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EXECUTIVE SUMMARY

Objective

The current ***Mapping Report on AF Sector Finance and Policy III*** expands on the findings of previous Working Package 5 deliverables (D5.1 and D5.2), by following an in-depth exploration of the evolving policy landscape; updating literature review on agroforestry's (AF's) potential to deliver ecosystem services; and exploring innovative blended financing mechanisms relevant to the sector. It further presents a theoretical comparative cash flow analysis to assess the impact of the *ReForest Sustainable Financing Scheme* on farm-level investment performance, before concluding with key insights on how it may support the long-term adoption of AF systems across Europe.

Background and context

Regional and global policy frameworks continue to have a significant impact on the AF sector. Recent updates to EU and international climate regulations reinforce strong commitments to climate resilience, biodiversity restoration, and food security, opening a clear opportunity for AF to lead the regenerative agrifood transition. However, despite its well-documented co-benefits, AF remains underused in Europe given its financial, technical and institutional barriers.

Public subsidies remain the primary source of AF funding, but alone, they are not sufficient to meet practitioners' specific financial needs. To achieve scalability and long-term adoption, the agroforestry sector must, therefore, integrate innovative funding mechanisms. This means promoting a blended finance approach that combines public funding with private, philanthropic and nature capital, as well as incorporating risk-sharing instruments such as guarantees and insurance. Expanding these financial pathways can reduce dependency on subsidies, reduce investment risks, and unlock new revenue streams for farmers, making agroforestry a self-sustaining and economically attractive land-use model for Europe and beyond.

Main findings

A series of EU climate and regulatory policies has created a more supportive landscape for agroforestry development, as explored in *Chapter 2*. The Common Agricultural Policy (CAP 2023-2027) funds remain a key pull factor in attracting and mobilising AF practitioners through direct payments, eco-schemes, rural development aid, and agri-environmental measures. These instruments align with broader EU frameworks such as LULUCF, the Green Deal, Farm to Fork, the Biodiversity and Forest Strategies for 2030, the Sustainable Finance Taxonomy, and the European Green Bond Standard.

The new Certification Framework for Carbon Removals (CRCF) further supports AF through robust monitoring, verification and reporting (MRV) systems and financial incentives for carbon farming. Complementary developments including: *the Corporate Sustainability Due Diligence Directive (CCSDDD), Strategic Dialogue on the Future of EU Agriculture, the Draghi Report on Competitiveness, the 2025 Competitiveness Compass, and the EU Omnibus Package* signal a strong shift toward agriculture that is driven by innovation and has less administrative load for farmers.

As a promising option to address climate adaptation and mitigation, agroforestry is also attracting more attention in international climate finance discussions. COP29 and COP16 highlighted the importance of carbon markets and potential biodiversity credits, while the EU's leadership in net-zero trade regulation has been influencing potential future demand for AF-linked products. Yet, geopolitical divergence and trade frictions between the EU, US, China, and the Global South appear to pose several challenges to nature capital financing coordination and carbon market standardisation.

To address these challenges and support investment decision-making, a strong evidence-based foundation is required. The literature review on cost-benefit analysis and ecosystem service valuation, conducted in *Chapter 3*, confirms that AF systems can provide long-term financial returns, especially when ecosystem services are adequately monetized. Payments for ecosystem services are increasingly recommended to internalise AF's environmental benefits. In addition, research highlights the importance of investing in robust MRV systems, as well as landscape modelling tools, to enhance credibility, attract finance, and support the integration of agroforestry into performance-based and ESG impact investing.

Chapter 4 builds on this previous analysis by examining how innovative financing mechanisms can be applied to agroforestry. It focuses on blended finance as a strategic approach to close AF funding gaps and improve long-term viability. The chapter links financial concepts to field-based case studies, illustrating how key accelerators such as regional advisory systems, guarantee providers, development finance institutions, impact investors, and nature capital markets can be adapted to support AF adoption.

In this context, the ReForest Sustainable Financing Scheme was designed to address the critical funding gap faced by agroforestry (AF) practitioners. First introduced in Deliverable D5.4, the scheme combines ex-ante, action-based, and result-based payments with advisory services in a structured five-year prototype tailored to AF systems conditions.

As detailed in *Chapter 5* and expanded through Deliverable D5.5, the scheme offers a practical solution to reduce entry barriers and improve revenue stability. As a visual representation, comparative cash flow analysis suggests that the scheme can accelerate the break-even point, reduce risk exposure, and enhance long-term returns when compared to a status quo scenario (one that is fully reliant on public subsidies, for example).

Further validation through field data and advanced economic and probabilistic modelling will be necessary to quantify the full impact of the scheme's refined version. Future research, drawing on empirical data from ReForest Living Labs and the probabilistic decision model developed by ReForest partners from the University of Bonn (WP6), will assess the marginal value of each additional financing layer in terms of cash flow generation and project valuation under real-world conditions.

Concluding Remarks

Agroforestry is well-positioned to help Europe achieve its climate, biodiversity, and rural development goals. Unlocking this potential requires coherent policy frameworks, competent national implementation, and access to diverse funding sources. This report provides a

knowledge-based framework for aligning innovation and impact-driven finance with AF development, offering actionable insights and a guide for policymakers, funders, and practitioners committed to scaling the sector across Europe.

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LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
AE4EU	Agroecology for Europe
AECM	Agri-Environment-Climate Measure
AFINET	Agroforestry Innovation Networks
AGB	Appropriate Governance Body
AF	Agroforestry
AVHGA	Hungarian Agricultural Guarantee Ltd.
CAP	Common Agricultural Policy
CARAT	Carbon Agroforestry Tool
CBAM	Carbon Border Adjustment Mechanism
CSDDD	Corporate Sustainability Due Diligence Directive
CSRD	Corporate Sustainability Reporting Directive
CSP	CAP Strategic Plan
DNSH	Do No Significant Harm
EAFRD	European Agricultural Fund for Rural Development
EEM	Ecosystem Environmental Monitoring
EIB	European Investment Bank
EMEA	Euro-Mediterranean Economists Association
ESG	Environmental, Social, and Governance
ETS	Emissions Trading System
EURAF	European Agroforestry Association
GAEC	Good Agricultural and Environmental Conditions
GAR	Green Asset Ratio
GEF	Global Environment Facility
GHG	Greenhouse Gas
Hi-sAFe	High Spatial Agroforestry Model
IPCC	Intergovernmental Panel on Climate Change
ISMEA	Italian Agricultural Insurance Agency
JNR	Jurisdictional and Nested REDD+
LULUCF	Land Use, Land-Use Change and Forestry
MRV	Monitoring, Reporting and Verification
NDC	Nationally Determined Contribution
NTFP	Non-Timber Forest Product
ORC	Organic Research Centre
PES	Payments for Ecosystem Services
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SFDR	Sustainable Finance Disclosure Regulation
SMR	Statutory Management Requirement
VC	Venture Capital
VCM	Voluntary Carbon Market
Verra	Verified Carbon Standard (VCS)
VSME	Voluntary Sustainability Reporting Standard for SMEs

1. INTRODUCTION

1.1 BACKGROUND AND MOTIVATION

Agroforestry, the practice of integrating trees with crops and/or livestock on the same land, is increasingly recognised for its capacity to deliver a wide range of environmental, economic, and social benefits. These systems can store carbon, protect soils, enhance biodiversity and water quality, and improve the condition and resilience of agricultural landscapes (Jose, 2009). In temperate climates, agroforestry can modify microclimates and water balance, reducing drought stress and stabilising yields under changing weather conditions (Jacobs et al., 2022). Economically, agroforestry allows farmers to diversify production, increase land productivity, and buffer against climate and market shocks (McDonald et al., 2021).

Despite these positive externalities, agroforestry uptake remains untapped across Europe. Structural and institutional barriers persist such as high upfront and maintenance costs, limited financial incentives, insufficient advisory support, and regulatory fragmentation. Agroforestry often falls between the domains of agriculture and forestry, making it difficult to support through existing policies like the Common Agricultural Policy (CAP). Most funding remains short-term and subsidy-based, with limited recognition of the long-term public value of ecosystem services generated by AF systems.

Scaling up agroforestry is, therefore, essential to achieve the European Green Deal's objectives of a carbon-neutral, resilient, and food-secure Europe, while ensuring the protection and restoration of biodiversity. A more integrated policy and financing framework is needed, one that links agriculture, forestry, climate, and rural development and that reflects the full socio-economic value of agroforestry practices. Recent studies (Donham et al., 2021; Hajdukovic, 2023) emphasise the need for innovative financial instruments and policies that recognize AF ecosystem services and reward farmers for delivering them.

This report forms the third policy mapping deliverable of Work Package 5 (WP5): *Finance and Policy*, within the ReForest project. WP5 aims to promote the uptake of agroforestry by developing a more effective and sustainable financing scheme specific to practitioners' needs. D5.1 examined the regulatory and policy landscape of European agroforestry, while D5.2 updated this analysis with a focus on the CAP 2023-2027 and carbon farming developments.

Building on these foundations, this third report (D5.3) deepens the analysis by integrating academic insights on cost-benefit analysis and payments for ecosystem services (PES), and by mapping innovative financial tools across public, private, and philanthropic sectors.

In parallel, this report also lays the analytical foundation for Deliverable *D5.5 Application of AF Sustainable Financing Scheme*, which tests the ReForest Sustainable Financing Scheme (designed and presented in D5.4) within Living Labs. This scheme aims to support the adoption and maintenance of agroforestry systems in Europe, with an emphasis on PES and the integration of ex-ante, action-based, and result-based payments, as well as advisory services.

1.2 METHODOLOGY

This report is based on intensive desk research of academic literature, EU legal texts and regulations, strategic policy documents, and reports from European institutions and agroforestry-focused initiatives. Sources include European Commission regulations (e.g. CRCF, CSRD, CBAM), studies from EU-funded projects such as AGFORWARD, AGROMIX, and Transition, for example, alongside technical

and financial reports from multilateral development banks, philanthropic foundations, and institutional investors active in land-use and climate finance.

In addition, the report integrates insights gained from co-creation working sessions held with ReForest's Living Labs partners and Working Package leaders. This includes distributing surveys and interviews to farmers, as well as hosting forum discussions and one-on-one meetings with researchers to discuss improvements and preliminary findings. Furthermore, external stakeholder consultations were promoted with players from the private sector, as detailed in *Chapter 4* and deliverable D5.5. This horizontal approach allows for the combination of top-down policy analysis and bottom-up practical perspectives, ensuring the scheme's relevance and feasibility.

1.3 Objectives and expected outcomes

The main objective of this report is to assess recent developments in agroforestry finance and policy and to propose concrete material for enabling its long-term adoption in Europe. Specifically, the report aims to:

- Analyse key EU and international policies relevant to agroforestry and their implications for future financing.
- Assess academic research on cost-benefit analysis approaches and the economic valuation of agroforestry ecosystem services.
- Identify and evaluate innovative financing mechanisms that can complement traditional subsidy-based models.
- Provide the conceptual and economic foundation for the refinement of the Financing Scheme (D5.5 and D5.6).

1.4 Report Structure

This report is organized in stages, beginning with policy context and progressing to financial strategy and application. It begins by situating AF within current EU policy developments, then moves on to global frameworks and academic insights before concluding with financial tools and applied modelling.

Chapter 2 outlines recent policy updates at the EU level that shape the AF landscape, focusing on funding mechanisms, regulatory alignment, and compliance frameworks. A timeline helps clarify how these institutional changes are influencing AF sector. In addition, it also explores how global climate finance, trade policy, and geopolitical developments intersect with European AF goals. A SWOT analysis at the end of the chapter highlights strategic entry points and challenges for scaling agroforestry in Europe.

Chapter 3 draws from academic literature to examine the economic valuation of agroforestry. It reviews evidence from cost-benefit analyses, ecosystem service valuation, and incentive mechanisms studies to establish a robust rationale for the proposed financing scheme.

Chapter 4 maps a diverse range of innovative financing mechanisms, focusing on a blended finance approach that can mobilize public, private, philanthropic and nature capital for agroforestry. This chapter connects financing theory with real-world examples and practice-based insights.

Chapter 5 presents a financial and stylised comparison of the baseline agroforestry investment scenario versus one supported by the ReForest Sustainable Financing Scheme. This analysis demonstrates the scheme's potential impact and prepares the ground for its field-testing in Deliverable D5.5

2. POLICY IMPLICATIONS TO AGROFORESTRY AT THE EU LEVEL

Chapter 2 examines the most relevant EU policies and legislative instruments that directly or indirectly influence agroforestry. It analyses how these legal frameworks influence funding, market access, sustainability standards, and administrative requirements, while highlighting both the opportunities and challenges for agroforestry practitioners in adapting to this shifting policy landscape.

