner-operated, allowing for flexibility in long-term decision-making, but they vary widely in size and capacity, from very small to large-scale operations. This diversity shapes their financial realities: smaller farms often struggle with high upfront costs and administrative burdens, while larger ones face complexity in aligning agroforestry with subsidy rules and land management structures. Despite these differences, all respondents agreed that current funding schemes are poorly matched to the long-term phased nature of AF. They called for more flexible financial tools that account for delayed returns, ongoing maintenance, and the holistic value of tree-based systems.

#### **Perceptions of Barriers to Agroforestry Implementation**

The most pressing barriers mentioned by ReForest farmers are institutional and structural ones. The highest-rated concerns were on subsidy misalignment, lack of a supportive policy framework, and income instability. In parallel, respondents cited limited access to markets for agroforestry products and a lack of agroforestry-specific technical knowledge as key obstacles to scaling their systems. While access to capital and credit were not the most severe constraint, respondents stressed that without policy clarity, stable income streams, and better-targeted support, long-term planning and investment in AF remain extremely difficult.

#### **Financial Support and Subsidy Preferences**

Respondents also expressed strong concerns about the administrative complexity of existing subsidy frameworks. Many reported difficulties navigating eligibility criteria and compliance requirements under CAP Pillar 1 and Pillar 2. Overall, there is a clear call for simpler, more flexible funding models that reflect the unique characteristics of AF systems. Farmers favour long-term payments tied to ecosystem services such as biodiversity enhancement and carbon storage, for example.

#### **Private Sector Involvement and Market Access**

The lack of access to the private sector in financing agroforestry is noticeable, with many farmers reporting challenges in accessing markets for AF linked products. This limits the ability to secure market-driven revenue from AF systems. Farmers generally perceive the private sector as an important potential partner but highlight the need for better market integration, clearer market access pathways, and incentives for private companies to invest in AF. Nevertheless, there is a growing interest in private sector engagement, particularly through mechanisms like carbon markets, biodiversity credits, and agri-food contracts, but barriers to entry remain significant for them.

### **Advisory Services and Capacity Building Needs**

Access to specialized advisory support remains a critical gap. Most ReForest farmers indicated that existing services are not adequate to their specific practices, leaving them without guidance on system design, financing options, or regulatory compliance.

### **MRV and Access to Capital Challenges**

MRV systems were widely acknowledged as essential for accessing ecosystem service payments, but current tools and protocols were often seen as too complex, costly, or inaccessible to implement effectively at the farm level. ReForest respondents also noted that current public support mechanisms remain poorly aligned with the capital demands and timeframes required for agroforestry systems to become viable.

### **Farmer Collaboration and Knowledge Sharing**

A key trend emerging from the surveys is the strong desire among farmers to collaborate with other stakeholders, including research institutions, universities, and fellow farmers. Knowledge sharing is seen as vital to overcoming the barriers to AF implementation, and many farmers are interested in participating more in networks or platforms that facilitate peer learning and collaboration.

### **Farmer Feedback on Financing Scheme Design and Additional Needs**

Across the ReForest Living Labs sample, farmers expressed frustration with the complexity, rigidity, and administrative burden of existing funding systems, particularly under the CAP. Key concerns included unclear eligibility rules, excessive paperwork, and insufficient advisory support. Legal and policy frameworks were also seen as poorly aligned with the long-duration nature of tree-based systems.

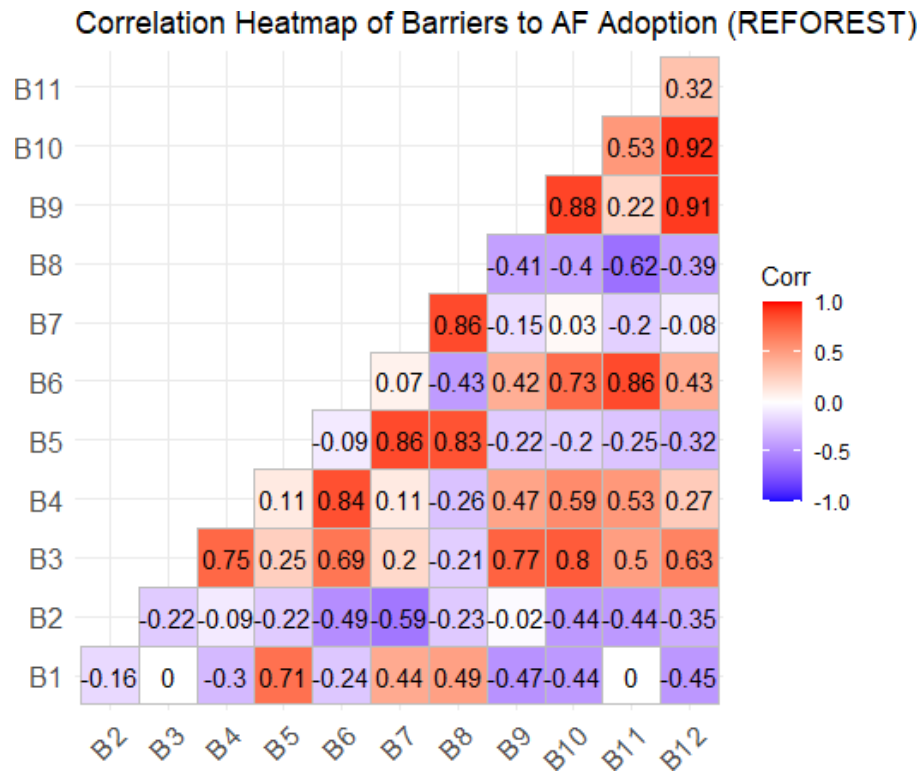
Moreover, as feedback to the proposed scheme, respondents tend to welcome the idea of result-based payments but stressed that MRV systems must be transparent, user-friendly, and fair. Poorly designed methodologies risk exclusion or misrepresentation of farm contributions. Survey results confirmed that current financing models and support structures are misaligned with the multi-functional, long-term character of agroforestry. To scale adoption, farmers advocated for integrated solutions combining simplified funding, regional advisory services, improved market access, and greater involvement of private finance, supported by peer networks and practical cooperative learning.

