



REFOREST



Agroforestry adoption in Europe: Institutional Barriers, Incentives & Decision Support

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What is hindering agroforestry's widespread adoption?

- Well aware of agroforestry's benefits at the farm-level and landscape-level
- Why isn't it adopted?
- Two stakeholder workshops in 2023 and 2024



Institutional barriers to AF adoption

- Capture country-wise institutional barriers
 - Document, policy analysis, CAP Strategic Plans, literature review
 - Exchange with regional experts
 - Complement the mapping reports -> EMEA's D5.1: *Mapping Reports on Agroforestry Sector Finance and Policy 1*
- Qualitatively assessing with our dynamic management tool -> practical insights into how different funding structures influence the economic viability of agroforestry over time



Institutional barriers to AF adoption

1. Definition

CAP I Pillar
+
Forestry Regulations

Uniform density tree caps

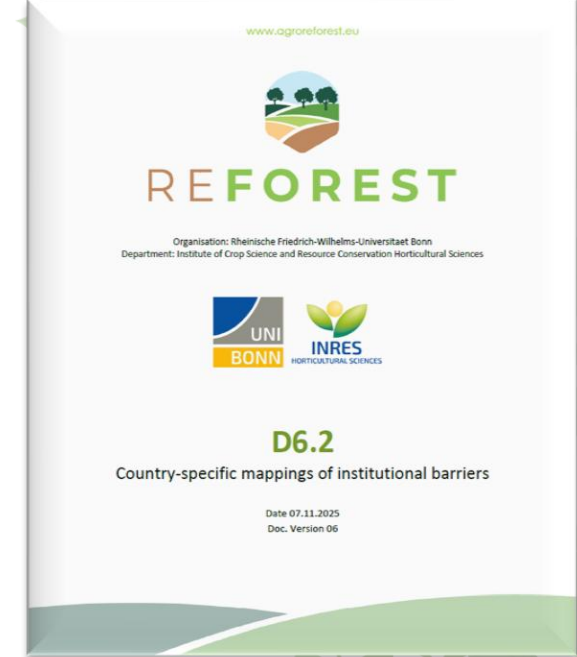
Static canopy thresholds

Crop-blind criteria

Exclusions: species, SRC

Bureaucratic transaction cost

Policy silos and inconsistent land codes



Institutional barriers to AF adoption

2. High Upfront Costs For Establishment

3. Delayed and Uncertain Returns

4. Inadequate or Poorly Designed Financial Incentives

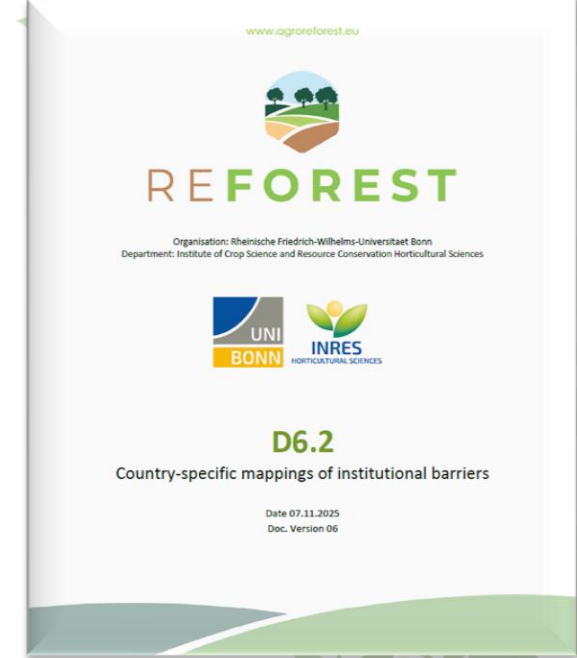
Belgium, Bulgaria, Czech Republic, Denmark, Spain, England, France, Germany, Hungary, Italy, Poland

5. Uncertain Policy Framework

6. Lack Of Advisory Services And Knowledge Dissemination

7. Lack of Market Access and Value Chain Development

- Support schemes rarely address all these
- Corroboration of findings with the EMEA farmers' survey



Existing Financial Support for AF adoption

- Financial Support in Germany
- European Agroforestry Institutional Support Database as per CAP 2023-2027

<https://doi.org/10.5281/zenodo.16877306>

Lower Saxony (+Hamburg, Bremen)

- Eligible: planting & protection material, establishment labour (consulting excluded!)
- Silvoarable systems only
- Farmers to cooperate with University of Göttingen
- Highest-ranking AF system is funded preferentially

Mecklenburg-Western pomerania

- Eligible: planting & protection material, establishment labour
- Staggered payment:
 - 1,566 €/ha* SRC
 - 4,138 €/ha* shrubs
 - 5,271 €/ha* timber/food
- Tree strips only
- Min. investment: 2,500 €

Brandenburg (+Berlin)

- Eligible: planning/consulting
- Other investment cost NOT funded
- Up to 18 h of consulting funded
- 25 % of consulting must take place at the farm

Saxony

- AF funding integrated in directive for agr. investments
- Effective investment must exceed 50,000 €
- Silvoarable systems only