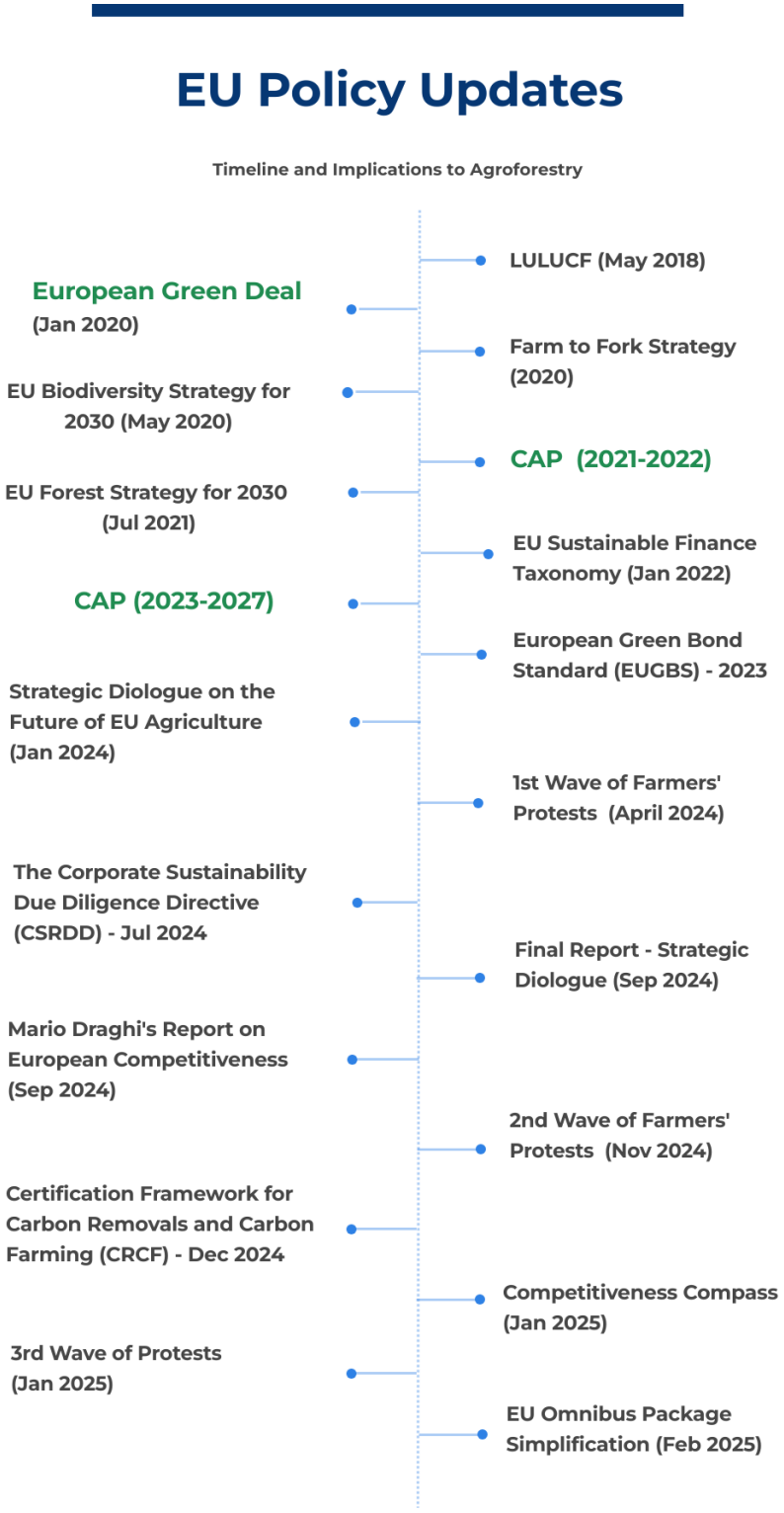

fig.1 *Timeline of relevant EU policies updates shaping AF finance. Source: own elaboration*

Figure 1 provides a timeline of major EU policy developments with direct or indirect implications for agroforestry. It illustrates the pace of institutional change, ranging from overarching strategies such as the European Green Deal and the Farm to Fork Strategy to more targeted instruments like the CAP 2023–2027, the EU Sustainable Finance Taxonomy, and the Certification Framework for Carbon Removals (CRCF). The timeline also reflects social and political disputes, including farmer protests and high-level dialogues, which signal both support for and resistance to the ongoing transition. Understanding these developments is essential for informing the design of the ReForest Sustainable Financing Scheme (D5.5).

2.1 COMMON AGRICULTURE POLICY (CAP 2023-2027)

The ***2023-2027 Common Agricultural Policy (CAP)*** edition is closely aligned with the European Green Deal ambitions by introducing a more sustainable, equitable, and performance-based framework. Structured around ten targeted objectives, the revised CAP seeks to ensure agricultural economic viability, environmental protection, and strengthen the socio-economic activity of rural areas (European Commission, 2023). The development of **National Strategic Plans** is a central component of this reform, allowing Member States to adapt policy tools to their unique local conditions and socioeconomic priorities.

Within this context, agroforestry stands out as a strong and recognized nature-based solution capable of meeting all 10 CAP objectives (see *Table 1*). As detailed and documented in previous *Deliverables D5.1 and D5.2*, agroforestry is eligible for public funding across both CAP pillars. Under Pillar I, eco-schemes require that at least 25% of direct payments be allocated to environmentally beneficial practices. Pillar II complements this with support through Agri-environment-climate Measures (AECMs), targeted investments, and knowledge exchange initiatives, for example. Agroforestry can also be further supported by aligning actions with several requirements, such as the Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Conditions (GAEC).

CAP Specific Objectives	Agroforestry Contributions
1. Support viable farm income and resilience of the agricultural sector	Diversifies income streams (timber, fruits, NTFPs); enhances resilience to price shocks and extreme climate events.
2. Enhance farm competitiveness and increase productivity	Increases land productivity per unit area (trees + crops/livestock) and efficiency, especially in the long run.
3. Improve farmers' position in the value chain	Enables access to premium markets (e.g. organic, biodiversity-friendly); enhances impact transparency and ESG branding opportunities.
4. Contribute to climate change mitigation and adaptation	Offers several Ecosystem Services such as carbon sequestration, water retention, and buffers microclimates.
5. Foster sustainable development and efficient management of natural resources	Improves soil health and farm resilience; enhances water retention; reduces nutrient runoff and erosion.
6. Contribute to halting and reversing biodiversity loss	Provides habitat connectivity; supports pollinators and natural pest control; integrates diverse plant and tree species.
7. Support generational renewal in the agricultural sector	Attracts younger farmers interested in innovation and climate-smart farming; fits within regenerative farming models.

8. Promote employment, growth, social inclusion, and local development in rural areas	Creates rural jobs in tree planting, management, processing; supports eco-tourism and agroecological education activities.
9. Improve the response of EU agriculture to societal demands (animal welfare, food waste, nutrition, etc.)	Supports sustainable and local food systems; improves ecosystem services; aligns with ethical consumer preferences.
10. Foster knowledge, innovation, and digitalization	Stimulates innovation in mixed farming systems; benefits from research on MRV, Living Labs approach carbon accounting, Financial Tools and landscape modelling.

**Table1*: *Agroforestry Contributions to CAP Specific Objectives. Source: own elaboration based on European Union (2021)*

Moreover, the CAP has implemented many initiatives to support small-scale farms. According to the European Commission (2022), the Complementary Redistributive Income Support for Sustainability (CRISS) reallocates 10.6% of direct payments to smaller farms, leading to an average per-hectare payment 16% higher than the national average. More than 6 million people are targeted to benefit from CAP-funded advisory services, including support for over 200,000 independent advisers. Additionally, 6,600 innovation projects under the EIP-AGRI initiative are planned to foster collaboration between farmers and researchers, while modernization investments are expected to reach 400,000 farms. The CAP also earmarks €8.5 billion specifically for young farmers, along with dedicated funding for women and rural communities, aiming to improve services for 11% of the EU's rural population.

Despite these numbers and concrete advances, key structural limitations continue to affect the uptake of AF in Europe. For instance, previous CAP cycles lacked a standardised definition of agroforestry, leading to inconsistent eligibility criteria across countries and funding periods. Regulatory thresholds, such as restrictions on tree density and hedge dimensions, frequently discourage farmers from incorporating trees into productive land for fear of losing payment eligibility (EURAF, 2023). Potential inconsistency between Pillar I (income support) and Pillar II (rural development) measures is also perceived as another barrier for the long-term viability of agroforestry systems (Hajdukovic, 2023).

While the 2023–2027 CAP introduces a more integrated framework with clearer definitions and targeted instruments, its success is much more dependent on how well Member States implement their provisions. Much will come down to their national capacity to cut administrative costs and overcome systemic regulatory and institutional barriers. Better alignment between agricultural and environmental administrations does not seem to be just a technical necessity, but a strategic move toward increasing farmer trust, ensuring predictable implementation, and making agroforestry a viable and efficient land-use alternative under CAP's umbrella.

2.2 Strategic Dialogue on the Future of EU Agriculture

After a series of seven plenary meetings, the Final Report of the ***Strategic Dialogue on the Future of EU Agriculture*** was officially delivered to the European Commission in September 2024. Launched earlier that same year, the Dialogue brought together 29 key stakeholders from across the agri-food sector to reflect on the future of farming and food in Europe. Its primary aim was to explore how to better align economic competitiveness and agri-food resilience with ecological and social responsibility.

In line with the UN Climate Change agenda set at COP28, the Dialogue promoted the concept of a "Triple Win" scenario (European Commission, 2024), which can be summarised as the following pillars:

1. **Enhancing Farmers' Livelihoods** by ensuring adequate financial incentives and expanding social safety net.
2. **Promoting Food Security and Price Stability** through resilient, competitive, and sustainable food systems.
3. **Reducing Carbon Emissions** in line with the EU's environmental and climate commitments.

Implications for Agroforestry

In this context, AF has emerged as a key solution capable of addressing and balancing these pressing challenges. The European Commission has identified demographic decline, ageing rural populations, youth outmigration, and deterioration of rural services as critical threats to rural viability. AF provides a flexible and landscape-adaptable model that can help revitalize rural economies by diversifying job opportunities and strengthening farming resilience. Its multifunctionality also allows it to contribute significantly to climate adaptation, the transition to sustainable diets, and the provision of public goods.

To implement these recommendations, the Dialogue proposed practical actions. These include financial incentives, robust social protection mechanisms, and pilot programs linking carbon farming and results-based payments, for example. The document also calls for increased consumer engagement through transparency tools such as environmental labelling, which can help communicate agroforestry's role in delivering measurable climate and ecosystem benefits. Collectively, these measures could be seen as a way to accelerate the integration of AF into the mainstream of EU agricultural and rural development policy.

2.3 Carbon removals and carbon farming regulations (CRCF)

The ***Carbon Removals and Carbon Farming Regulation (CRCF)*** *(EU/2024/3012)*, adopted on November 2024, proposes the first EU-wide voluntary certification framework for carbon removals, carbon farming, and carbon storage in products. This regulation is seen as a key pillar in supporting the EU's climate neutrality target by 2050 and improving the credibility and environmental integrity of carbon markets (European Union, 2024).

Key Objectives

- Support the EU climate target of achieving net removals of 310 million tonnes of CO_2 by 2030, in coordination with Member States' Strategic Plans.
- Contribute to climate neutrality by 2050 and enable the generation of net negative emissions beyond 2050.
- Promote environmental co-benefits, including improved biodiversity, soil health, and climate resilience, while ensuring no significant harm to ecosystems.
- Prevent double counting and support progress toward the EU's nationally determined contributions (NDCs) under the Paris Agreement

Certification Mechanisms

- Establish clear definitions and high-quality criteria for carbon removal activities, including geological storage, agroforestry, and carbon storage in long-lasting products.
- Lower administrative burden to improve accessibility and reduce costs for operators.
- Ensure transparency and credibility through robust monitoring, reporting, and verification (MRV) systems.
- Prevent greenwashing and fraud through strict oversight, liability mechanisms, and registry-based tracking.

- Encourage research and innovation to develop new methodologies, improve data quality, and support small-scale and nature-based solutions.

Steps to quantify net carbon removal benefit

At the core of the certification process is a detailed methodology for quantifying carbon removal benefits, established under four categories of certifiable units:

1. Permanent Carbon Removal Units
2. Carbon Farming Sequestration Units
3. Soil Emission Reduction Units
4. Carbon Storage in Product Units

Where each unit represents one ton of CO_2-equivalent removed or reduced and must be verified and registered within the Union Registry or a certified scheme registry.

Quantification of Net Benefits

1. **Baseline Calculation:** Establish standardised or activity-specific baselines to quantify additional carbon removals or soil emission reductions compared to business-as-usual practices.
2. **Emission Accounting:** Subtract all associated direct and indirect GHG emissions over the lifecycle of the activity (including fertiliser use, fuel inputs, and potential land-use change) to determine the net carbon removal benefit.

Where all metrics must follow conservative estimates, align with IPCC Tier 3 methodologies, and report uncertainties transparently.

Implications for Agroforestry

The CRCF explicitly recognises agroforestry as an eligible carbon removal activity. To qualify for certification, a system must (1) **demonstrate increased carbon stocks** in soil or biomass through the integration of trees and perennial vegetation, (2) **deliver measurable co-benefits** such as enhanced biodiversity, improved soil health, or greater resilience to drought, and (3) **prove additionality** by exceeding legal obligations and standard practices.

For example, a transition from conventional cropland to a silvoarable system, where tree rows are integrated into arable fields, can be considered additional if such practices are not already required by national regulation. Similarly, the establishment of silvopastoral systems, where livestock graze under tree cover, can deliver both carbon and biodiversity gains, especially when native or multifunctional species are used. Even low-intensity interventions, such as restoring traditional hedgerows or expanding buffer zones with tree plantings, may qualify if they are properly documented through MRV protocols and aligned with project baselines.