## **5.3.4 AF Barriers Correlations by Sample**

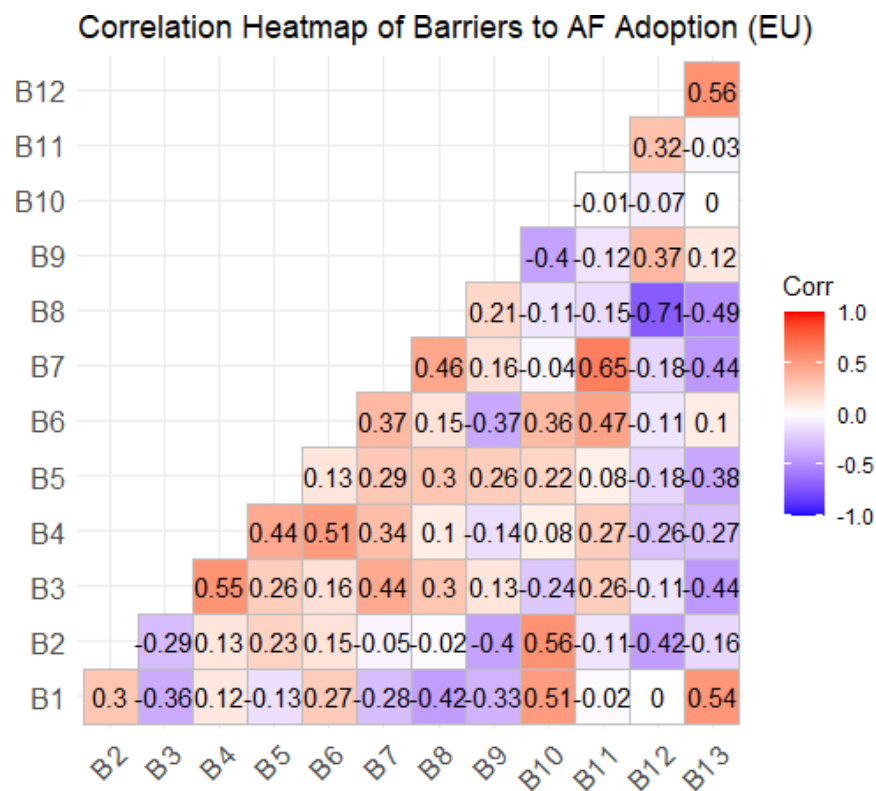
This sub-section presents a comparative analysis of the correlations between barriers to agroforestry adoption across the ReForest, EU, and UK samples, as shown by Figures 2,3 and 4. The same could have been done to MRV barriers, but as they account for fewer options for respondents to assign, we decided to compute just those related to AF.

This heatmap correlation analysis was carried out in R using Pearson's coefficient to explore how key agroforestry barriers (B1–B13) relate to one another. Separate correlation matrices were produced for the ReForest, EU, and UK datasets. The results were visualised using the *ggcorrplot* package, which highlights both the strength and direction of relationships in an intuitive heatmap format. This approach helps uncover clusters of interconnected challenges that tend to appear together and vary across different regional contexts.



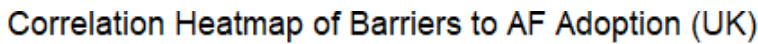


**Fig 2.** Correlation Heatmap of AF Barriers (ReForest). Source: own elaboration



**Fig 3.** Correlation Heatmap of AF Barriers (EU). Source: own elaboration





**Fig 4.** Correlation Heatmap of AF Barriers (UK). Source: own elaboration

The legend below defines barrier codes (B1–B13) used in the data analysis of agroforestry adoption constraints. Each label corresponds to a key challenge identified through stakeholder surveys and interviews across the ReForest countries, and it was used for simplification and spacing purposes.