Thuringia

- Eligible: planning/consulting
- Other investment cost NOT funded
- 3 AF-related subsidised consulting options (2000 € each)

Bavaria

- Eligible: planting & protection material, establishment labour
- Staggered payment:
 - 1,566 €/ha* SRC
 - 4,138 €/ha* shrubs
 - 5,271 €/ha* timber/food
- Tree strips only
- Min. investment: 2,500 €

Baden-Württemberg

- Eligible: planning/consulting
- Other investment cost NOT funded
- Min. 5 h of consulting
- 5 licensed consulting companies

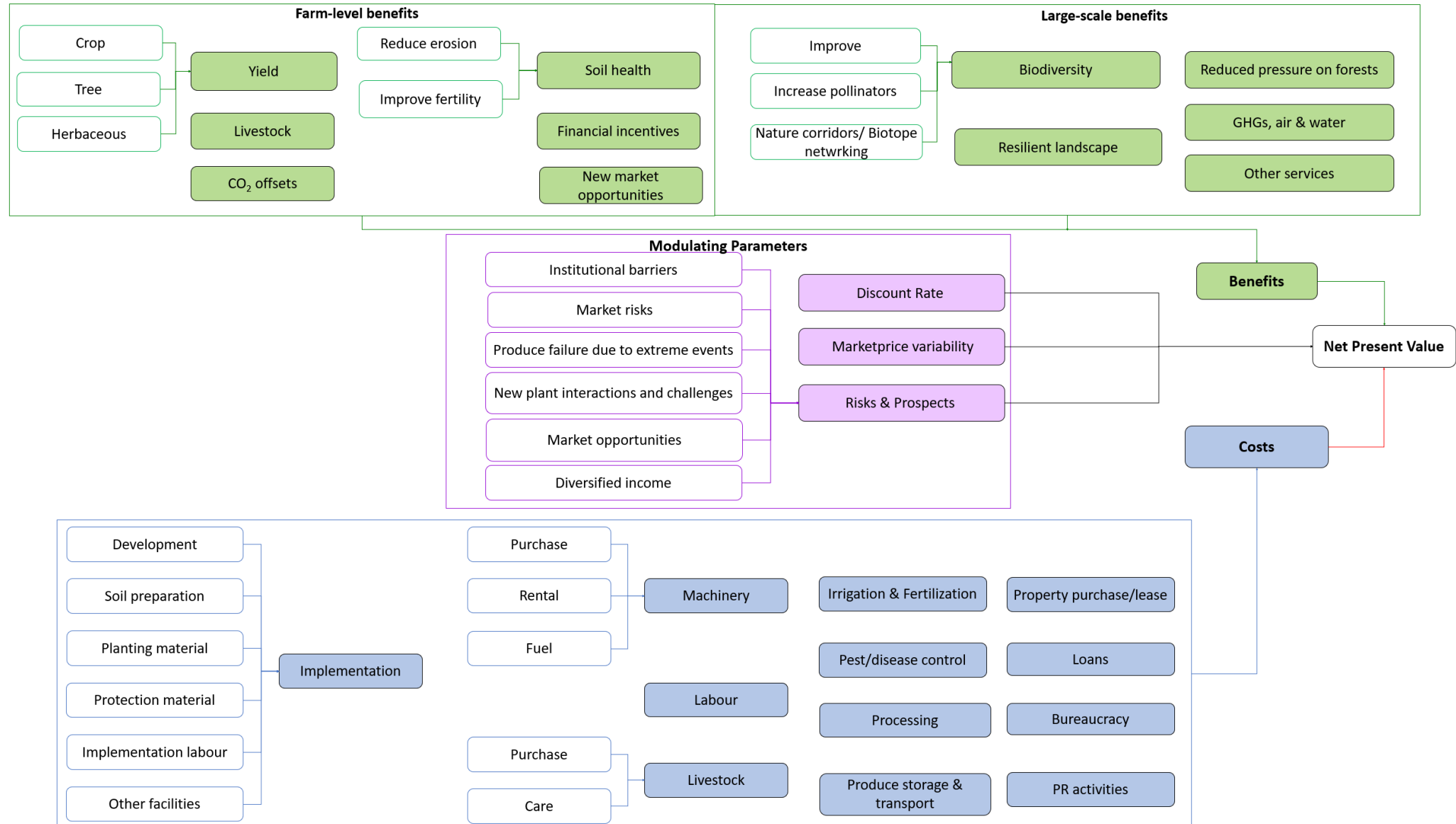
Swatek, et al., (2024). Agroforestry adoption in Germany: using Decision Analysis to highlight the effects of institutional barriers and funding options on system profitability, poster at EURAF2024.