A key innovation introduced by the CRCF is the recognition of certified temporary carbon removal benefits, which account for removals maintained over a defined period (typically at least five years, even if they are not permanent). This mechanism is relevant for AF systems, where carbon stored in biomass and soils can fluctuate due to harvesting, management practices, or land use changes. Unlike permanent removals, temporary carbon removal benefits do not result in the issuance of carbon credits but are instead eligible for certification under the CRCF and recorded in the Union Registry as carbon removal units.

To ensure environmental integrity, the regulation includes safeguards such as defined monitoring periods, expiration of certified benefits at the end of those periods and liability mechanisms to address reversals. Certified agroforestry projects fulfilling these conditions can benefit from recognition under

voluntary schemes and contribute to sustainability disclosures and corporate reporting obligations, including under the EU Taxonomy and CSRD.

The structure of the regulation is summarized in *Table 2* below, which captures the legal and operational mechanisms embedded in the CRCF, including eligibility definitions, certification processes, methodological standards, and registry oversight.

Chapter	Article	Take-away
Chapter 1- General Provisions	Subject matter and scope Definitions Eligibility for certification	Outlines the scope of the regulation, provides core definitions (e.g., carbon farming, carbon removal), and sets criteria for activity eligibility
Chapter 2- Quality Criteria	Quantification	Activities must show a net carbon removal or soil emission reduction benefit, calculated using standardized and verifiable methodologies.
	Additionality	Activities must go beyond legal obligations and existing practices, without causing significant environmental harm.
	Storage, Monitoring and Sensing	Requires long-term carbon storage, robust monitoring systems, and liability mechanisms (e.g., insurance, buffer reserves) to address risks of CO_2 reversal.
	Sustainability	Carbon removal actions must deliver co-benefits, particularly for biodiversity, water resources, and soil health.
	Certification and Methodology	Establishes a voluntary certification framework; schemes must apply for EU recognition based on compliance with CRCF criteria.
Chapter 3 - Certification	Certification of Compliance Certification bodies	Outlines rules for verifying compliance and recognizing competent certification bodies responsible for assessment.
Chapter 4 – Certification Schemes	Operation of certification schemes Union registry and certification registries Recognition Reporting requirements	Defines rules for how certification schemes must operate, including transparency, registry management, and annual reporting.
Chapter 5 - Final Provision	Amendment to annexes	Provides legal basis for updates to the regulation, including delegated acts, review timelines, and date of application.

**Table 2: Summary of CRCF General Provisions. Source: own elaboration based on (European Union, 2024)*

2.4 CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

The ***Carbon Border Adjustment Mechanism (CBAM)*** is another important element of the EU's climate strategy. Designed to complement the EU Emissions Trading System (ETS), CBAM introduces a carbon price to imports of emissions-intensive goods from countries with less stringent climate regulations. It entered a transitional phase in 2023 and will become fully operational in 2026. The regulation aims to prevent carbon leakage (where companies relocate production to countries with weaker environmental rules) and to encourage global partners to adopt cleaner practices (European Commission, 2023; 2024).

Implications for Agroforestry

CBAM is expected to create strong incentives for low-emission agroforestry products. Outputs such as biochar, certified timber, biomass pellets, and low-carbon feed are particularly attractive for decarbonising industrial value chains due to their carbon sequestration benefits and reduced input emissions. These products are becoming more and more popular in industries like bio-based inputs, fertilizers, and building materials that are probably going to be a part of future CBAM expansions.

When supported by strong MRV systems, agroforestry products can demonstrate low embedded emissions. This positions them advantageously as EU importers seek to reduce their carbon exposure. For example, certified timber from agroforestry systems could be favoured in low-carbon construction, while sustainably produced biomass may be used in green energy or steel production with reduced CBAM cost implications.

The transition period allows time for agroforestry producers to improve MRV systems and traceability. Well-documented emissions performance may translate into lower adjustment costs or preferential treatment as CBAM evolves. Additionally, CBAM offers technical assistance for low- and middle-income countries, helping agroforestry stakeholders improve emissions tracking and gain access to EU markets through verified low-carbon supply chains.

Nonetheless, CBAM remains controversial, mostly in developing countries. Critics warn that, in practice, it could function as a trade barrier, disadvantaging exporters in regions with limited capacity to implement MRV systems or decarbonize production. Without adequate support and policy flexibility, CBAM risks reinforcing global trade asymmetries, raising concerns about fairness, climate justice, and the principle of common but differentiated responsibilities.

2.5 CORPORATE SUSTAINABILITY REPORTING DIRECTIVES (CRSD AND CSRDD)

Following *CBAM* and *the CRCF*, the European Commission's recent proposals to amend the **Corporate Sustainability Reporting Directive (CSRD)** and adopt the **Corporate Sustainability Due Diligence Directive (CSRDD)** reflect a broader effort to streamline sustainability legislation while reinforcing transparency and accountability.

Implications for Agroforestry

For the agroforestry sector, these developments can be relevant, as they clarify reporting expectations, reduce compliance burdens, and improve alignment with value chain realities (European Commission, 2025; European Union, 2024).

The updated CSRD limits required reporting to big companies with more than 1,000 employees. This exemption gives considerable regulatory relief to most agroforestry stakeholders (including smallholders, cooperatives, and SMEs), who frequently lack the administrative capacity to comply with formal disclosure obligations. To encourage voluntary involvement, the plan includes a Voluntary

Sustainability Reporting Standard for SMEs (VSME), which allows smaller actors to publish their sustainability performance in a proportionate and flexible way.

The CSRDD presents a risk-based due diligence strategy centred on direct suppliers and main business relationships. This strategy can be particularly appropriate for agroforestry because supply chains are frequently fragmented and involve many small-scale participants. The directive prevents overregulation of indirect partnerships by restricting necessary due diligence to major risks and core partners, allowing AF businesses to focus resources on areas with the most operational and reputational risk.

Both directives promote the execution of the European Green Deal, for example, the Farm to Fork Strategy's climate and biodiversity objectives. The inclusion of agroforestry in these frameworks emphasizes its importance in carbon sequestration, soil restoration, and biodiversity protection. It also increases ties with developing financial instruments like the Carbon Removal Certification Framework (CRCF) and the EU Taxonomy, hence increasing access to green financing and carbon markets.

Proposed changes, such as increasing monitoring cycles from one to five years, removing sector-specific reporting templates, and giving simpler assurance requirements by 2026, will make compliance easier for AF practitioners. These changes are essential for a sector often constrained by limited technical and financial resources, and they should enable a greater focus on delivering tangible environmental and social outcomes.

2.6 EU OMNIBUS SIMPLIFICATION PACKAGE

In February 2025, the European Commission launched the first **Omnibus Package**, a legislative initiative aimed at reducing administrative burdens under key EU sustainability frameworks: CSRD, CSRDD and the EU Taxonomy. These reforms were anticipated by the *EU Compass for Competitiveness*, published in January 2025, which outlined a 25% cut in reporting obligations across the board, and a 35% reduction for small and medium enterprises (SMEs) (European Commission, 2025; KPMG, 2025).

The package introduces proportionate requirements, offering these actors simplified compliance obligations like those available to SMEs. Reporting is to be better aligned with investor needs, while safeguards are introduced to avoid the “trickle-down effect” of disclosure requirements on smaller supply chain partners.

Table 3 summarises the main regulatory simplifications introduced by the EU Omnibus Package. These changes reduce reporting requirements, simplify compliance, and make sustainability frameworks more accessible, especially for SMEs and land-based industries like agroforestry.

Directive	Key Simplifications
CSRD	• Removes 80% of companies from mandatory reporting; focuses on firms with >1,000 employees. • Postpones implementation deadlines to 2028 for firms previously due in 2026–2027. • Introduces voluntary SME standards; reduces data burdens on smaller actors.

EU Taxonomy	• Narrows reporting scope to firms already under CSDDD; allows others to report voluntarily. • Reduces reporting templates by 70% and introduces a materiality threshold. • Simplifies DNSH criteria and permits partial alignment to support transition finance. • Adjusts the Green Asset Ratio (GAR) by excluding exposures to companies outside CSRD scope.
CSDDD	• Limits due diligence to direct business partners; extends monitoring cycles to five years. • Removes EU-level civil liability while preserving national-level compensation rights. • Delays due diligence rules for large companies to July 2028; advances guidance to July 2026.
CBAM	• Importers with less than 50 tonnes of embedded emissions per year are exempt from CBAM obligations. This affects around 90% of importers—mainly SMEs and individuals—while still covering over 99% of total emissions in scope. • For importers that remain within scope, the procedures for authorisation, emissions calculation, and reporting have been streamlined to reduce administrative costs and clarify responsibilities. • Stronger enforcement mechanisms have been introduced to prevent regulatory evasion, supporting long-term fairness and the integrity of CBAM. • A legislative proposal expected in early 2026 will likely expand CBAM to include more ETS-covered sectors and downstream goods, potentially increasing relevance for agroforestry-linked products.

**Table 3: Key Changes related to EU Omnibus Package. Source: own elaboration based on European Commission (2023;2025)*

Implications for Agroforestry

The OMNIBUS Package has the potential to improve access to sustainability-linked markets for agroforestry practitioners, particularly smallholders, cooperatives, and early-stage enterprises. The package addresses key administrative and data-related barriers that have frequently prevented smaller actors from participating in ESG-focused initiatives, public funding instruments, or blended finance programs by simplifying compliance procedures and reducing indirect supply chain reporting obligations. For example, reduced documentation and harmonised MRV processes can lower the eligibility threshold for CAP eco-schemes, carbon farming projects, and green procurement frameworks, which were historically dominated by larger, more resource-equipped players.

The package also introduces greater flexibility in how projects align with the EU Taxonomy and Do No Significant Harm (DNSH) criteria. This partial alignment may allow AF systems that are not yet fully compliant with rigorous technical screening criteria to access transition funding. In this context, transition funding refers to targeted financial support (grants, technical assistance, or phased subsidies) designed to help projects gradually improve sustainability performance. For example, cooperatives implementing silvopastoral practices could receive support to adopt biodiversity-friendly planting or integrate soil carbon monitoring systems over time, rather than being excluded from funding for not meeting full compliance at the outset.

However, the relaxation of certain sustainability standards, particularly DNSH thresholds, raises environmental concerns. There is a risk that some land management practices could qualify for funding or certification without fully respecting ecological thresholds, potentially undermining long-term climate and biodiversity goals. To mitigate this, the OMNIBUS package retains safeguards such as baseline compliance requirements for high-risk activities, continued MRV obligations, and Member State discretion to enforce stricter national standards. The effectiveness of these measures will depend on how they are implemented and whether farmers are supported by advisory services to maintain environmental integrity while navigating simplified procedures.

2.7 POSITIONING AF IN GLOBAL CLIMATE AND TRADE POLICY

This section looks at how agroforestry is being positioned within global climate, biodiversity, and trade policy discussions. It highlights recent developments at COP29 and COP16, where carbon markets, ecosystem service credits, and biodiversity targets are gaining momentum, opening new opportunities for agroforestry to be integrated into international finance and policy frameworks.

The chapter also explores broader geopolitical trends, including diverging climate strategies between the EU, US, and Global South, and what these shifts mean for long-term investment in nature-based solutions. Finally, it considers how global trade policy (through tools like environmental labelling, carbon pricing, and supply chain regulations) could shape future market access for agroforestry products. Together, these trends help AF's position as a credible, climate-positive land use strategy with growing relevance in both policy and investment circles.

2.7.1 COP29 AND COP16: IMPLICATIONS FOR AGROFORESTRY

The outputs of ***COP29*** and ***COP16*** brought better approaches that can facilitate AF adoption. COP29 improved Article 6.4 methodology, allowing removal-based initiatives like agroforestry to enter international carbon markets. Meanwhile, COP16 highlighted biodiversity conservation and fair benefit sharing, strengthening the case for integrated methods that incorporate carbon and ecosystem service credits.

Boxes 1 and 2 summarize the key implications of these global processes for agroforestry within international climate and biodiversity frameworks.

COP29 – Summary Box

Highlights

- **Carbon Removals Defined:** Carbon removals were defined as deliberate human interventions through which greenhouse gases (GHGs) are extracted from the atmosphere and stored in long-term reservoirs (geological, terrestrial, or oceanic).
- **Monitoring Requirements:** Projects are required to comply with stringent Monitoring, Reporting, and Verification (MRV) protocols. These must be based on validated methodologies and supported by high-resolution data sources, including satellite and remote sensing technologies.
- **Reversal Risk Management:** Measures must be implemented to address the risk of carbon re-release. Contributions to a Reversal Risk Buffer Pool are mandated to ensure environmental integrity is maintained.
- **Baselines and Additionality:** Projects must be based on conservative, business-as-usual baselines. Additionality must be clearly demonstrated, and leakage minimized, to confirm that outcomes would not occur without the intervention.
- **Inclusivity:** Methodologies are required to ensure equitable participation, with dedicated provisions established for developing countries and Indigenous Peoples.

Implications for Agroforestry

Under the revised Article 6.4 framework, new opportunities are opened for agroforestry to access international carbon markets. Projects that are aligned with the updated MRV and additionality criteria may be considered eligible for verified results-based payments. Beyond carbon sequestration, co-benefits related to biodiversity, water regulation, and soil health can be recognized, further positioning agroforestry as a credible and high-integrity carbon removal strategy.

*__Box 1__: COP29 Summary Boxy, Source: own elaboration based on (UNFCCC & COP29 Presidency, 2024).