- B1: Lack of access to suitable funding options
- B2: High costs of borrowing
- B3: Lack of agroforestry-specific implementation knowledge or skills
- B4: Lack of a strong agroforestry support network or community
- B5: Income instability
- B6: Lack of market access for agroforestry products
- B7: Insufficient insurance offers
- B8: Extreme events due to climate change
- B9: High risk and long timelines required for agroforestry to become profitable
- B10: Absence of standardised environmental impact measurement framework (MRV)
- B11: Lack of advisory services
- B12: Lack of a supportive regulatory and policy framework at the national level
- B13: Subsidy misalignment

**Table 14** summarizes the key correlation values and provides interpretations for each dataset.

Sample	Key Correlations	Interpretation
ReForest	<p>B10-B12 (0.92) B9-B12 (0.91) B9-B10 (0.88)</p> <p>B5-B7 (0.86) B5-B8 (0.83)</p>	<p>The ReForest sample shows a strong correlation of structural barriers. Policy gaps (B12), MRV challenges (B10), and Perceptions of Risk and Long Timelines (B9) are tightly linked. These findings reflect a case of potential coordination failure, where fragmented governance and ambiguous compliance rules increase risk perception, delay returns, and inhibit farmer participation.</p> <p>Financial barriers like income instability (B5), insurance gaps (B7), and vulnerability to climate risks (B8), form another high-correlation cluster, indicating that financial insecurity is linked to risk exposure and a lack of insurance coverage. This mirrors typical features of incomplete rural insurance markets, where covariate risks (like droughts or floods) are not insurable through private mechanisms alone. In such settings, farmers are more likely to prioritize short-term survival over long-term land-use changes like agroforestry.</p> <p>These patterns support the case for bundled interventions that address institutional clarity, reduce MRV transaction costs, and introduce blended financial tools such as income-stabilization schemes, public-guaranteed insurance, and simplified eco-scheme protocols.</p>
EU	<p>B7-B11 (0.65) B11-B12 (0.56)</p> <p>B10-B1 (0.51) B10-B2 (0.56)</p>	<p>In the broader EU sample, correlations are generally weaker and more varied compared to the ReForest and UK datasets. This can be attributed to the larger sample size and the diversity of national contexts within the EU, which dilute the strength of individual correlations.</p> <p>There are moderate correlations between a lack of advisory services (B11) and both: insurance gaps (B7) and policy gaps (B12), suggesting that where institutional support systems are weak, both policy implementation and risk mitigation mechanisms fail to reach farmers effectively.</p> <p>The relationship between MRV barriers (B10) and both: a lack of funding (B1) and high borrowing costs (B2) indicates technical monitoring issues that affect financial access. Lenders interpret technical uncertainty and monitoring burdens as risk premiums, limiting credit access and increasing the cost of capital for AF projects.</p> <p>Given the institutional diversity across EU Member States, uniform policy levers are unlikely to yield consistent outcomes. Instead, a more targeted approach is needed: one that strengthens advisory ecosystems, enables MRV harmonisation at the national level, and links CAP instruments with credit and insurance products to unlock investment for transition farming systems.</p>

UK	B3-B4 (0.90) B3-B7 (0.92) B4-B7 (0.87)	<p>In the UK, a concentrated barrier cluster centers on knowledge gaps (B3), weak support networks (B4), and insurance gaps (B7).</p> <p>This reflects a dense information–risk problem, where the absence of technical knowledge and trusted advisory channels impedes the adoption of financial risk management tools.</p> <p>Unlike in the EU sample, the issue in the UK appears less related to product availability and more to uptake failure. Insurance and financial products may exist, but farmers without embedded networks or quality advice perceive them as inaccessible or irrelevant. This underscores the role of social capital and peer learning in enabling effective risk transfer and long-term investment decisions.</p> <p>Policy interventions in the UK should therefore focus on integrated solutions that combine advisory support, community-based extension, and co-developed insurance schemes.</p>
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**Table14.** Key Barrier Correlations by Sample. Source: own elaboration

These patterns reveal how farmers experience interconnected challenges, with certain barriers reinforcing each other. The strong correlations between policy uncertainty, technical complexity, and financial vulnerability underscore the need for systemic solutions that go beyond single-issue interventions. Addressing only one barrier in isolation will likely prove to be insufficient in unlocking agroforestry’s full potential. Instead, targeted, integrated approaches are required, combining policy reform, risk management instruments, and robust support systems to dismantle structural constraints and create an enabling environment for widespread agroforestry adoption.