Decision Support for AF adoption: Dynamic Management tool

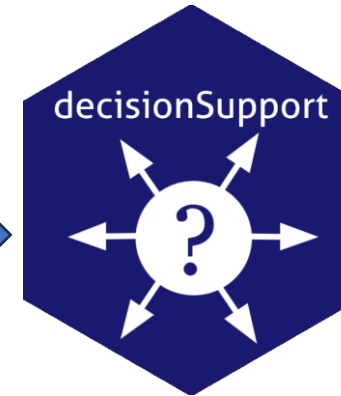
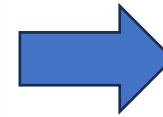
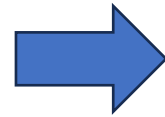
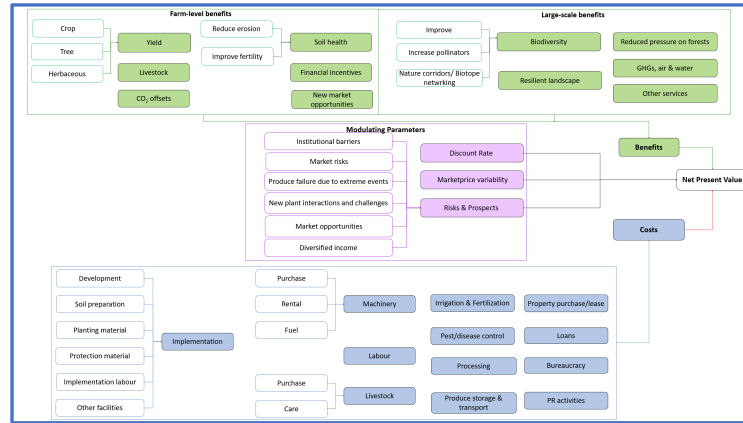
- A testing platform for support measures
- Using the Decision Analysis approach
 - Include everything that matters
 - Model system using all sources of information, including local and expert knowledge
 - Explicitly consider uncertainties about inputs, processes and outputs (probabilistic models)
 - Identify key uncertainties for measurement using 'Value of Information' analysis
 - Update model, when new information becomes available



Comprehensive Conceptual Model



Modelling Process



```

#Crop rotation in R system
#Ar Einkorn yields (einkorn_indices) <-
  v((Ar_einkorn_yields, cv_einkorn_yield, length(einkorn_indices)) * (1 - perc_yield_reduction(einkorn_indices)) *
  Arable_area_Ar * Ar_chance_perc_crop_fall * Ar_chance_perc_weather_fall)

Ar_einkorn_benefit <- v((einkorn_price, cv_einkorn_price, n_years) * Ar_einkorn_yield

Ar_wheat_yield(wheat_indices) <-
  v((Ar_wheat_yields, cv_wheat_yield, length(wheat_indices)) * (1 - perc_yield_reduction(einkorn_indices)) *
  Arable_area_Ar * Ar_chance_perc_crop_fall * Ar_chance_perc_weather_fall)

Ar_wheat_benefit <- v((wheat_price, cv_wheat_price, n_years) * Ar_wheat_yield

Ar_dinkel_yield(dinkel_indices) <-
  v((Ar_dinkel_yields, cv_dinkel_yield, length(dinkel_indices)) * (1 - perc_yield_reduction(einkorn_indices)) *
  Arable_area_Ar * Ar_chance_perc_crop_fall * Ar_chance_perc_weather_fall)

Ar_dinkel_benefit <- v((dinkel_price, cv_dinkel_price, n_years) * Ar_dinkel_yield

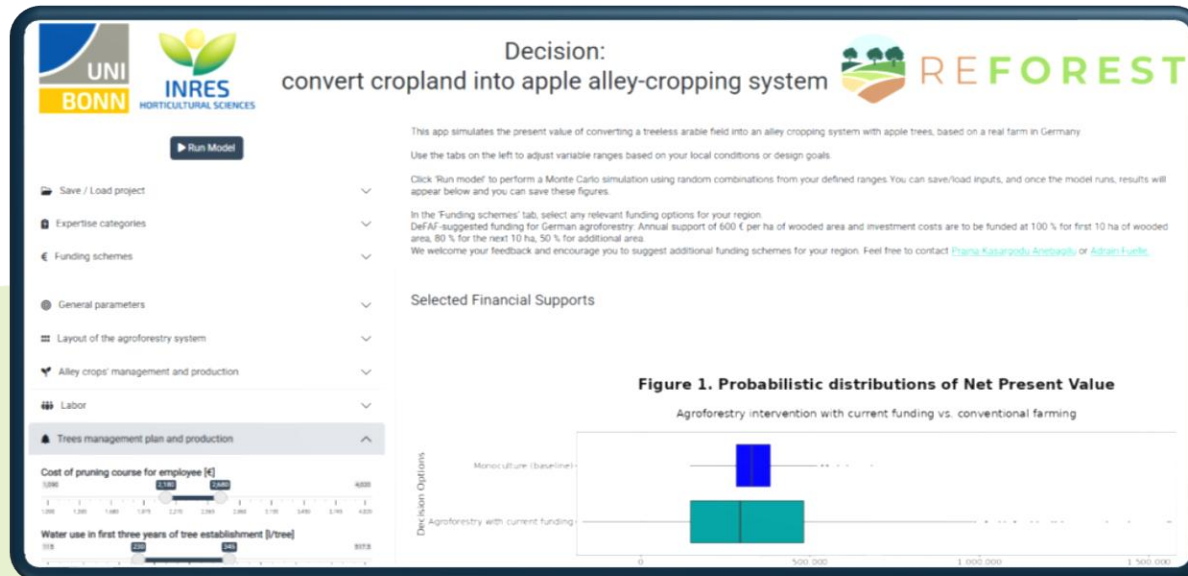
#Tree component - nuts in ar system
Ar_nuts_yield <- rep(0, n_years)
EST_subsidy <- rep(0, n_years)

#yield of one nut tree [kg/tree]
Ar_nuts_yield <- goimport_yield
max_harvest <- nuts_yield_max
time_to_first_yield_estimate <- time_to_first_nuts
time_to_second_yield_estimate <- time_to_second_nuts
first_yield_estimate_percent <- nuts_yield_first
second_yield_estimate_percent <- nuts_yield_second
n_years <- n_years
var_cv <- var_cv
no_yield_before_first_estimate <- TRUE
)

#yield of all nut trees [kg] considering risks
Ar_tot_nuts_yield <-
  Ar_nuts_yield * num_trees * Ar_chance_perc_crop_fall * Ar_chance_perc_weather_fall

#Calculate how many kg have nuts quality and can therefore be marketed at a higher price (pack_nuts) and
#the rest are used for making oil
PC_pack_nuts <- v((pc_pack_nuts, var_cv, n_years) / 100
pack_nuts_yield <- Ar_tot_nuts_yield * PC_pack_nuts
oil_nuts_yield <- Ar_tot_nuts_yield * (1 - PC_pack_nuts)

#the benefits from nuts are calculated by multiplying their yields by their respective prices
Pack_nuts_benefit <-
  v((pack_nuts_price, var_cv, n_years) * pack_nuts_yield
oil_nuts_benefit <-
  v((oil_nuts_price, var_cv, n_years) * oil_nuts_yield
  