COP 16 Summary Box

Highlights

- **Marine Protection**: A global framework was adopted to safeguard high-biodiversity areas in international waters.
- **Recognition of Indigenous and Afro-descendant Communities:** These communities were formally included in conservation governance structures, with a dedicated subsidiary body established to support their participation.
- **Cali Fund**: A global mechanism was created to facilitate fair and equitable benefit-sharing from digital sequence information (DSI) derived from genetic resources.

Setbacks

No consensus was reached on the establishment of a new biodiversity funding mechanism due to procedural delays and lack of quorum. Ongoing funding gaps continue to jeopardize the achievement of the 2030 biodiversity targets.

Implications for Agroforestry

The outcomes of COP16 reinforce the relevance of equity, traditional knowledge, and benefit-sharing in landscape-scale conservation. Agroforestry stands to benefit from these developments through emerging biodiversity-linked finance opportunities, including those based on DSI, ecosystem credits, and community-based stewardship models.

*__Box 2__: *COP16 Summary Box. Source own elaboration based on United Nations Convention to Combat Desertification (UNCCD, 2024b).*

The outcomes of COP29 and COP16 indicate that agroforestry has real opportunities to gain recognition in both carbon and biodiversity policy spaces, elevating its role as a regenerative land use system. As these events become more inclusive and involve more people (from farmers and indigenous communities to scientists and local leaders), they are also becoming a driving force in bringing agroforestry the attention and support it requires on a global scale.

2.7.2 Green Global Policy Divergence and Instability of Climate Investment

Global political shifts in 2025 are altering the landscape for nature-based solutions like agroforestry. In the United States, the re-election of Donald Trump has marked a clear break from international climate cooperation. One of his first actions in office was to withdraw the U.S. from the Paris Agreement, echoing his previous term, and to direct federal agencies to accelerate fossil fuel development while rolling back environmental protections.

Federal support for clean energy and ecosystem-based mitigation has been significantly scaled back, with key climate funding programs frozen. Internationally, the U.S. has halted contributions to major climate finance mechanisms and withdrawn from global climate governance roles, reducing support for land-based climate efforts in developing countries. Domestically, Trump's administration is also challenging state-level climate initiatives and reversing EPA regulations, creating uncertainty for long-term sustainability policy.

In contrast, the European Union continues to strengthen its climate leadership. At the 2025 World Economic Forum in Davos, European Commission President Ursula von der Leyen reaffirmed the EU's commitment to climate neutrality and explicitly named agroforestry as a strategic pillar of the European Green Deal (WEF, 2025; Von de Leyen, 2025). This commitment is backed by a growing suite of policy and finance instruments, including the EU Taxonomy for Sustainable Finance, the Carbon Removal Certification Framework, and climate-related measures under the Common Agricultural Policy.

In the Global South, 2025 marks a period of growing political commitment and institutional innovation around climate mitigation and adaptation. At COP29 in Baku, countries from Africa, Latin America, and Southeast Asia highlighted the importance of agroecological practices for climate resilience and rural development. Similarly, COP16 in Colombia emphasized the region's leadership in ecosystem restoration and advancing biodiversity goals under the Kunming-Montreal Framework. Governments are increasingly integrating agroforestry into national climate strategies, supported by emerging regional finance mechanisms, indigenous knowledge systems, and cross-border cooperation. The momentum in the Global South seems to be shifting from pilot projects to scalable, policy-embedded solutions that reflect local priorities and long-term sustainability goals.

For agroforestry practitioners, this divergence in international climate policy reinforces the importance of regulatory stability. While disengagement by the United States may slow progress toward a globally harmonised sustainability agenda, Europe is creating a more predictable environment for long-term investment.

2.7.3 Global Trade Policy and its Role for Climate Change

This leadership role also extends to global trade policy. As supply chains are disrupted and market confidence weakens, by the new waves of tariffs, the future of climate-aligned trade is unclear. Can sustainability and open trade still move forward together? Or will rising tariffs and retaliatory policies close markets to agroforestry products, especially those from lower-income countries?

In a 2024 lecture hosted by the International Food Policy Research Institute, Pascal Lamy, former European Union Trade Commissioner and Director General of the World Trade Organisation, stressed that international trade rules must adapt to the realities of climate change, ecosystem degradation, and growing inequality. He argued that aligning trade policy with sustainability and food security is not only urgent but essential.

For agroforestry, this global shift presents an opportunity to become part of a new trade narrative, one that values climate-positive production, resilient supply chains, and socially inclusive land use strategies. Lamy also cautioned that new trade measures, such as environmental labelling or carbon pricing at the border (CBAM), must be designed with fairness in mind. If not carefully implemented, these tools could unintentionally create barriers for producers in developing countries (Lamy, 2024).

As a result, the European Union (as a potential leader in shaping the future of sustainable trade) has both the opportunity and the responsibility to promote agroforestry and other nature-based solutions in ways that are ambitious, inclusive, and development-friendly.

2.8 SWOT ANALYSIS OF AF POLICY LANDSCAPE (2025)

Table 4 presents a SWOT analysis of the agroforestry policy landscape in 2025, combining key findings from previous sections (2.1 to 2.7). It summarises how current policy conditions influence the economic viability and scalability of agroforestry in the EU.

Strengths	Weaknesses
Delivers multiple co-benefits: income diversification, climate mitigation, soil health, and biodiversity	Complexity of planning, implementation, and monitoring compared to conventional systems
Strong alignment with EU Green Deal and climate neutrality goals	Limited technical assistance and advisory services in several Member States

High adaptability to different agroecological zones and farming models	Gaps in standardized metrics for monitoring, reporting, and verification (MRV) of impacts
Recognized under emerging EU policy tools like the Carbon Removal Certification Framework	High upfront costs and slow return on investment may limit uptake
Enhances resilience to climate shocks and supports long-term farm viability	Land tenure insecurity and administrative complexity can hinder access to funding
Opportunities	**Threats**
Expansion of carbon and biodiversity credit markets, with stronger demand for nature-based solutions	Fragmented policy support and uneven uptake across EU regions
Integration into corporate supply chains through sustainability disclosure rules (CSRD, CSDDD)	Youth outmigration and demographic shifts reducing rural implementation capacity
EU funding instruments (CAP eco-schemes, Horizon Europe, climate finance) increasingly favor agroecology	Risk of being sidelined without dedicated targets in CAP and national strategies
Results-based payments and climate-smart labelling gaining traction	Market uncertainty, global trade disruptions, and short-term economic pressures
Greater recognition in global fora (e.g. COP16, COP29) as a scalable land-use solution	Environmental stressors, including droughts and pests, could threaten long-term system stability

****Table 4**: SWOT analysis of AF policy landscape (2025). Source: own elaboration*

The SWOT analysis reinforces how agroforestry is gaining policy support in the EU, particularly given its alignment with the objectives of the European Green Deal and emerging frameworks such as CRCF, for example. Its flexibility across land-use systems and its dual contribution to environmental and economic resilience position agroforestry as a strong candidate for deeper integration into future rural development.

Despite these strengths, several persistent barriers are still in place. These include limited access to technical advisory services, fragmented MRV systems and high upfront investment costs. It is clear that without addressing these structural flaws, the widespread adoption of agroforestry will remain constrained, especially among small and medium-sized farms.

At the same time, new opportunities are emerging. Market-based instruments such as carbon and biodiversity credits, integration into corporate supply chains under the CSRD and the CSDDD, and a growing range of EU funding mechanisms all offer significant potential to scale up AF practices and link them to broader sustainability objectives.

In terms of threats, uneven uptake across Member States, rural demographic decline, and continued fragmentation between agricultural, environmental, and trade policy domains remain pressing concerns. This means that without coordinated policy reform and sustained investment, the momentum behind agroforestry's integration into EU sustainability frameworks may be weakened, limiting its transformative potential at scale.

3. ACADEMIC PERSPECTIVES

Building on the policy and financial context discussed in Chapter 2, this chapter examines the economic foundations of agroforestry through academic literature. While previous chapters discussed regulatory momentum and emerging funding streams for nature-based solutions, this chapter takes a step back to ask more profound questions: what is the actual value that agroforestry provides, and why is it not adequately rewarded?

To explore this gap, *Chapter 3* reviews academic research in three key areas:

- **Cost-Benefit Analyses:** *How does the economic performance of agroforestry compare to conventional farming or forestry systems over time? What factors influence profitability across different AF systems the most?*

- **Ecosystem Service Valuation:** *How can we assign economic value to the environmental benefits agroforestry provides, such as carbon storage, biodiversity, and water regulation? How can non-market values be translated into incentives that are recognized by financial and policy actors?*

- **Payments for Ecosystem Services (PES):** *How can farmers be financially rewarded for delivering ecosystem services through agroforestry, and what makes these mechanisms effective? What role do farmer preferences, contract design, and local context play in PES uptake?*

These three topics were chosen because they address two persistent barriers to financing agroforestry: (1) the undervaluation of its environmental and socio-economic benefits, and (2) the lack of financial mechanisms adapted to its long-term and multifunctional investment profile.

Insights from the literature review directly inform the design of the ReForest Sustainable Financing Scheme, ensuring it is evidence-based, aligned with farmer needs, and capable of supporting agroforestry as a viable strategy for climate mitigation and rural development.

3.1 COST-BENEFIT ANALYSIS OF AGROFORESTRY SYSTEMS

Recent studies compare the economic performance of agroforestry with conventional agriculture and forestry. Thiesmeier and Zander (2023) conduct a scoping review of the literature on the economic performance of temperate agroforestry systems in Europe and North America compared to agriculture and forestry. Their results show that agroforestry tends to generate lower economic returns than agricultural land, but higher returns than forestry. The authors find that the economic performance of agroforestry systems such as silvoarable and silvopastoral systems depends on soil and site characteristics, the prices and profitability of individual system components, and policy support (e.g., government subsidies) and payments for ecosystem services. The study suggests that the wide range of ecosystem services provided by agroforestry systems and their valuation through subsidies, carbon pricing or payments for ecosystem services is a key issue that needs to be addressed to improve the economic performance of such systems in different locations.

Alcon et al. (2024) assess the overall economic impact of different crop diversification systems across Europe compared to monoculture, using eight case studies from three European pedoclimatic regions (Southern Mediterranean, Northern Mediterranean and Boreal). The authors carry out an economic

valuation by integrating both market and non-market values through a social gross margin analysis in the short term and a cost-benefit analysis in the medium to long term. Their results indicate improved social gross margins when environmental and socio-cultural benefits are considered in the short term, and greater economic benefits in the medium and long term. These findings underline the potential of crop diversification to make farming systems more resilient by improving the economic sustainability of farms and the provision of ecosystem services.

In a European-wide assessment, Kay et al. (2019) find that agroforestry systems significantly contribute to climate change mitigation through carbon sequestration. The study maps the various environmental pressures on agricultural land and identifies priority areas where agroforestry interventions could be most effective. Experts proposed 64 adapted agroforestry systems for these areas, with estimated carbon sequestration potentials ranging from 0.09 to 7.29 t C ha^{-1} a^{-1}, offsetting between 1.4% and 43.4% of total European agricultural greenhouse gas emissions. These findings indicate that the targeted implementation of agroforestry systems can reduce cumulative environmental pressures while also contributing to climate and sustainability goals.

Torralba et al. (2016) conducted a meta-analysis of 53 studies on European agroforestry and concluded that these systems improve biodiversity, soil fertility, and erosion control when compared to traditional agriculture and forestry. However, the effects vary depending on the land-use type and ecosystem service being assessed. The study shows that agroforestry improves biodiversity, soil fertility and erosion control, but has no clear effect on provisioning services and tends to reduce biomass production. Notably, both silvopastoral and silvoarable systems were found to increase biodiversity and ecosystem service provision, especially when compared to forest land.

Finally, García-Rubio et al. (2024) highlight that traditional market-based valuations often undervalue the total economic benefits of multifunctional systems like agroforestry. Their findings support the argument for more inclusive valuation methods that consider broader ecosystem services.

3.2 Economic valuation of ecosystem services

While traditional cost-benefit analyses provide valuable insights into the economic viability of agroforestry, they often fail to account for the full range of ecosystem services. This omission may lead to an undervaluation of agroforestry relative to more conventional agricultural models. This section explores the economic valuation of ecosystem services, focusing on how integrating both market and non-market values can enhance agroforestry's financial appeal and strengthen the case for supportive policies.

Kay et al. (2019) conducted a comparative analysis of 11 European landscapes using environmental modelling and economic valuation methods to quantify both marketable (e.g. biomass production) and non-marketable ecosystem services and dis-services (e.g. groundwater use, nutrient and soil loss, carbon sequestration, pollination deficits). Their results show that agroforestry systems reduce pollution externalities and increase carbon storage benefits, generating higher overall economic returns relative to conventional agricultural practices. Their findings suggest that incorporating ecosystem service values into market systems would promote agroforestry and enhance its financial viability through payments for ecosystem services and penalties for disservices.

A similar conclusion is drawn by Alam et al. (2014), who develop a quantitative framework for valuing ecosystem services in tree-based intercropping systems in southern Québec. The study estimates ten distinct services, including climate regulation, air and water purification, and biological control. The combined value of non-market ecosystem services ($1,634 ha^{-1} y^{-1}) is found to exceed that of commercial outputs, resulting in a total net value of $2,645 ha^{-1} y^{-1}. While the total value of ecosystem services was high, farmers only benefited from agricultural and timber products, highlighting the need for government incentives to support wider adoption of agroforestry practices that benefit society.