## 5.4 INTERVIEWS

To complement survey findings and gain deeper insight into farmers’ perspectives, structured interviews with six agroforestry practitioners across the ReForest Living Labs were conducted. The aim of these interviews was to understand in more detail how farmers perceive ecosystem service payments, what kind of financial mechanisms are feasible in practice, and how the proposed scheme aligns with their realities.

The interviews were designed around three areas:

- **Context, Expectations, and Awareness:** Farmers were asked about their previous exposure to ecosystem service payment schemes, current contributions to socio-environmental impact, and their perspectives on which financial incentives have been most effective or promising for supporting agroforestry
- **Farmers’ Perceptions on ReForest Sustainable Financing Scheme:** The interviews introduced the structure and rationale behind the proposed scheme (see Chapter 2), with farmers providing feedback on the scheme’s three pillars.
- **Financial Conditions and Economic Valuation:** Farmers described how they currently manage farm finances and value the economic benefits of ecosystem services, and how agroforestry is integrated into their overall business models and planning.

The interviews followed a flexible format, combining closed and open-ended questions to allow for both structured comparison and deeper qualitative insight. Farmers were encouraged to share concrete

experiences, challenges, and suggestions for improving financing mechanisms. Interviews were conducted in local languages, when possible, lasted around 30 minutes, and were recorded, with informed consent, to ensure accuracy and confidentiality.

Special attention was given to adapting the language to avoid technical jargon. Concepts like “ex-ante payments” and “results-based finance”, for example, were explained into farmer-friendly terms to ensure clarity and relevance. The interview guideline also emphasized simplicity and allowed room for participants to reflect on barriers, policy conditions, and long-term needs. The findings will directly inform the refinement of the scheme and future policy recommendations.

The interview process was embedded within ReForests’ broader co-creation methodology. Living Labs in Bulgaria, Czechia, and Hungary helped with stakeholder engagement and took part of WP 5 webinars and bilateral meetings. More specifically, partners from Trakia University, University of Sopron, Organic Research Center (ORC) and Czech University of Life Sciences Prague (CZU) provided interdisciplinary inputs to refine interviews’ guideline and interpret preliminary results.

## WP 5 Interviews - Main Findings

Data was collected through six in-depth interviews conducted in three countries: **Bulgaria (1), Czechia (2), Hungary (2), and England (1)**. The responses were structured in alignment with the thematic pillars and transcribed in English. It is important to note again that, given the exploratory nature of the sample, findings are not statistically representative but can still offer rich qualitative depth that highlights the heterogeneity of AF in Europe.

### Bulgaria

In Bulgaria, a mountainous and ecologically certified farm emphasised the importance of community development and biodiversity protection and called for more accessible and region-specific agri-environmental payments: *“agri-environmental payments should be more accessible and tailored to the specifics of individual regions, altitude, soils, and climatic conditions”*. This confirms a common concern that current funding mechanisms frequently fail to account for the realities of diverse landscapes and farming systems. While state advisory services were available, they were described as having limited scope and practical value.

State advisory services were available but perceived to be insufficient, while the five-year project timeline was too short to yield meaningful results. The farmer also emphasised the importance of stronger local markets and producer-led supply chains, stating that *“the market is quite difficult. It is oversaturated with imported goods. We need markets administered by the producers themselves and a policy for using Bulgarian farm food.”*

### Czechia

The two Czech farms represented different agroforestry business models: one centred on environmental restoration and education, while the other emphasised market-oriented production through direct sales and organic certification. Despite their differences, both farmers agreed that upfront payments were critical to facilitating adoption.

Yet, they expressed serious concerns about the short timeframes often associated with funding, claiming that a five-year window is insufficient to support ecological benefits or meaningful economic returns. One farmer expressed his frustration as follows: *“I fear that some farmers could abuse this short period, planting trees solely to obtain subsidies and then cutting them down after five years. This would defeat the purpose.”*

There was strong support for result-based payments, but farmers consistently emphasised the need for simple and practical indicators over complex environmental analytics. As one farmer put it: *“As farmers, we are practical people. We want clear results. Either the potatoes grew, or they didn’t. We don’t want to deal with complex analyses, such as examining trace elements or ions”*. This sentiment emphasises the tension between ambitious monitoring frameworks and the realities of farm-level implementation. Moreover, both farms emphasised the importance of high-quality advisory services, as one of them stated: *“Farmers need competent advisors who can help them plan and implement agroforestry projects, and show them the economic benefits.”*

### Hungary

In Hungary, both respondents emphasised the negative effects of policy uncertainty and strict land classification rules, which have discouraged long-term agroforestry investments. According to one farmer, *“the short-term subsidy logic leads to tree removal after the five-year maintenance period.”*

While Hungarian farmers supported result-based payments, they also preferred simple and practical metrics like tree vitality or basic biodiversity observations over complex technical MRV requirements. One farmer described the long-time horizons involved: *“The fruit trees in agroforestry systems generally don’t produce meaningful yields at five years. For some crops, it takes 10 to 15 years to see real benefits,”* - emphasising the importance of financing schemes that are consistent with agroforestry's long-term cycles.