```



Dynamic Management Tool: Catalogue of Systems



An alley cropping system with apple trees, based on a real farm in Germany

A walnut alley cropping system with vegetable crop rotation, based on Living Lab in Flanders, Belgium

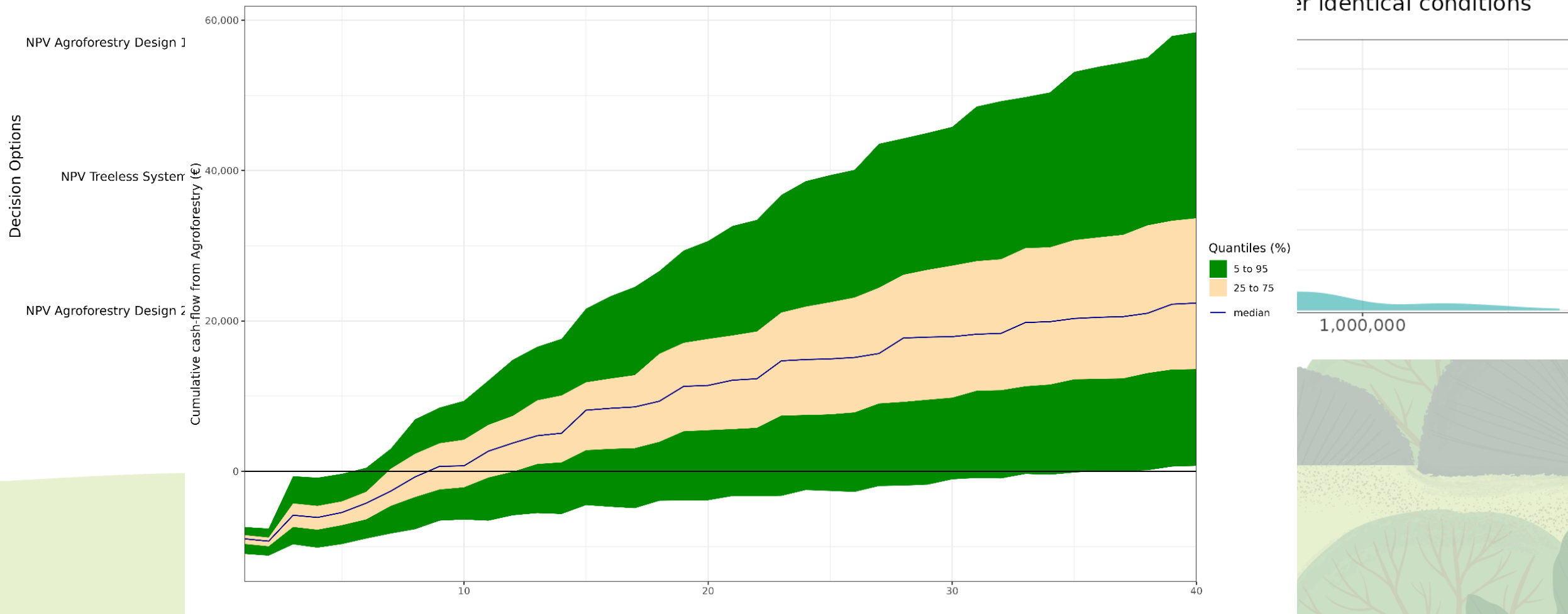


A fruit tree system with multiple species, honey production, and a traditional orchard meadow, based on a plan for an agroforestry farm in Germany