3.3 Payments for ecosystem services

Payments for Ecosystem Services (PES) schemes are emerging as a promising tool to bridge the gap between the environmental benefits provided by agroforestry and the financial needs of farmers. These schemes offer a way to incentivise the adoption of agroforestry by compensating landowners for the ecosystem services their systems deliver. However, their design and implementation require careful consideration of local contexts and farmer preferences to ensure effectiveness and scalability.

Haile et al. (2019) use a discrete choice experiment with smallholder farmers in Ethiopia to assess their willingness to accept PES contracts promoting the integration of climate-smart agroforestry into monocultures. Their study shows that farmers perceive greater benefits from up-front payments, and that a small number of trees to be planted and short-term contracts are essential for participation. These findings reveal the need to consider farmer preferences and household characteristics when designing payment for ecosystem services schemes to encourage large-scale adoption of climate-smart agroforestry.

A broader review by Mayr et al. (2025) confirms the growing relevance of PES in agroforestry transitions, while highlighting the limited scope of current initiatives. Most PES schemes remain concentrated in the Global South and focus predominantly on carbon removal, neglecting co-benefits such as biodiversity, water regulation, or social equity. High transaction costs, small farm sizes, and land tenure uncertainties are identified as persistent obstacles to broader participation. The authors conclude that supportive policy and legal frameworks, such as addressing land tenure issues, can significantly improve the effectiveness and adoption of PES schemes to promote agroforestry.

In the European context, Tavernier et al. (2024) examine stakeholder perceptions of four economic incentive types (government subsidies, PES, payments for agroforestry products, and community-based schemes) in Flanders. PES linked to carbon sequestration emerges as the most promising, particularly under current EU environmental priorities. However, uptake is still limited by low consumer demand for agroforestry products and insufficient public awareness. The study emphasizes that raising awareness and gaining deeper insights into stakeholder preferences are essential to accelerate the development and effectiveness of these incentives.

Complementing these findings, Hagemann et al. (2025) analyse 39 result-based agri-environmental schemes across six European countries. Compared to action-based schemes, result-based payments offer a more flexible and performance-based approach but face low uptake by farmers due to issues such as limited advisory support, monitoring uncertainties and the risk of non-payment. The authors identify key design features of current schemes (e.g., adaptation to site- or region-specific conditions, training and extension, Sustainable payment structure) that could increase farmer participation, as well as current limitations, particularly the narrow focus of environmental objectives considered, high

monitoring costs and financing challenges. They also highlight the difficulty of directly transferring successful approaches to other countries due to differences in environmental conditions, farming systems and traditions.

Key Insights from Literature Review

The academic evidence reviewed in this chapter reinforces the strong economic and environmental rationale for investing in agroforestry, particularly when the full scope of ecosystem services is properly valued and monetized.

Cost-benefit analyses papers consistently show that agroforestry enhances long-term farm resilience while delivering meaningful social and economic benefits compared to conventional / monoculture systems. Despite these advantages, AF's adoption remains low. One significant barrier is that existing financial instruments frequently fail to capture the unique characteristics of agroforestry and its diverse portfolio of non-market benefits.

The ability to quantify co-benefits such as carbon sequestration, biodiversity enhancement, and water retention is critical to meeting this challenge. When these services are quantified and monetized, they can support incentive structures that align public policy goals with private investment interests, making agroforestry a more appealing and viable land-use option.

Payments for Ecosystem Services (PES) schemes are one example of an incentive structure that rewards farmers for maintaining environmental benefits. However, literature indicates that their performance is dependent on supportive policies, personalised implementation that considers local contexts and active farmer participation. Without these conditions, PES projects often face challenges such as high monitoring costs, administrative burdens, and uncertainties around land tenure.

The findings from the literature support the foundation of the ReForest Sustainable Financing Scheme. It helps sustain its main pillars (access to advisory services, ex-ante support, and action- and results-based payments), and emphasises the urgent need to incorporate and monetise ecosystem services as a key factor for cashflow generation. This approach allows for a more comprehensive financial model that acknowledges both the regenerative potential of agroforestry and the added value of participation in regenerative value chains.

4. INNOVATIVE FINANCIAL INSTRUMENTS FOR PROMOTING AF UPTAKE

As highlighted in the previous sections, AF systems require financing schemes that can account for their unique characteristics: long-term investment horizons, high upfront and opportunity costs, delayed returns on investments, provision of multifunctional socio-economic ecosystem services, and high-risk perception.

Unlike conventional agriculture, which is often optimized for profit seeking and short-term yield extraction, agroforestry is also peculiar because it values soil as a regenerative and long-term asset. In this setting, mainstream financial instruments (those built around commodity prices and large-scale monoculture production models) are inappropriate for the temporal and unique dynamics of agroforestry.

Chapter 4 explores how blended finance (the strategic combination of public, private, and philanthropic capital) can help bridge the gap between ecosystem value and financial viability. Drawing on insights from ReForest Living Labs, EU policy analysis, stakeholder engagement, literature, and global best practices, this chapter presents a range of financial instruments and real-world examples that can support the scaling of agroforestry.

- *Section 4.1* introduces the motivation behind designing finance mechanisms adapted to AF's unique needs and outlines the core principles of blended finance.
- *Section 4.2* focuses on the role of regional advisory systems and Living Labs methodology in enhancing investment capacity and providing field-level support to AF farmers.
- *Section 4.3* examines how banking institutions and guarantee instruments can address financial risk and unlock access to credit.
- *Section 4.4* explores private sector engagement through carbon and biodiversity markets, sustainable / long-term advanced purchase agreements (APA) contracts, and impact-driven capital.
- Finally, *Section 4.5* highlights the growing role of fintech platforms and digital tools in lowering transaction costs, improving data transparency, and facilitating inclusive access to agroforestry finance.

4.1 OVERVIEW OF BLENDED FINANCE APPROACHES AND MECHANISMS

A central challenge in designing a holistic financing framework for agroforestry systems is the integration of their positive externalities into projected cash flows. Most financial tools rely on standard cost-benefit analysis (CBA) models, which estimate net present value (NPV) based on future costs and revenues discounted over time.

However, this method tends to overlook non-marketable ecosystem services. While some of these co-benefits may be partially quantifiable and rewarded, through nature capital markets, for example, traditional CBA models often do not translate AF’s full potential into direct or predictable revenue streams. As a result, agroforestry projects are systematically undervalued and often excluded from profit-seeking investment portfolios.

Table 5 categorizes these blended mechanisms into four strategic approaches; each designed to target specific investment barriers and align financial incentives with long-term ecological and social outcomes.

Approach	Blended Finance Mechanisms
Community-Driven and Incentive-Based Funding	Instruments such as crowdfunding, philanthropic grants, forgivable loans, and tax incentives can lower barriers to entry by supporting early-stage planning and infrastructure.
Market and Investment-Based Financing	Solutions include impact bonds, development bank loans, long-term agri-food contracts, and ecosystem service markets (e.g. carbon or biodiversity credits), helping link AF projects to supply chains and nature capital revenues.
Risk Mitigation and Financial Stability Instruments	Tools like guarantees, debt swaps, solidarity levies, and insurance models can stabilize returns, improve creditworthiness, and buffer agroforestry projects against volatility.
Long-Term Support and Policy-Driven Incentives	Mechanisms such as impact investments with grace periods and ongoing public incentives help sustain long-term delivery of public goods and climate co-benefits.

**Table 5*: Blended Finance Approaches for AF. Source: own elaboration.*

In order to dive deeper into the universe of innovative mechanisms, chapter 4 is further divided into 5 subsections: (1) Regional Advisory Systems; (2) Guarantee Institutions and Development Banks; (3) Venture Capital, Seed Funding, nature Capital Markets, Advance Purchase Agreements (APA) and ESG investing; (4) Impact Investment Funds, Crowdfunding Platforms, and Philanthropic Networks; and (5) Partnerships with Startups and Digital Financing Tools.

Table 6 presents an overview of key agroforestry finance accelerators, which corresponds to the five subsections of Chapter 4 cited above. Each category is paired with real-world examples, offering a clear snapshot of how these blended finance instruments are being applied to advance agroforestry in practice.

AF Accelerators	Brief Description	Real Case Study - Examples
Regional Advisory Systems	Regional advisory systems improve the design, implementation, and performance of AF systems. The Living Lab methodology links scientific research to field-level practices through participatory experimentation and site-specific data.	ReForest Living Labs; Savory Institute; Climate Farmers; Life Terra; Alvelal; Åland; CREAF; Agroforestry Research Trust; Association Française d'Agroforesterie; Agroforst Deutschland
Guarantee Institutions	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

Development banks	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
Venture Capital and Seed Funding	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
Nature Capital (Carbon + Biodiversity Markets)	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)
Advance Purchase Agreements and ESG Investing	Long-term sourcing agreements with ESG-minded corporations that want to create a 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
Impact Investment and Crowdfunding Platforms	Funds are 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
Philanthropy and Networks Supporting AF	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
Partnerships with Startups and Financing Tools	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 6*: Summary of ReForest Innovative AF Financing Mechanisms. Source: own elaboration.*

4.2 Regional advisory services and living labs approach

The adoption and scaling of agroforestry systems depend heavily on the access and quality of regional advisory services. These services provide technical guidance and reduce the financial and administrative burdens associated with systems design, regulatory compliance, and access to finance and markets. In practical terms, contact with effective advisory support helps agroforestry practitioners reduce the time and cost involved in applying for subsidies, interpreting legal requirements, selecting suitable tree-crop combinations, and even engaging with buyers or intermediaries.

From an investment standpoint, strong advisory systems are expected to increase the NPV of AF projects by mitigating technical and operational risks, improving resource allocation, reducing costs, and strengthening long-term performance. Advisory services are particularly critical during the early

design phase, where planning errors can result in sunk costs and undesired outcomes, but are meant to be linked ideally over the whole life span of the project.

Empirical evidence supports this view. Do et al. (2020), working in Northwest Vietnam, tested their probabilistic decision analysis model to assess the adoption of seven agroforestry systems. Their research found that many AF farmers dropped out of their projects due to uncertainty, investment lags, and limited access to technical support. Similarly, Shahi and Singh (2024) found that the lack of advisory structures in rural Gujarat, India, significantly limited the adoption of profitable agroforestry models by small farmers. In Europe, Sollen-Norrlin et al. (2020) emphasised that the lack of field-based advisory networks and regional demonstration sites disrupts the expansion of agroforestry practices, particularly in areas where farming traditions favour monocultures.

Further studies stress the need for region-specific advisory approaches. Rhouma et al. (2024) highlight the value of incorporating Water-Energy-Food-Ecosystems (WEFE) Nexus indicators in tailoring advisory tools to resource-scarce and climate-vulnerable areas, particularly in the Mediterranean. Awazi et al. (2025) similarly underline the role of advisory systems in managing water-related ecosystem services in degraded landscapes. Friedrich and Feser (2022) show that locally embedded advisory networks, integrated with institutional and practitioner linkages, are more effective in reducing entry barriers.

As noted, quality and regional advisory models play a critical role in supporting agroforestry farmers, but it is still important for them to evolve beyond traditional extension services and to address the specific complexities and long-term nature of agroforestry investments. Under the ReForest project, FarmTree Tool responds to this need through research-based simulations of cash flow, biomass production, and carbon sequestration over 20 to 30 years. This approach enables advisors and farmers to test different scenarios, including changes in subsidy design, carbon pricing, and land use strategies, for example. Calibrated with empirical data from the ReForest Living Labs, the tool produces projections that reflect real-world biophysical and economic conditions, providing farmers with a customised assessment of their finances.

Tools like FarmTree can help farmers and advisors make more accurate plans, reduce financial uncertainty, and tailor decisions to local conditions. This kind of integrated approach also encourages better collaboration between researchers and practitioners, making it easier to share knowledge and scale up good practices. Over time, it offers a practical way to deliver consistent and data-informed support that reflects the diversity of landscapes across Europe.

Box 3 highlights a selection of field-based initiatives that are driving agroforestry adoption through practical, regionally adapted support. These organizations offer advisory services, monitoring systems, training, and demonstration sites that help translate agroforestry principles into actionable farm-level practices. Their work strengthens local capacities, links producers to regenerative value chains, and builds the technical foundation needed to scale agroforestry across diverse European landscapes.

Examples of Field-Based Initiatives Advising AF

Savory Institute (Global) provides Holistic Management training and Ecological Outcome Verification (EOV) to monitor land health. Their Land to Market platform links agroforestry producers to regenerative supply chains and mobilizes capital for nature-positive land restoration.

Climate Farmers (Europe) offers farmer-centered support for agroforestry planning, training, and monitoring. Their Carbon+ Program incentivizes practices such as tree planting and soil improvement, supported by digital tools for tracking ecosystem services and carbon outcomes.

Life Terra (EU-wide) is a pan-European initiative aiming to plant 500 million trees by 2025. Supports agroforestry and ReForestation efforts by providing digital tools, planting resources, and community engagement strategies focused on long-term land stewardship.

Alvelal (Spain) restoring one million hectares in the Altiplano through agroforestry, native ReForestation, and regenerative agriculture. Guided by the 4 Returns Framework, Alvelal combines ecological regeneration with rural economic development, supported by community-based advisory.

Åland (Finland) demonstrates practical agroforestry approaches including silvopasture, alley cropping, riparian buffers, and forest farming. Supported by local advisory systems, Åland provides a replicable model for temperate agroforestry integration in Northern Europe.

CREAF (Spanish ReForest Living Lab) advances agroforestry policy and finance by combining research, expert engagement, and co-creation methods. It also supports regenerative agriculture and forest management strategies adapted to global change, offering technical services to land managers.