Both farmers stressed the importance of knowledge exchange and peer learning as critical enablers of agroforestry adoption, as one put it: *“Farmers have little or no knowledge of agroforestry technology, and it would be good to make them aware of it, through exchange of ideas, farm visits, and help choosing the right species for their land.”* This call for practical, hands-on learning reinforces the value of farmer-to-farmer networks and locally relevant advisory services.

### England

The UK interview was conducted with a practitioner managing a university-affiliated mixed farm with arable, livestock, and agroforestry components. Despite being involved in the SFI (Sustainable Farming Incentive) design process, the farm was excluded from agroforestry support due to stem density thresholds. *“We did that on a commercial basis, we weren’t eligible”*, the farmer noted, highlighting how rigid eligibility rules disincentivise innovative models that exceed scheme design.

The farmer ranked upfront and action-based payments as five out of five in importance, critical to reducing the high setup costs of trees, fencing, and management. It was warned that poor initial planning could *“leave you with 30 years of a mess to look at”*. While the farmer agreed that five years was enough to establish the system, it was not enough for return on investment: *“You’re going to be looking for sort of 15 plus, especially for tree-based systems”*.

This UK farmer was cautiously supportive of results-based payments, on the condition that metrics are flexible, transparent, and within farmers’ control. *“If the measurables are things I know I can achieve, then I’d be happy”*. However, the farmer criticised metrics that penalise farmers for externalities like weather, wildlife variability, or regional biodiversity baselines – and proposed a “basket” of measurable outcomes (e.g., flower margins, pollinator activity, reduced pesticide use), allowing farms to demonstrate benefit without excessive complexity.

On advisory services, the farmer pointed to a lack of practical agronomic knowledge on integrating crops and livestock beneath trees: *“Everyone’s focusing on the trees. No one is thinking about the crop or the livestock underneath”* and continued: *“...less than 1% of agronomists in the UK have experience with*

agroforestry”. Collaborations with ORC and the Woodland Trust were mentioned as useful but informal, and he called for more structured, integrated farm-level support across the UK.

In terms of financial monitoring and ecosystem services valuation, the farmer advocated for better tracking systems that could distinguish agroforestry contributions to yield and environmental benefits: “Total factor productivity doesn’t measure environmental value... so I try to evaluate by savings in herbicides and fungicides, or increased crop yield.” Finally, the interviewer was especially enthusiastic about market-linked approaches, such as selling grain with reduced carbon content through schemes like LENS (Landscape Enterprise Network): *“If I can sell my wheat off the farm at less carbon attached to it, then that’s great. That’s quite exciting”*.

Taking all interview inputs into consideration, table 15 compiles ten main takeaways.

<b>Duration Matters</b>	Across all countries, the five-year prototype was criticized as insufficient to fully realize most ecosystem benefits. Farmers emphasized the importance of a long-term funding scheme (ideally 10 to 15 years) with goals suited to specific crop types and land use objectives.
<b>Balancing Establishment and Maintenance</b>	Current funding frameworks prioritize start-up costs without addressing ongoing management. A successful scheme is expected to strike a balance between initial investment and long-term maintenance payments to ensure that agroforestry systems are viable after the subsidy period.
<b>Simplifying MRV and Result-Based Payments</b>	Farmers are open to results-based payments, but they insist that monitoring systems be practical, accessible, and cost-effective. Metrics should focus on intuitive indicators like canopy cover, tree health, or water retention, for example, rather than overly scientific approaches.
<b>Addressing Advisory Gaps</b>	All farmers reported a lack of region-specific agroforestry advisory services. They asked for help with species selection, spatial design, and navigating administrative requirements.
<b>Improving Market Access and Certification</b>	Farmers identified a lack of dedicated labels, certification schemes, and consumer awareness as major barriers to agroforestry's economic sustainability. They advocated for Fair Trade or organic certifications, as well as investments in marketing infrastructure to connect farmers to premium markets, for example.
<b>Aligning Policies and Land Use Rules</b>	Land eligibility rules, such as Hungary's MEPAR system, can conflict with agroforestry spatial requirements. To scale effectively, financing schemes must be in line with national land-use policies, CAP classification systems, and broader environmental regulations.
<b>Building Trust and Stability</b>	A common concern was a lack of policy continuity and long-term vision. Farmers emphasised that the ReForest scheme should demonstrate a consistent, long-term commitment to reduce administrative burdens and isolate itself from political cycles in order to foster trust and adoption.
<b>Integrate Agroforestry into Whole-Farm Planning and Accounting</b>	Several farmers noted that agroforestry is often financially and administratively treated as an add-on rather than a core land use, which hinders both strategic planning and recognition of its environmental benefits. Schemes should support integrated farm-level accounting systems that distinguish agroforestry's economic and ecological contributions and allow tracking of impacts across cropping, livestock, and tree components.
<b>Enable Modular and Flexible Scheme Design:</b>	Rigid scheme criteria (such as stem density thresholds or strict contract durations) were flagged as barriers to inclusion. A more modular approach, where farmers can select and combine scheme components based on their system type and maturity, would better accommodate diversity in agroforestry practices and enable stepwise adoption.
<b>Recognize and Reward Co-Benefits Beyond Carbon</b>	While carbon sequestration is often emphasised, farmers highlighted other ecosystem services like pollinator habitat, pesticide reduction, water quality, and educational outreach. Financing schemes are expected to account for these co-benefits through diversified reward structures that reflect the multi-functional nature of agroforestry