A silvopastoral agroforestry system, planned for our UK Living Lab. Additionally, two agroforestry designs are compared



Dynamic Management Tool: Catalogue of Systems





REFOREST



EMANES ANNUAL CONFERENCE 2025

Finance Scheme for upscaling Regenerative Agroforestry

Tiago Zibecchi, EMEA Researcher



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Ultimate goal is to upscale AF in the EU by Designing and Testing a Sustainable Finance Scheme

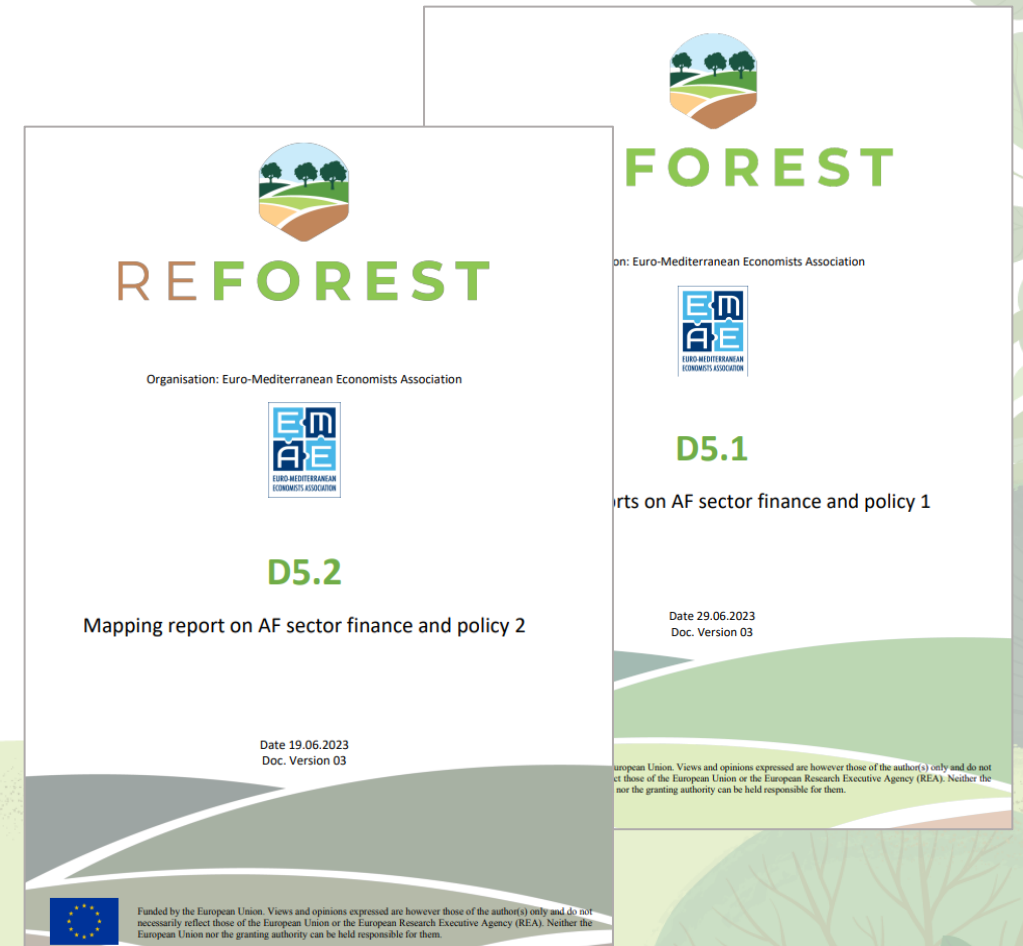
For that, we had to first understand EU's current Policy and Finance landscape. What are the underlying conditions? Barriers? Opportunities? Drivers? Incentive Mechanisms? Existing Gaps? Trends?

Policy	Finance
Regulatory Framework: What are relevant certifications / laws / projects in place affecting AF farmers?	Farmers' financial situation: Is it professionalized? Do farmers have clear business plans? Indicators: Cash-Flow projections? ROI? Debt? Loans conditions?
Demographics: Who are AF farmers? Average profile? Farms Size? Maturity/ Adoption Year? Skills? Human Resources? Infrastructure? Cooperatives?	Market Orientation: Value chain? Market Access? Consumers (Demand side)? Who are the stakeholders? Investors? Risks?
Country-specific Analysis: What are differences concerning Land Tenure, Land Use and Distribution, Typology, Public Subsidies, Taxonomy, Advisory Services, Private sector contributions, etc...?	Innovation, Digitalization and MRV Efforts: ES tracking (Carbon, Biodiversity, Soil, Water)?