Agroforestry Research Trust (UK) specializes in research and education on agroforestry systems, including forest gardening and tree crops. Provides training and practical resources to help farmers adopt sustainable agroforestry practices.

Association Française d'Agroforesterie (France) supports the development of agroforestry systems through research, policy advocacy, and capacity building. Works with farmers to integrate trees with crops and livestock to improve biodiversity, soil health, and farm resilience.

Agroforst Deutschland (Germany) is a national network promoting agroforestry implementation across Germany. Offers advisory services, conducts applied research, and supports farmers in adopting practices that improve soil quality and climate resilience.

Box 3: *Examples of Field-Based Initiatives Supporting AF. Source: own elaboration*

4.3 BANKING SECTOR

The banking sector continues to view agroforestry as a high-risk investment category. As previously stated, traditional lending models are misaligned with the structural characteristics of agroforestry like long payback periods, seasonal cash flows, and limited collateral possibilities (often associated with fragmented land ownership and mixed production systems). These factors tend to increase the perceived credit risk and volatility of agroforestry projects, making it less appealing to commercial banks and potential investors.

To address this gap, EMEA initiated a series of discussions with several **national guarantee institutions**, including ISMEA (Italy), AVHGA (Hungary), and the Hellenic Development Bank (Greece)**.** These contacts allowed us to showcase the ReForest Sustainable Financing Scheme, receive feedback and explore possibilities to incorporate agroforestry-specific products into national credit systems.

Although these institutions do not currently provide guarantees for agroforestry, they have indicated willingness to adjust existing instruments to meet the AF sector's demands.

Credit guarantees represent one of the most effective de-risking tools for mobilizing private capital in agriculture. They allow commercial lenders to offload part of the default risk to a public intermediary and provide collateral, therefore lowering their capital reserve requirements and increasing lending capacity. It was observed that, in most cases, national guarantee institutions can underwrite between 70% to 100% of the loan principal, depending on policy mandates and risk classification.

The European Association of Guarantee Institutions (AECM), with whom EMEA also held consultations, helped to better understand these trends. According to the AECM Statistical Yearbook (2023), over €20 billion in guarantees were issued to the agricultural sector by member institutions in 2023. AECM representatives also acknowledged the potential demand for customised guarantees for ecosystem-based land management approaches like agroforestry.

Beyond national mechanisms, **development finance institutions** such as the Global Environment Facility (GEF) and the European Investment Bank (EIB) have historically used subordinated debt and first-loss capital to attract private investment in environmental sectors. These instruments could be relevant in agroforestry, where delayed cash flows and increased perceived risk continue to discourage investor interests, and should also be considered as a potential AF financing accelerator.

Based on interactions with both farmers and the banking sector, it seems that access to **insurance** remains underdeveloped in the context of agroforestry. Climate-related risks, such as drought, flood, windstorms, and rising temperatures, can have a significant impact on both system establishment success and revenue stability, as documented in *Deliverables D5.2 and D5.4*. While CAP Pillar II allows for co-financed insurance schemes for annual crops and livestock, few products adequately address the long-term, multi-layered nature of agroforestry systems. Parametric insurance, based on weather indices or remote sensing triggers, offers a promising alternative due to faster and more transparent payouts. However, most of these products remain at the pilot stage and have not yet been mainstreamed into CAP-supported instruments (Hajdukovic, 2024).

Land ownership appeared to be one of the main topics of discussion with the banking sector, since European countries have had different Land Reforms at different times in history. Lands' scale and typology are also a big factor, which seems to be correlated with land ownership and also with farms' success in fundraising and being competitive at the market level. In regions dominated by large-scale and consolidated properties, subsidy schemes typically follow standardised formats, such as per-hectare or per-tree payments, which tend to align with commercial farming models and broader investment strategies. In contrast, regions with fragmented land ownership face more complex challenges. Small and medium-sized farms often operate under diverse legal and operational conditions, with limited access to credit and technical assistance.

These **structural differences** shape how financial institutions engage with agroforestry. In more consolidated systems, agroforestry can often be positioned as a bankable land-use strategy, particularly when linked to subsidy schemes or regulatory compliance. In fragmented settings, however, financing is hindered by higher transaction costs, weaker collateral bases, policy inconsistencies, and unpredictable revenue streams.

The banking sector plays a critical role in scaling agroforestry by offering credit lines, risk mitigation instruments, and infrastructure financing. Development banks and guarantee institutions enhance project bankability by reducing capital costs and perceived risks, consequently improving affordability for farmers and enterprises.

These financial instruments complement the ReForest Sustainable Financing Scheme by enabling early-stage investment, addressing long-term infrastructure needs, and supporting blended finance approaches. Alignment with EU funding frameworks and regulatory standards ensures that banking products support credible, transparent, and long-term agroforestry investments. Aside from capital provision, banks can bring additional expertise in financial structuring, monitoring, and compliance, which strengthens the scheme's ability to attract private co-finance and scale agroforestry across diverse European landscapes.

4.4 PRIVATE SECTOR

Private investment has an important role to play in scaling agroforestry. It can bring in performance-based incentives and open new sources of income for farmers. These sections show how voluntary carbon markets (VCM), emerging biodiversity credit schemes, and long-term results-based contracts in food supply chains can create real opportunities to channel more investment into agroforestry systems.

4.4.1 - Nature Capital: Carbon and Biodiversity Markets

The VCM continues to mature, offering a complementary route to the predominant public climate finance. Its credibility relies on trusted third-party standards, such as *Verra's Verified Carbon Standard* and the *Gold Standard*, which help ensure the environmental integrity of carbon credits through clear rules on permanence, additionality, and co-benefits.

At the EU's policy level, agroforestry's climate mitigation potential is being formalised under the CRCF Regulation. While agroforestry is not yet included under the EU Emissions Trading System (ETS), future compliance methodologies may expand to incorporate land-based sequestration. Notably, the revised ETS Directive increases the annual reduction rate of emission allowances from 2.2% (2021–2023) to 4.4% from 2028, signalling greater policy space for nature-based solutions (European Parliament and Council, 2023).

The proposed *Green Claims Directive* adds further relevance. It requires that companies making environmental claims, such as promoting carbon-neutral or biodiversity-positive products, must provide scientific evidence and independent verification. This could help strengthen the credibility of agroforestry-related claims in the marketplace while also highlighting the importance of reliable monitoring and reporting systems, especially for businesses aiming to meet ESG requirements.

On the demand side, pilot initiatives such as MoorFutures (Germany) and Carbon by Indigo (USA) demonstrate that private buyers are already engaging in premium markets for carbon and biodiversity credits generated by tree-based systems. These initiatives quantify impacts such as soil carbon storage, habitat restoration, and fertility improvement, positioning agroforestry within premium environmental markets. MoorFutures generates locally certified credits through peatland restoration, while Carbon by Indigo enables U.S. farmers to earn revenue from soil carbon sequestration, backed by third-party certification, for example.

Still, there are barriers to overcome. Agroforestry systems vary widely by region and farm type, and this complexity makes it harder to apply standard monitoring, reporting, and verification (MRV) methods. Smallholders and community-based projects often lack the capacity or resources to meet rigorous certification and disclosure requirements. Addressing these challenges will be essential to ensure that agroforestry can scale equitably and attract the private investment needed to unlock its full potential.

4.4.2 – ESG and Corporate Sustainability Strategies

Agroforestry offers a strategic opportunity for companies pursuing regenerative approaches within Europe. Unlike offsetting, which compensates for emissions through external projects, insetting improves environmental performance directly within a company's own supply chain. This approach aligns with the European Commission's emphasis on integrated sustainability practices and supports compliance with regulatory frameworks such as the Sustainable Finance Disclosure Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD), both of which prioritise transparency and accountability in environmental and social impacts.

Several organizations are building the bridge between ESG strategies and agroforestry by developing innovative financial tools, certification schemes, and nature-based sourcing models. *Box 4* presents examples of how these efforts are enabling companies to integrate agroforestry into their sustainability commitments while creating market incentives for regenerative land use.

Connecting ESG-Driven Companies to AF Through Nature Capital

Some organizations are bridging AF investment gap by combining it with carbon certification, regenerative transition programs, and nature-based financial instruments.

Landbanking Group develops financial contracts tied to measurable improvements in biodiversity, soil, carbon, and water. These assets can be held by companies as ESG-positive investments or used to meet biodiversity and climate goals.

Soil Capital operates a regenerative transition platform that enables companies to purchase high-integrity carbon certificates generated by farmers. Participating companies gain traceable impact along their supply chains, aligning with CSRD, and other ESG benchmarks.

Naturise supports large-scale agroforestry expansion through technical assistance and incentive payments. Its model appeals to ESG-focused buyers seeking biodiversity co-benefits, climate resilience, and regenerative land use in their supply chains or investment portfolios.

RobinFood offers a scalable model for ESG initiatives. Its digital forecasting and inclusive partner programs could serve as channels for integrating agroforestry products (e.g. climate-positive ingredients, tree-integrated supply chains) into sustainability-focused food platforms.

**Box 4: Connecting ESG-Driven Companies to AF Through Nature Capital. Source: own elaboration*

4.4.3 - Improving (MRV) Systems for Private Sector Engagement

For agroforestry to access carbon and biodiversity markets, as well as ESG-linked contracts in the agri-food sector, robust MRV systems are essential. Buyers, investors, and regulators increasingly demand credible, measurable, and independently verified evidence of environmental performance.

Models such as Hi-sAFe simulate tree–crop interactions to estimate changes in carbon stocks, biomass, and productivity over time. Similarly, CARAT calculates carbon storage above and below ground, offering insights into the long-term climate benefits of agroforestry. These tools are supported by satellite imagery, drones, and field-based sensors that allow real-time observation of environmental changes.

For MRV data to be trusted and actionable, it must be linked to official reporting channels. This includes national land registries such as the Land Parcel Identification System and greenhouse gas

inventories required under the UN climate agreements. Independent verification is also critical. External audits help confirm that projects meet standards related to durability, additional benefits, and accuracy, qualities that are essential for environmental markets to function with integrity.

To ensure agroforestry is fully recognised and supported, MRV systems must be linked to key policy frameworks such as the CAP, the EU Taxonomy for Sustainable Finance, and national climate strategies. Such integration allows agroforestry projects to qualify more easily for public funding and become visible to private investors. For instance, projects applying for eco-schemes or agri-environment-climate measures must demonstrate verifiable land use changes, which depend on rigorous MRV. When aligned with national greenhouse gas inventories, these systems also allow agroforestry-based carbon removals to be included in official climate reporting. This strengthens policy transparency and helps unlock access to both public and private climate finance.

4.4.4 - Agri-Food Contracts and Advance Purchase Agreements (APAs)

Outside formal environmental markets, agroforestry can attract private investment through long-term sourcing arrangements with food processors, retailers, and cooperatives. One promising model is the Advance Purchase Agreement (APA), which commits buyers to purchasing agroforestry products or associated ecosystem services under pre-agreed terms. These contracts offer income predictability for producers and improve their ability to access finance, an important factor given the high initial costs and delayed returns typical of agroforestry systems.

For producers, APAs tend to reduce financial uncertainty by securing future revenue and can help unlock co-financing or blended finance by demonstrating stable cash flows. For buyers, these agreements ensure access to traceable, climate-resilient raw materials that align with sustainability commitments. Contractual terms may include fixed prices, staged payments, or performance-based bonuses, creating shared incentives for long-term value creation.

These models are increasingly used in ESG-aligned procurement strategies, especially as companies face stricter sustainability reporting obligations under frameworks such as the EU CSRD. As expectations for supply chain transparency grow, so does the demand for verified and biodiversity-positive sourcing.

Several leading companies and initiatives are already applying Advance Purchase Agreement (APA) models to support sustainable land use transitions. *Box 5* presents examples of how these contractual approaches are being used to secure long-term demand for agroforestry products and ecosystem services, offering greater income stability for producers while meeting corporate sustainability goals.

APA-Based Sourcing in Practice

Fairtrade International offers minimum price guarantees for certified products, helping to reduce income volatility and support long-term sustainability for producers.

Nestlé's Sustainable Sourcing Program secures long-term supplies of cocoa and coffee from regenerative systems, directly linking procurement to climate and biodiversity targets.

Mondelez's Cocoa Life Initiative engages in multiyear sourcing agreements that encourage farmers to adopt diversified, shade-grown production systems rooted in agroforestry principles.

Unilever's Regenerative Agriculture Principles supports long-term sourcing partnerships that integrate agroforestry practices, aiming to improve soil health, biodiversity, and farmer livelihoods across key supply chains.

Danone's Ecosystem Fund supports projects that integrate agroforestry into dairy supply chains through co-financing and long-term purchasing commitments. The fund focuses on improving ecosystem services and strengthening relationships with local farmers.

Tony's Chocolonely Open Chain implements long-term purchasing arrangements with cocoa cooperatives practicing agroforestry, linking equitable trade to regenerative land use.

Box 5: *APA-Based Sourcing in Practice. Source: own elaboration*

4.4.5 - Green Bonds and Investment Aggregation Strategies

Green bonds offer a promising opportunity to further finance agroforestry. These instruments are specifically designed to support projects with clear environmental benefits. Under the European Green Bond Regulation (EU) 2023/2631, agroforestry initiatives that align with the EU Taxonomy and meet basic social safeguards may qualify for this type of funding. This opens the door for agroforestry to be more fully integrated into Europe's sustainable finance agenda.