**\*Table 16: Interview Main Take-Aways** Source: own elaboration based on interview insights



## 6. DISCUSSION

The field-level testing of the proposed Financing Scheme provides valuable evidence on how it can be refined to better reflect farmers' realities and accelerate AF adoption across different countries in Europe.

A first key lesson from both surveys and interviews concerns the timeframe of the Scheme. Many farmers across the Living Labs and external network agreed that five years may be too short to capture the real value and returns of agroforestry systems. Since AF systems often require 10 to 15 years to mature, the current duration could end up excluding important benefits that come later in the project cycle. This feedback highlights the need to consider a longer-term or more flexible structure, where additional payments or support mechanisms could continue beyond the initial five years.

While the scheme's inclusion of robust MRV systems is a strength, farmers advocate simplifying these systems to focus on practical, cost-effective and farmer-friendly indicators. Preferred metrics include canopy cover, tree health, water retention and farmer-submitted photographic evidence, as these are considered more practical and cost-effective than complex or highly technical measures, which can impose administrative burdens and hinder adoption. The proposed result-based payment structure, which is based on thresholds and offers scalable incentives, could accommodate these simpler indicators and provide the necessary flexibility.

Another finding refers to the importance of supporting the entire agroforestry project lifecycle, not just the initial setup. While ex-ante and action-based payments are aligned for covering initial costs, many farmers expressed concern about the lack of ongoing support for system maintenance, monitoring, and adaptive management. These later stages are critical for long-term success, but are frequently underfunded by current funding schemes. In this regard, results-based payments were welcomed, though participants emphasised that MRV procedures must be simple, cost-effective, and accessible. This feedback reinforces the opportunity to integrate blended finance as a core element of the refined Scheme, because it is expected to close the existing funding gap by mobilising additional funding streams via private, philanthropic and nature capital, and, in turn, mitigate investors' perceived risks associated with agroforestry projects.

Data also confirmed that institutional and regulatory factors play a major role in shaping the potential for AF uptake. In many countries, like Hungary and Bulgaria, for example, land tenure issues, limited credit access, and the dominance of large-scale agriculture continue to present barriers. Farmers in these regions often face additional challenges, such as short-term leases or limited eligibility for public support schemes. These structural constraints underscore the need for a financing model that remains adaptable and inclusive, with eligibility criteria that accommodate diverse ownership models and farm sizes.

Another critical gap is the lack of access to advisory services. Many farmers consistently called for more practical, region-specific guidance in designing their agroforestry projects. This included support with species selection, navigating funding options, and meeting policy or reporting requirements. In many cases, existing advisory services were found to be fragmented, underfunded, or not tailored to agroforestry. Strengthening these networks is therefore considered essential for building trust and enabling farmers to make informed, confident decisions.

An area where the scheme could also expand its scope is improving market access and certification. Farmers emphasised that the absence of agroforestry-specific certification labels and limited marketing infrastructure hinder their economic viability. Addressing these challenges would require greater



engagement with the demand side, including buyers, retailers, and consumers, as well as broader coordination across the supply chain. Creating dedicated labels, improving logistics, and raising awareness of agroforestry products could help unlock market value and incentivise adoption through stronger price signals and consumer recognition.

Furthermore, research found growing interest in the use of digital tools, especially those that help with system planning, monitoring, and decision-making. While not all farmers currently use them, many expressed interest in platforms that can simplify tasks like visualising system design or tracking environmental indicators. Digital and fintech tools such as *FarmTree* can play a key role in closing this gap. However, to ensure widespread adoption, it is understood that these tools must be affordable, user-friendly, and supported by adequate training or advisory services.

Finally, data revealed strong enthusiasm for collaboration and shared learning, strengthening initiatives like the ReForest Platform. Many farmers valued opportunities to connect with peers through Living Labs, field visits, and co-creation workshops. These formats help reduce uncertainty, promote innovation, and build confidence in agroforestry systems. Looking ahead, peer-based networks should be recognised as essential components of the broader support ecosystem, not only for testing new models but also for scaling agroforestry in practice.