Series of Mapping Reports



Prepared and published by Tiago Zibecchi (2025)



Prepared and published by Ivan Hajdukovic (2023)

15/12/2025

Mapping Report - Policy

MOTIVATION

- **Country-level Case Studies Analysis** (Typology; Taxonomy; Historical Land Reforms, Use and Distribution; Advisory Service; Fiscal Budgets)
- Evaluation of recent CAP and Green Deal frameworks (**EU Policy Updates**) to identify gaps and opportunities for AF
- Assessment of public, private, and philanthropic funds for AF projects (**innovative and blended finance incentive mechanisms**)
- Identification of **structural barriers** and **enabling conditions** for investment uptake
- **Economic Literature review** on Payments for Ecosystem Services (PES), AF's Economic Valuation and CBA models

What it's in dispute at a global level?

EU Commission's "**Triple Win Scenario**" in agrifood policy.

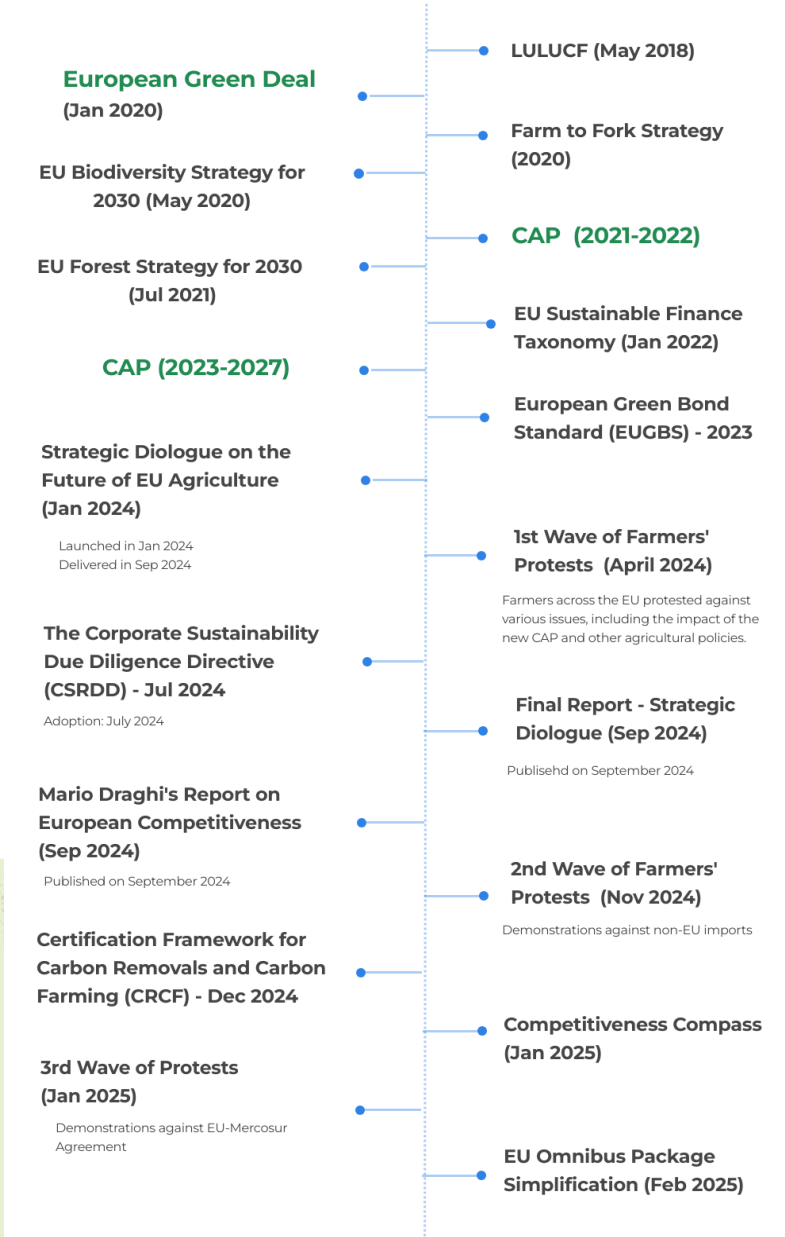
1. improving farmer livelihoods
2. lowering carbon emissions
3. ensuring food security and price stability

+ COP and Trade policy Agreements considerations



EU Policy Updates

Timeline and Implications to Agroforestry



Mapping Report - Finance

MOTIVATION

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?*



Key Insights from Literature Review

Agroforestry delivers strong long-term benefits, enhancing farm resilience and generating social and economic value compared to conventional or monoculture systems (Thiesmeier & Zander, 2023; Alcon et al., 2024; Kay et al., 2019; Torralba et al., 2016). Yet adoption remains low because existing financial instruments rarely account for the system's long-time horizons, risk profile, and ecosystem co-benefits.

Valuation studies show that when ecosystem services are quantified and monetized, agroforestry delivers higher total economic value (García-Rubio et al., 2024; Kay et al., 2019; Alam et al., 2014). These insights support incentive structures that connect public policy objectives with private investment flows.

Payments for Ecosystem Services (PES) can reward farmers for environmental benefits, but evidence shows they work best when supported by strong policies, tailored contract design, localized implementation, MRV uptake and advisory services (Haile et al., 2019; Mayr et al., 2025; Tavernier et al., 2024; Hagemann et al., 2025). Without these conditions, PES faces challenges such as high monitoring costs, administrative burdens, and land-tenure constraints.