One of the major challenges, however, is scale. Many agroforestry projects are relatively small and fragmented, falling below the investment thresholds of institutional investors. To overcome this, AF practitioners can be grouped together through aggregation strategies such as forming farmer cooperatives, public-private partnerships, or Special Purpose Vehicles (SPVs). The European Commission (2016) identified aggregation as a critical mechanism for unlocking capital for land use and resource-efficient projects, while the European Parliament (2022) emphasised the importance of strong oversight and standardised reporting to maintain credibility and avoid greenwashing.

To attract investor interest and maintain market integrity, aggregation must be supported by robust governance and compliance mechanisms. In this context, the EU green bond standard sets out specific expectations, including pre-issuance disclosures, external evaluations, and post-issuance reporting on how proceeds are allocated and what environmental impact they deliver (European Parliament, 2022). Meeting these requirements is essential to maintain transparency and investor confidence. With stronger support systems and faster certification processes, agroforestry could become a trusted and compelling use case within the growing European green bond ecosystem.

4.4.6 - Early-Stage Capital and Impact Investment for AF

Venture capital, private equity, and seed funding are crucial options for supporting agroforestry business models and developing technologies. These financing instruments are well-suited to early-stage and growth-phase AF ventures that often fall outside the scope of traditional lending, for example.

Box 6 presents leading global funds that channel capital into agroforestry, demonstrating its potential to deliver both environmental impact and financial returns.

Selected Global Examples
Campo Impact Fund invests in agroforestry and regenerative land-use models across Latin America and the Amazon Basin. The fund targets commercially viable projects with measurable environmental and social impacts, focusing on ReForestation, sustainable agriculture, and carbon credit generation.
Terra Bella Fund provides upfront capital to agroforestry and conservation initiatives that generate verified emissions reductions. The fund prioritizes nature-based solutions that support long-term sustainability and rural livelihoods.
Moringa Fund operates in Latin America and Sub-Saharan Africa, financing large-scale agroforestry ventures that integrate biodiversity goals with profitable land-use strategies. It seeks projects that deliver both economic returns and positive ecosystem outcomes.
Blue Earth Capital is a global impact investment firm with a focus on environmental and social sectors. The firm invests in sustainable agriculture and land use projects, including agroforestry, through private equity and credit investments, aiming to generate measurable impact alongside financial returns.

**Box 6*: *Early-Stage Capital and Impact Investment for AF (Global Examples). Source: own elaboration*

Europe's agroforestry investment landscape is evolving rapidly, supported by climate-aligned capital, emerging financial instruments, and growing policy recognition of nature-based solutions.

Box 7 showcases early-stage funds and platforms that are directing capital into agroforestry-aligned ventures, highlighting how regenerative land use is gaining traction as both an environmental and economic asset.

Selected European Examples

The Yield Lab Europe helps early-stage entrepreneurs create solutions that increase resource efficiency and sustainability in agriculture. Its portfolio covers biofertilizer and animal health breakthroughs that promote soil regeneration and ecosystem resilience, both of which are critical components of successful agroforestry systems. The Yield Lab supports solutions that decrease dependency on synthetic inputs, creating an enabling environment for agroforestry to scale within sustainable food production.

Propagate Partners is a company that supports the planning, financing, and implementation of agroforestry systems. It provides digital tools for farm design, offers advisory services to landowners, and facilitates access to capital through its investment platform. Recent backing from European investors, including The Nest and AgFunder, signals growing interest in agroforestry as a structured and scalable land use. Propagate's model shows how agroforestry can move from niche practice to investable asset class, supported by measurable environmental and financial outcomes.

AgFunder is a global investment platform supporting new business models in agriculture and food. Its portfolio increasingly includes companies working on regenerative land use and climate-positive farming. One example is Klim, a platform that helps farmers generate and sell carbon credits.

SLM Partners manages a fund focused on regenerative agriculture in Spain and Portugal. The fund invests in agroforestry, permanent crops, and sustainable land management practices, aiming to deliver both financial returns and environmental benefits.

Norrsken VC is an impact investment fund based in Europe, supporting startups that align with the UN Sustainable Development Goals. The fund invests in sectors such as climate, energy, and sustainable agriculture, providing early-stage capital to companies driving environmental and social impact.

**Box 7*: Early-Stage Capital and Impact Investment for AF (European Examples). Source: own elaboration*

These examples show that interest in agroforestry is growing, especially among investors focused on climate and sustainability. But turning this momentum into large-scale investment will require some key improvements. The sector needs better tools to measure impact, more bankable projects, and financing models that fit with current policy frameworks. Strengthening this foundation is essential if agroforestry is to move from the margins to a central role in Europe's green economy.

4.4.7 - The Role of Impact Investment in Agroforestry

Impact investment offers a promising way to finance agroforestry by focusing on long-term environmental and social outcomes, not just financial returns. Many investors in this space prioritize climate action, biodiversity conservation, and the well-being of rural communities. When these co-benefits are well articulated, agroforestry initiatives can easily attract impact-driven capital.

To access this type of funding, agroforestry stakeholders need to present their work in terms that resonate with impact investment funds. This means moving beyond technical language and translating practices on the ground into clear and outcome-based indicators. Metrics like carbon sequestration, improved soil health and consistent yield production help show how agroforestry delivers real value.

At the same time, the rise of mission-driven investors is also creating new opportunities for more inclusive financing. Crowdfunding and crowdlending platforms allow individuals to directly support agroforestry projects, often with small contributions and minimal administrative barriers. These

platforms do more than raise funds; they can build public engagement, trust and connect consumers with the landscapes behind their food and climate solutions.

Box 8 highlights initiatives that democratise investment in agroforestry, enabling individuals and institutions to support projects with measurable environmental and social outcomes while advancing equity and participation in sustainable land use.

Examples of Democratised and Impact-Oriented Agroforestry Finance

Crowdfarming is a European initiative that allows consumers to invest directly in agroecological farms. By enabling pre-purchase contracts, the platform provides farmers with upfront financing and guaranteed market access, including for agroforestry-based production.

GrowAhead is a global crowdfunding platform that connects individual donors with smallholder farmer cooperatives. It supports agroforestry and regenerative agriculture projects by funding activities such as training, seedling distribution, and long-term sustainability planning.

ReNature is a Netherlands-based organization that secures blended finance (including grants, seed funding, and sponsorships) for regenerative agroforestry demonstration projects globally. It works closely with farmers, corporates, and financial institutions to structure scalable finance solutions with high social and environmental returns.

Arara Seed also operates in Latin America and finances community-led agroecology and ReForestation initiatives. The platform places strong emphasis on Indigenous land stewardship, food sovereignty, and climate resilience, directing capital to grassroots efforts.

NatureVest is the impact investing arm of The Nature Conservancy, structuring and funding investments that support conservation outcomes. The platform has facilitated investments in sustainable forestry and agroforestry projects that deliver environmental and financial returns.

**Box 8*: *Examples of Democratised and Impact-Oriented Agroforestry Finance. Source: own elaboration*

In conclusion, this section shows that private sector engagement is essential to scaling agroforestry. Performance-based capital, long-term APA contracts and nature capital markets expand revenue opportunities and reduce risk for AF practitioners' financial planning. These mechanisms provide incentives for ecosystem stewardship, reward measurable outcomes, and attract co-financing from institutional investors and mission-aligned funds.

They are also central to the ReForest Sustainable Financing Scheme by sustaining the argument for results-based payments, investment aggregation, and supply chain integration. Alignment with EU regulatory frameworks, including the Taxonomy for Sustainable Activities and the CSRD, further enhances market credibility and financial transparency. Moreover, private investment not only brings additional capital but also contributes technical expertise, verification capacity, and access to value chains. Such engagement strengthens the economic foundations of AF and supports its integration into Europe’s broader climate and rural development strategies.

4.5 PHILANTHROPIC SECTOR

Philanthropic capital can play a catalytic role in advancing agroforestry, particularly during early-stage development when conventional finance is often risk-averse or unavailable. By prioritising long-term environmental and social outcomes over short-term financial returns, philanthropic actors can help fill critical funding gaps in areas such as research and development, farmer training, landscape restoration, and governance innovation.

Recent data confirm that philanthropic climate finance is gaining momentum. In 2023, global philanthropic contributions to climate change mitigation reached an estimated USD 9.3 to 15.8 billion yet still represented less than 2 percent of total global philanthropic giving (Climate Works Foundation, 2024). Foundation-based climate funding has increased to USD 4.8 billion, nearly tripling since 2019. Agroforestry-related sectors (forests, food and agriculture, and sustainable land use) have consistently been among the most supported, with cross-cutting strategies such as public engagement and sustainable finance also experiencing rapid growth.

The Global Alliance for the Future of Food led a joint declaration by 25 philanthropic institutions calling for a tenfold increase in funding for agroecology and regenerative food systems. Their report, *Cultivating Change*, estimated that transforming food systems will require between $250 and $430 billion annually. The declaration called for realigning public subsidies, scaling climate finance, and building stronger funding coalitions to accelerate this transition.

Philanthropic capital is also essential for developing the infrastructure required to make agroforestry a credible and investable model. This includes funding for MRV systems, carbon and biodiversity certification standards, and digital tools that enhance data accessibility and transparency. These elements are frequently overlooked by private investors, but they are critical to lowering barriers to market participation. Collaborative initiatives like the Tenure Facility, the Global Methane Hub, and the Drive Electric Campaign, for example, show how pooled philanthropy can deliver climate benefits while also promoting biodiversity conservation.

Philanthropic funding is also well-suited to promoting inclusive and equity-based changes. Targeted investment can help to empower Indigenous and local communities, increase community-led resource management, and enhance legal competence and benefit-sharing agreements. These investments are crucial to ensure that agroforestry transitions are both environmentally sustainable and socially equitable.

In addition to financing direct interventions, philanthropic actors have played an important role in strengthening the governance structures and coordination platforms that promote long-term agroforestry development. This support includes ongoing investment in networks and alliances that promote knowledge exchange, policy alignment, and collaboration among practitioners, researchers, and decision-makers from various regions and sectors.

Box 9 presents policy-focused platforms that support the integration of agroforestry into EU climate, biodiversity, and rural development agendas. These initiatives contribute to regulatory alignment, policy advocacy, and institutional coordination across member states.

Examples of Philanthropic Initiatives Supporting AF

The European Foundations for Sustainable Agriculture and Food (EFSAF) is a pan-European network of philanthropic institutions coordinating funding strategies to transform food and farming systems by 2030. Its members (e.g. Fondazione Cariplo, IKEA Foundation, Robert Bosch Stiftung, and Porticus) collaborate on agroecology, agroforestry, and regenerative land use.

The Fondation de France directly supports local agroforestry experimentation projects that integrate trees into farming systems to restore biodiversity, enhance soil health, and improve rural resilience. It fosters inclusive, community-driven approaches that strengthen environmental stewardship at the farm and landscape levels.

The European Climate Foundation promotes agroforestry through its work on sustainable land use and food systems, supporting policy change and cross-sector collaboration to align climate, biodiversity, and rural development goals. Its programs help position agroforestry within key EU policy instruments, encouraging integrated solutions across agriculture and climate policy.

Climate Emergency Collaboration Group advances agroforestry by funding land use initiatives within global climate campaigns, promoting resilience, coalition-building, and policy inclusion for nature-based solutions. It helps elevate agroforestry in climate discourse by supporting aligned advocacy and high-impact communications.

Life Terra is funded by the EU LIFE program and implements large-scale tree planting and agroforestry initiatives in Southern Europe, particularly Spain, Italy, and Greece. It engages local communities and schools, combining afforestation with food security and ecosystem restoration objectives.

Climate and Land Use Alliance (CLUA) supports agroforestry through funding for sustainable land use, indigenous land rights, and integrated tree-based agriculture to advance climate, biodiversity, and equity outcomes. It engages with regional partners to scale nature-based practices that combine environmental protection with social justice.

**Box 9*: Examples of Philanthropic Initiatives Supporting AF. Source: own elaboration*

Box 10 highlights practitioner-led networks that promote knowledge exchange, technical capacity, and peer learning. These alliances connect farmers, researchers, and civil society to support locally adapted agroforestry practices and strengthen bottom-up innovation.

Examples of European Agroforestry Networks and Alliances

EURAF (European Agroforestry Federation) is a leading European network advancing agroforestry through policy advocacy, research dissemination, and stakeholder engagement. EURAF plays a key role in influencing EU Common Agricultural Policy (CAP) reforms and integrating agroforestry into national strategies.

Agroecology Europe is a pan-European platform promoting agroecological transitions, including agroforestry, by bridging research, policy, and grassroots movements. The network supports system-level change through knowledge sharing and civil society mobilization.

Agroforestry for Africa-Europe (A4AE) is a bi-regional alliance facilitating collaborative research, knowledge exchange, and implementation of agroforestry practices between European and African partners to enhance sustainability and climate resilience.

INNOAF (Innovations for Agroforestry) is a Horizon Europe project developing digital tools, monitoring systems (MRV), and value chain innovations to support the effective deployment and scaling of agroforestry across Europe.

AgroforestMED Platform is a Mediterranean cooperation network dedicated to promoting both traditional and innovative agroforestry systems in dryland areas. It fosters regional knowledge exchange and supports sustainable land use solutions tailored to the Mediterranean context.

**Box 10*: *Examples of European Agroforestry Networks and Alliances. Source: own elaboration*

In summary, philanthropic finance brings essential value to the development of agroforestry by addressing investment barriers that public and private capital often cannot. It helps absorb early-stage risk, supports innovation, and builds the technical and institutional infrastructure required for agroforestry to scale.