By integrating key lessons from living labs and farmer feedback, the Scheme can be refined to better reflect farmers' specific needs and local conditions, offering a more practical solution to the financial barriers hindering agroforestry adoption across Europe.



## 7. CONCLUSIONS

This report applied and tested the proposed ReForest Sustainable Financing Scheme across a range of agroforestry systems, farm types, and policy environments. The objective was to assess whether the financing model developed in D5.4 could effectively support real-world agroforestry implementation and to identify adjustments that would make it more relevant, inclusive, and practical. Through a combination of policy analysis, secondary data review, stakeholder engagement via surveys and interviews, and farm-level case studies, this work generated detailed insights into current funding gaps, farmer needs, and the broader institutional conditions shaping AF adoption.

Chapter 2 laid out the structure and logic of the Scheme. It combines four key elements: Ex-Ante Payments to address upfront investment costs; Action-Based Payments to reward sustainable practices; Results-Based Payments for long-term outcomes; and continuous Advisory Services as an enabling supporting system. This design reflects the complex and long-term nature of AF projects, and it is intended to make them more financially viable, less risky, and more attractive to a wider range of farmers. In a nutshell, the Scheme aims to provide a conceptual framework that can help make agroforestry economically viable for farmers and recognise the ecosystem services it provides.

Chapter 3 presented the research methodology, which integrated five levels of analysis. These ranged from the EU policy and regulatory environment down to individual farm case studies. Primary data was gathered through surveys with 38 agroforestry practitioners and guided interviews with 6 farms from four countries (Germany, Hungary, Czechia, and the UK). This multi-layered approach allowed the study to link strategic policy insights with operational realities on the ground.

Chapter 4 examined the enabling policy environment and national-level differences across the eight ReForest countries. While agroforestry is increasingly recognised within the EU Green Deal, Farm to Fork Strategy, and climate adaptation agendas, its integration into CAP Strategic Plans remains uneven. In several Member States, the definition of agroforestry is unclear or inconsistently applied. Land ownership structures, regional typologies, and advisory systems also vary widely. These differences create uneven starting points for farmers and influence the feasibility of adopting new financing mechanisms. Farm-level data from Living Labs further demonstrated that agroforestry practitioners operate within diverse contexts, with different system types, ownership models, market access, and technical capacity, requiring financing solutions that are flexible and locally adapted.

Chapter 5 analysed the primary data collected from ReForest-related farms, as well as external ones. Three main support gaps were identified. First, only a minority of respondents had access to financing that fully covered their agroforestry costs. Second, private finance mechanisms such as ESG-linked contracts or carbon credits remained underutilised, mainly due to complexity, lack of information, and perceived risks. Third, advisory services tailored to agroforestry were either missing or fragmented. Despite these challenges, the Scheme's hybrid logic was positively received. Farmers appreciated the combined structure of different payment types and welcomed the inclusion of continuous advisory support. They also emphasised the importance of trust-based relationships, peer learning, and practical tools for system planning and monitoring.

Chapter 6 discussed the lessons learned from applying the Scheme. One recurring insight was the mismatch between the five-year prototype and the long-term nature of agroforestry systems. Respondents called for a financing approach that reflects the full lifecycle of tree-based systems, with options to extend support or introduce longer-term results-based payments. Simplifying MRV procedures and offering practical tools, especially digital platforms that are user-friendly and low-cost, was another area for improvement. The analysis also highlighted the need for regionally adapted

delivery models that reflect national land tenure regimes, farm sizes, and policy implementation frameworks. Finally, it confirmed that advisory services and co-learning environments are not peripheral but central to the successful rollout of any financing scheme.

The interviews and surveys also revealed additional design insights. Rigid eligibility criteria, such as fixed stem densities or uniform parcel configurations, often exclude farmers using more diverse or traditional agroforestry systems. Many called for a more adaptable approach that allows for flexibility based on farm type, system maturity, and local conditions. Farmers also stressed the need to recognize a wider range of ecosystem services beyond carbon, including benefits for biodiversity, water quality, and soil health. These co-benefits are important to them and should be reflected in payment structures.

A final insight concerned the way agroforestry is positioned in farm planning. Several farmers noted that agroforestry is often treated as a side activity, rather than integrated into the core of their operations. To change this, the Scheme should support integrated planning and accounting systems that reflect the full value of trees, crops, and livestock working together.