Overall, the literature confirms the need for financing models that recognize ecosystem service value, reduce early-stage risk, and align incentives with farmer behavior: core principles reflected in the ReForest Sustainable Financing Scheme.

Design and Application of ReForest Financing Scheme

Application



Prepared and published by Tiago Zibecchi (2025)

Theory



Prepared and published by Ivan Hajdukovic (2024)

15/12/2025

Proposed Sustainable Financing Scheme for AF

Ex-Ante based
payments

Action based
payments

Result based
payments

Advisory Services

Ref.: COWI, Ecological Institute, and IEEP (2021); Den Heder (2017); Guimarães et al., (2023); Hadjukovic (2023); Kay et al (2019); Mc Donald et al (2021); Sheid et al (2023)

The Sustainable Financing Scheme was co-designed in Deliverable D5.4 (Hadjukovic,2023) through iterative consultations with REFOREST partners and Living Labs.

It integrates findings from WP5 Mapping Reports, Stakeholder Feedback, and Literature Review on blended finance and PES mechanisms to create a hybrid model stress-tested with LL's and extended EU & UK farmers.

Scheme's Methodological approach

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

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

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

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

Baseline Scenario (Subsidies/ CAP based)

5 Year Prototype Phases*	Proposed Scheme	Traditional / Subsidiary Based Payments
Prior to Project Implementation (Upfront)	Ex-ante payments	<ul style="list-style-type: none"> - CAP Pillar I & II -> Planning and initial setup grants for feasibility studies, land assessment, and initial project setup. - State Aid -> Initial research and infrastructure setup funding.
Year 1: Establishment of AF Systems	Action-based payments	<ul style="list-style-type: none"> - CAP Pillar I (Eco-schemes) -> Subsidies for sustainable planting practices, rewarding practices that benefit the environment and climate beyond usual requirements.
Years 1-5: Management of AF Systems	Hybrid payments	<ul style="list-style-type: none"> - CAP Pillar II (Rural Development) -> Funding for ongoing management and operational costs, enhancing system resilience and productivity. - Operational State Aid -> Support for sustainable agricultural operations. - Direct Payments -> Basic income for compliance with sustainability practices.
Year 5*: *or End of the Project	Result-based payments	<ul style="list-style-type: none"> - CAP Pillar II: Rewards for achieving sustainability targets at project completion.
Extra / Conditional Payment Services	Other existing Payments	<ul style="list-style-type: none"> - Young Farmers: Targeting under 40-year-old farmers - CRISS: Targets smaller farms for higher per hectare support. - PSF: Simplifies payments to reduce burdens.

Financing Scheme Living Labs' Application

Overall Data

Secondary Data

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

Primary Data

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

ReForest Living Labs – Descriptive Data

Final_Data (14 observations)

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

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

Clean_Data (10 observations)

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

Belgium (1); Bulgaria (1); Czech Republic (2); Denmark (1); Germany (1); Hungary (3); England (5)

Living Labs Survey shows

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

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

Living Labs Survey shows

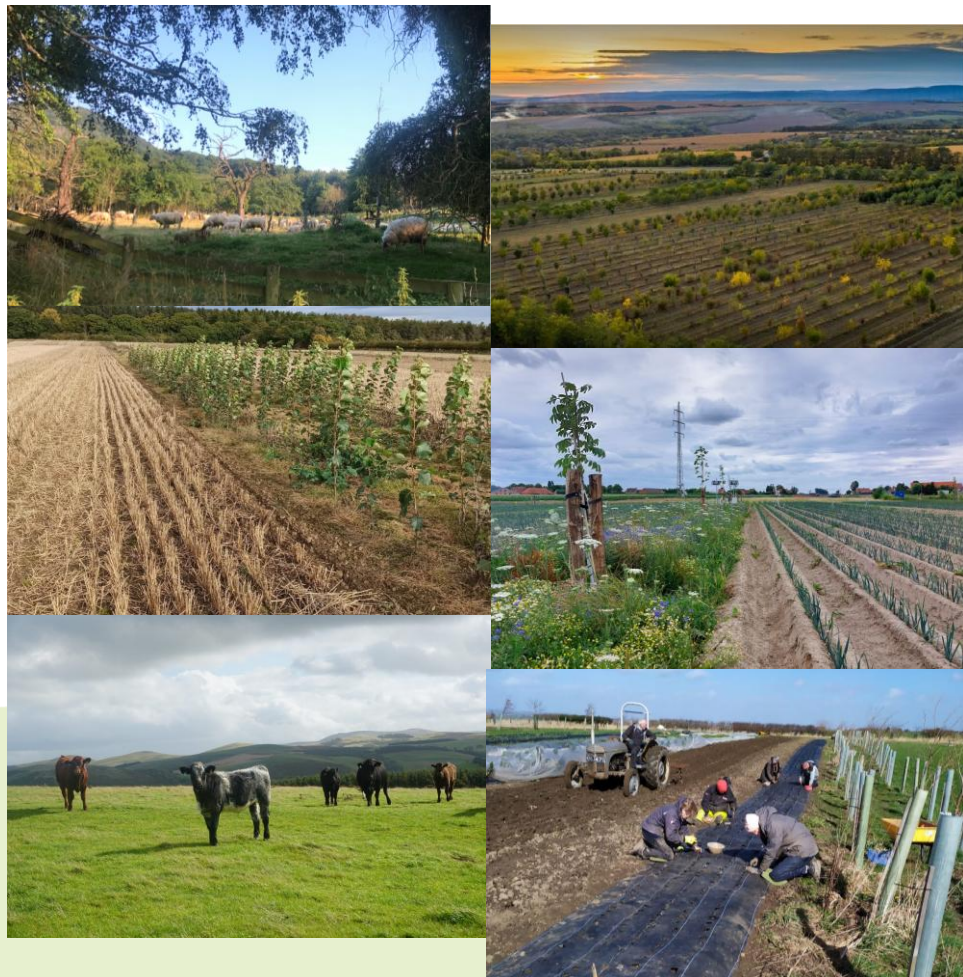
Financing Gap	Only 1/3 of farmers say their Current Financing Scheme is enough to maintain their AF practices
Private Sector Involvement Gap	Only 1/3 of farmers engaged with Private Sector Investments
Advisory Service Gap	Around 60% of farmers are connected to some form of Advisory Services