Within the ReForest Sustainable Financing Scheme, philanthropic contributions can anchor co-financing partnerships, fund advisory and technical support, and enable robust monitoring systems for performance-based payments. They also promote inclusive governance by supporting community participation and equitable access to resources.

4.6 DIGITAL FINANCE AND CLIMATE TECH TOOLS

Digital innovation plays a transformative role in shaping the financial background needed to scale agroforestry. Tools such as fintech platforms, climate-smart analytics, and digital monitoring systems are helping to overcome persistent barriers by improving data transparency, reducing transaction costs, and allowing for better risk assessment.

One of the most promising developments is the use of financial simulation tools that model long-term agroforestry performance. The FarmTree tool (2024), for example, generates projections over 25 years or more, estimating important indicators such as Net Present Value (NPV), Internal Rate of Return (IRR), carbon storage, and changes in soil fertility. These forecasts help farmers make informed decisions while also supporting investment-grade reporting that speaks to funders and financial institutions.

Emerging digital infrastructure further strengthens the tradability and credibility of ecosystem service assets. Blockchain-based registries can improve the traceability of carbon and biodiversity credits and reduce the risk of double-counting, which increases investor confidence, for example. Artificial intelligence is also being used to automate environmental monitoring through satellite imagery, geospatial analysis and remote sensing. These AI-driven MRV systems reduce the cost of verification and support compliance with the EU Carbon Removals Certification Framework and the EU Taxonomy, making it easier for agroforestry projects to be formally recognised in national climate reporting.

Moreover, the fintech sector is also expanding financial access through new forms of capital. Peer-to-peer lending platforms, insurance products, and the tokenisation of environmental assets are helping to mobilise funding for smaller or community-led projects. These tools improve liquidity for farmers while allowing individuals and institutions to invest in nature through fractional ownership. At the same time, new bundled service models are being developed that combine digital finance, technical assistance and insurance into a single platform. These user-friendly interfaces make it easier for agroforestry practitioners to access the resources they need to plan, adapt, and grow.

As climate finance technologies advance, their integration into agroforestry will be essential to improve inclusiveness. These tools help align the needs of farmers with the expectations of financial institutions by offering transparent, data-driven insights and reducing information gaps.

To support this transition, the REFOREST Digital Toolbox is being developed as a central hub for agroforestry practitioners. Accessible through the DigitAF website, this initiative aims to bring together modelling tools, monitoring systems, and interactive dashboards to support scenario planning, track environmental outcomes, and generate reliable data for financing and certification processes. Current features include the FarmTree tool for long-term financial planning, with additional modules under development such as yield predictors, crop suitability assessments, and carbon estimators.

The full toolbox will be supported by a clear user roadmap, curated resources, and real-world case studies to guide decision-making at key stages of agroforestry planning. Efforts are also underway to align with complementary initiatives, such as DigitAF's Digital Tool Catalogue, ensuring a coherent and practical offering for farmers, advisors, and investors alike.

5. IMPACT ASSESSMENT OF REFOREST FINANCING SCHEME

The ReForest Sustainable Financing Scheme was developed to make agroforestry more accessible and economically viable for farmers. Inspired by the logic of Payments for Ecosystem Services (PES), the scheme is flexible enough to adapt to different farm conditions while helping land managers overcome financial and knowledge barriers. Its goal is to fairly recognize the holistic value of ecosystem services and support the long-term success of agroforestry systems across Europe.

To summarize our findings, and to illustrate the financial logic of the Scheme, *Figure 2* presents a stylized cumulative cash flow projection comparing two agroforestry investment scenarios for the same farm: the red one following the Traditional Subsidy based Framework (baseline), and the green being the one supported by the ReForest's scheme.

The chart is based on assumptions drawn from Living Lab experiences, academic research, and the FarmTree digital tool and reflects the typical economic pattern of agroforestry systems:

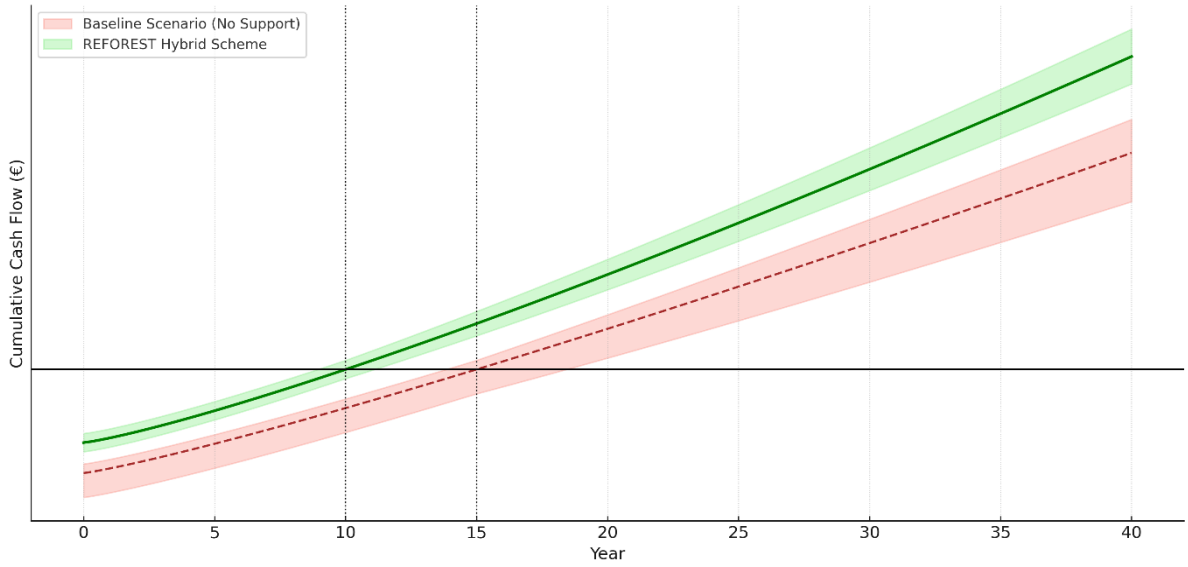

***FIG.2**: *Cumulative Cash Flow Projection – Baseline vs. ReForest Scheme. Source: own elaboration*
Note: The FarmTree tool supports the design of agroforestry projects by modeling long-term costs, revenues, and ecosystem service benefits across various tree–crop–livestock combinations. It uses ReForest farm-level input data, such as tree species, crop rotation, planting density, yield forecasts, labor costs, and maintenance schedules, to simulate annual cash flows over a multi-decade horizon. The tool applies time-phased cost and revenue curves that reflect the biological growth cycles of perennial systems and integrates assumptions about market prices, discount rates, and subsidy schemes. Scenario analysis allows comparison between conventional systems and agroforestry alternatives, making it easier for users to assess investment feasibility, break-even points, and long-term profitability under varying policy and market conditions.

The baseline trajectory, marked in red, mirrors and consolidates the average economic reality faced by many agroforestry practitioners today: prolonged negative cash flows, break-even delayed until (approximately year 15, in this theoretical scenario), and high exposure to unmitigated risks. These outcomes are driven by barriers mentioned throughout the report like limited upfront support, irregular public subsidies, and fragmented market access, for example. The shaded uncertainty band under this scenario expands significantly over time, reflecting increased cashflow volatility from weather shocks, market swings, and institutional fragmentation.

In contrast, the ReForest-supported scenario (green line) has a more optimistic financial forecast. Farmers can reduce their initial losses and reach break-even by year 10 with a structured combination of upfront and action-based payments, as well as regional advisory services (in this hypothetical scenario). From that point forward, revenues are expected to increase at a faster rate (steeper curve)

compared to the baseline scenario, partly due to increased productivity driven by regional technical advisory and digital tools.

The shaded areas in the chart represent financial risk. In the baseline model, the wider band indicates greater exposure to climate, market, and policy volatility, making returns highly uncertain. In contrast, the ReForest scenario shows a narrower band, reflecting more stable and predictable returns. This improved risk profile is due to integrated mitigation tools introduced in *Chapter 4*, such as credit guarantees, concessional loans, insurance products, business models aggregation strategies, and advance purchase agreements.

Next steps involve collaboration with REFOREST partners at the University of Bonn (WP6) to quantify the performance of the financing scheme using their existing simulation model. Their probabilistic (Monte Carlo) approach has been selected to reflect uncertainties related to subsidy design, market dynamics, and ecosystem service delivery.

In parallel, an initial mapping of relevant financial flows has been conducted to identify funding sources with potential alignment to agroforestry. *Table 7* presents a selection of existing public and private initiatives that support regenerative land use across Europe. While not all are agroforestry-specific, they do indicate a growing alignment between impact finance and the environmental benefits that agroforestry delivers. This list is expected to expand in future reports as part of ReForest's WP5 investigation.

Funder / Program	Funding Volume	Agroforestry Relevance	Source
European Investment Bank (EIB)	€3 billion package (aiming for €8.4B total)	for agriculture and other bioeconomy activities across Europe with focus on young farmers, gender equality and green investments	Link
European Union LIFE Programme	€5.43 billion (2021–2027)	Funds agroforestry projects (e.g. LIFE AgroForAdapt, MixForChange)	Link
European Bank for Reconstruction and Development (EBRD)	€16.6 billion in 2024, 58% on green projects	Supports regenerative agriculture, including Afn (many developing countries)	Link
European Climate Foundation	€61 million (2021)	Promotes AF through policy reform and climate-smart land use	Link
Impact Bridge Sustainable AgriFood Fund (Spain)	€150 million target in 2025	Spain's largest private equity fund specializing in sustainable agrifood, and it explicitly targets investments that promote climate adaptation, biodiversity, and regenerative agriculture (does not have a dedicated agroforestry fund)	Link

**Table 7*: Selected Impact Finance Initiatives Supporting Agroforestry and Regenerative Land Use in Europe. Source: own elaboration based on links attached*.

6. CONCLUSION

The current ***Mapping Report on AF Sector Finance and Policy III*** serves as a knowledge-based guide for policymakers, funders, and practitioners working to scale agroforestry through more effective and innovative financing approaches. It integrates analysis of EU and international policy frameworks, economic evidence from academic research and on-field insights from stakeholder engagement and Living Lab experiences within the ReForest project. Ultimately, this report connects policy momentum with financial design considerations, ensuring that the proposed solutions are both technically viable and grounded in practice. The objective is to promote the transition toward a more resilient AF scheme that contributes meaningfully to Europe's environmental, agricultural, and rural development goals.

The policy analysis presented in *Chapter 2* demonstrates that, while agroforestry is gaining visibility in high-level strategies (such as the CAP, LULUCF, Green Deal, and emerging carbon certification schemes), it still requires clearer implementation pathways, consistent valuation of ecosystem services, and better alignment between subsidy instruments and long-term investment cycles. The SWOT analysis at the end of the chapter supports these findings. It identifies strong alignment with EU policy goals and the ecological adaptability of agroforestry as key strengths. At the same time, it highlights ongoing challenges like administrative complexity, limited advisory support, and high upfront costs as weaknesses. It also points to growing opportunities in ecosystem markets and stresses the need to address structural risks like uneven national adoption and rural demographic decline to mitigate potential threats.

Building on this, the literature review in *Chapter 3* confirms that AF provides significant long-term net benefits, particularly in soil health, carbon sequestration, biodiversity enhancement, and water retention. However, these co-benefits are frequently delayed, context-dependent, and inadequately compensated under current financial support systems. The evidence also emphasises the importance of digital tools like landscape modelling, MRV systems, and integrated assessment frameworks in increasing the credibility and financial viability of AF projects. Furthermore, the review emphasises the importance of developing more inclusive valuation methods that account for both market and non-market ecosystem services, as well as designing PES schemes that reflect farmer preferences, lower transaction costs, and ensure equitable access, especially for smallholders.

Chapters 4 and 5 outline the economic logic behind the Scheme, showing how a mix of blended finance instruments can help make agroforestry a more attractive and investable option. Credit guarantees, concessional loans, early-stage seed capital, and payments for ecosystem services each play a role in lowering risk, improving cash flow generation, and supporting farmers throughout the different phases of adoption. Digital platforms, MRV systems, and certification regulations can improve access to financing. These components are informed by real-world barriers identified through ReForest stakeholder consultations and co-creation processes in the Living Labs, ensuring their relevance to diverse farming contexts.

The report's findings directly inform the structure of the ReForest Sustainable Financing Scheme (D5.4), whose application is detailed in D5.5. Designed in alignment with the current Policy Landscape as well as with the investment profile of agroforestry systems, the Scheme considers persistent barriers such as irregular cash flow, delayed returns, fragmented financing sources, and limited market access. Based on that, it proposes a structured model that combines ex-ante, action, and results-based payments, supplemented by regional advisory services and digital tools.

Looking ahead, the report also provides material for Deliverable D5.6, which will turn findings into actionable policy recommendations. These will focus on reducing regulatory complexity, aligning CAP

with private and climate finance, and equipping Member States to better integrate agroforestry into national strategies, for example.

Finally, it is important to note that further research is needed to test the marginal impact of the scheme in real-world conditions. This means quantifying the added value of each layer of the financing scheme in terms of cash flow generation and project valuation. Using empirical data from the ReForest Living Labs and applying the probabilistic decision model developed by partners at the University of Bonn (WP 6), the future study expects to calibrate financial simulations to reflect actual farm-level dynamics.

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