Taken together, these findings validate the general structure and purpose of the ReForest Sustainable Financing Scheme but point to several critical refinements:

- **Extend the timeframe:** Align support with the longer lifecycles of agroforestry systems by allowing for multi-year or phased implementation beyond the five-year prototype.
- **Support the full project lifecycle:** Financing should extend beyond early investments to cover maintenance, monitoring, and adaptive management.
- **Simplify MRV systems:** Use practical, low-cost tools that draw on existing data sources and digital platforms that farmers can easily access. In this context, the proposed result-based payment structure, which relies on thresholds and offers scalable incentives, can be adapted to reflect the simpler indicators suggested by farmers.
- **Increase flexibility and inclusiveness:** Ensure that eligibility criteria can accommodate a wide range of farm sizes, system types, and land tenure arrangements.
- **Promote digital tools and learning networks:** The scheme should integrate practical digital tools to assist farmers with project planning and implementation, and to help them estimate the performance of agroforestry systems in terms of productivity, profitability, and ecosystem service provision, without adding unnecessary technical complexity.

D5.5 has shown that farmers are ready to engage in agroforestry, but only if the right conditions are in place. These include tailored financing, strong advisory support, accessible planning tools, and opportunities to learn from others in similar situations. The Scheme offers a realistic and forward-looking model that brings these elements together, while allowing room for adaptation based on local needs.

Looking ahead, the next phase will focus on developing targeted policy recommendations and actively communicating the Scheme to key audiences. This includes policymakers, farmers, practitioners, and financial actors, with dissemination through dedicated events, policy briefs, scientific publications, and stakeholder dialogues. The aim is to raise awareness of the Scheme's potential, gather constructive feedback, and support its gradual uptake in relevant funding and advisory frameworks.

Agroforestry offers a practical pathway toward a more resilient and regenerative agricultural landscape for Europe, but real progress depends on continuous investment and strong institutional support. With the right enabling conditions in place, agroforestry can move from niche practice to mainstream solutions, delivering long-term benefits for climate, biodiversity, and rural livelihoods.

## APPENDIX 1: REFERENCES AND RELATED DOCUMENTS

ID	Reference or Related Document	Source or Link/Location
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2	CAP Eco-Schemes in Denmark: European Commission, 2023 CAP factsheet for Denmark	<a href="#">Agriculture and rural development - European Commission</a>
3	Ciaian, P., Kancs, D., Swinnen, J., Van Herck, K., & Vranken, L. (2012). <i>Rental Market Regulations for Agricultural Land in EU Member States and Candidate Countries</i> . CEPS.	<a href="https://core.ac.uk/download/pdf/76799057.pdf">https://core.ac.uk/download/pdf/76799057.pdf</a> Archivo de Integración Europea+2
4	COWI, Ecologic Institute, and IEEP. (2021). <i>Technical Guidance Handbook - Setting up and implementing result-based carbon farming mechanisms in the EU</i> . Report to the European Commission, DG Climate Action, under Contract No.	<a href="https://www.ecologic.eu/sites/default/files/publication/2021/CarbonFarming_Technical_Guidance.pdf">https://www.ecologic.eu/sites/default/files/publication/2021/CarbonFarming_Technical_Guidance.pdf</a>
5	Czech University of Life Sciences Prague – Agroecology and Agroforestry research	<a href="https://www.czu.cz">https://www.czu.cz</a>
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11	EURAF – Czech Republic Country Profile	<a href="https://www.europeanagroforestry.eu/countries/czech-republic">https://www.europeanagroforestry.eu/countries/czech-republic</a>
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### Top 3 Barriers by Country (AF-Specific)

Country	Barrier 1	Barrier 2	Barrier 3
<b>Bulgaria</b>	Lack of MRV (4.22)	Income instability (4.20)	Subsidy misalignment (4.00)
<b>Czechia</b>	Income instability (4.60)	Subsidy misalignment (4.38)	Extreme Climate Shocks (4.25)
<b>Germany</b>	Subsidy misalignment (4.75)	Lack of funding (4.33)	Lack of Policy Support (4.33)
<b>Hungary</b>	Lack of skills (5.00)	Subsidy misalignment (5.00)	Lack of Policy Support (5.00)
<b>UK</b>	Lack of Policy Support (4.00)	Lack of funding (4.00)	Lack of MRV (3.89)

*\*Table 16: Top 3 Barriers by Country (AF Specific). Source: own elaboration*

### Top 3 Barriers by Country (MRV-Specific)

Country	Barrier 1	Barrier 2	Barrier 3
<b>Bulgaria</b>	High costs of MRV (3.78)	Lack of knowledge or expertise (3.33)	Lack of tools or equipment (3.30)
<b>Czechia</b>	High costs of MRV (4.67)	Time constraints (4.20)	Difficulty accessing data (3.50)
<b>Germany</b>	High costs of MRV (4.55)	Time constraints (4.55)	Lack of knowledge or expertise (4.36)
<b>Hungary</b>	High costs of MRV (5.00)	Lack of knowledge or expertise (5.00)	Lack of tools or equipment (5.00)
<b>UK</b>	High costs of MRV (4.50)	Lack of knowledge or expertise (4.00)	Lack of tools or equipment (3.88)

*\*Table 17: Top 3 Barriers by Country (MRV Specific). Source: own elaboration*