** Data Based on 38 Farmer responses from five EU countries (Bulgaria, Czechia, Germany, Hungary and the UK) under the ReForest D5.5 survey.*

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

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

Living Labs Interviews shows



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

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

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



REFOREST



Upcoming Research Paper*

Quantifying ReForest Financing Scheme impact on farmers' performance using Decision Analysis Model



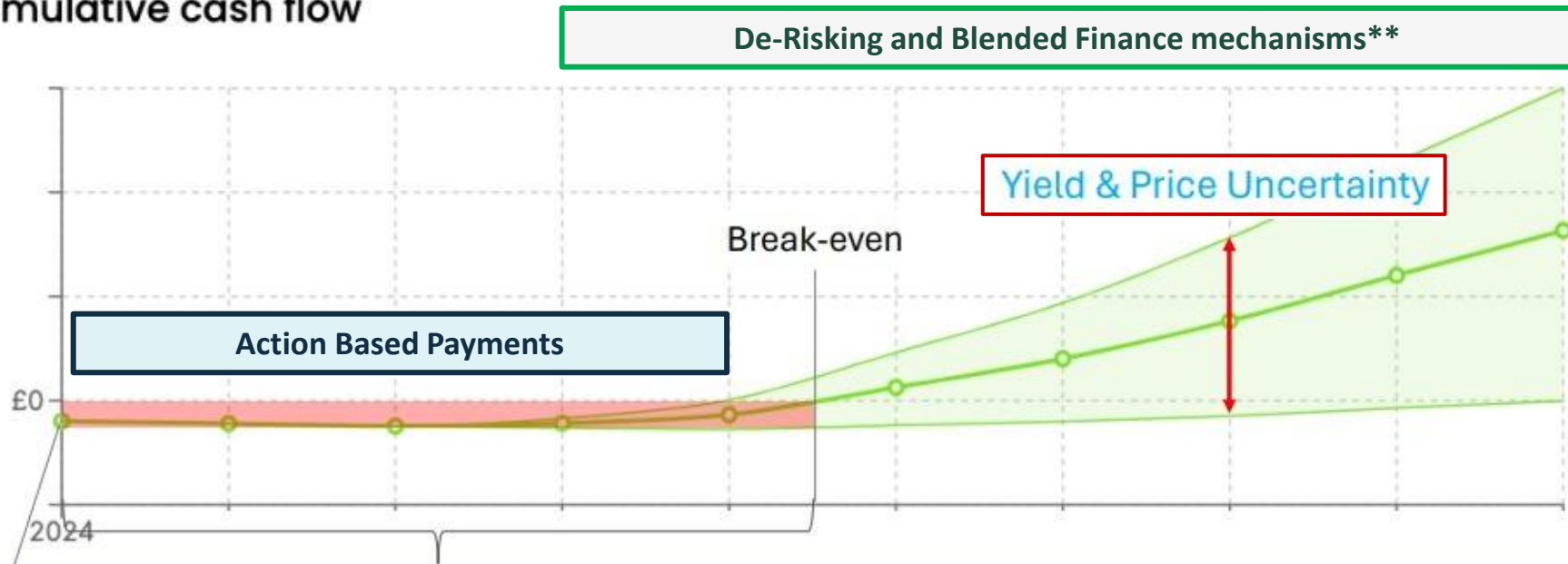
Funded by the
European Union

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ReForest Financing Scheme

Stylized Typical AF Farmer Financial Projection

Cumulative cash flow



Ex-Ante Payment

5-20 years (no revenue & maintenance costs)

Initial investment
(trees, planting etc)

Hybrid - Results Based Payments

Advisory Service

Deep
Roots

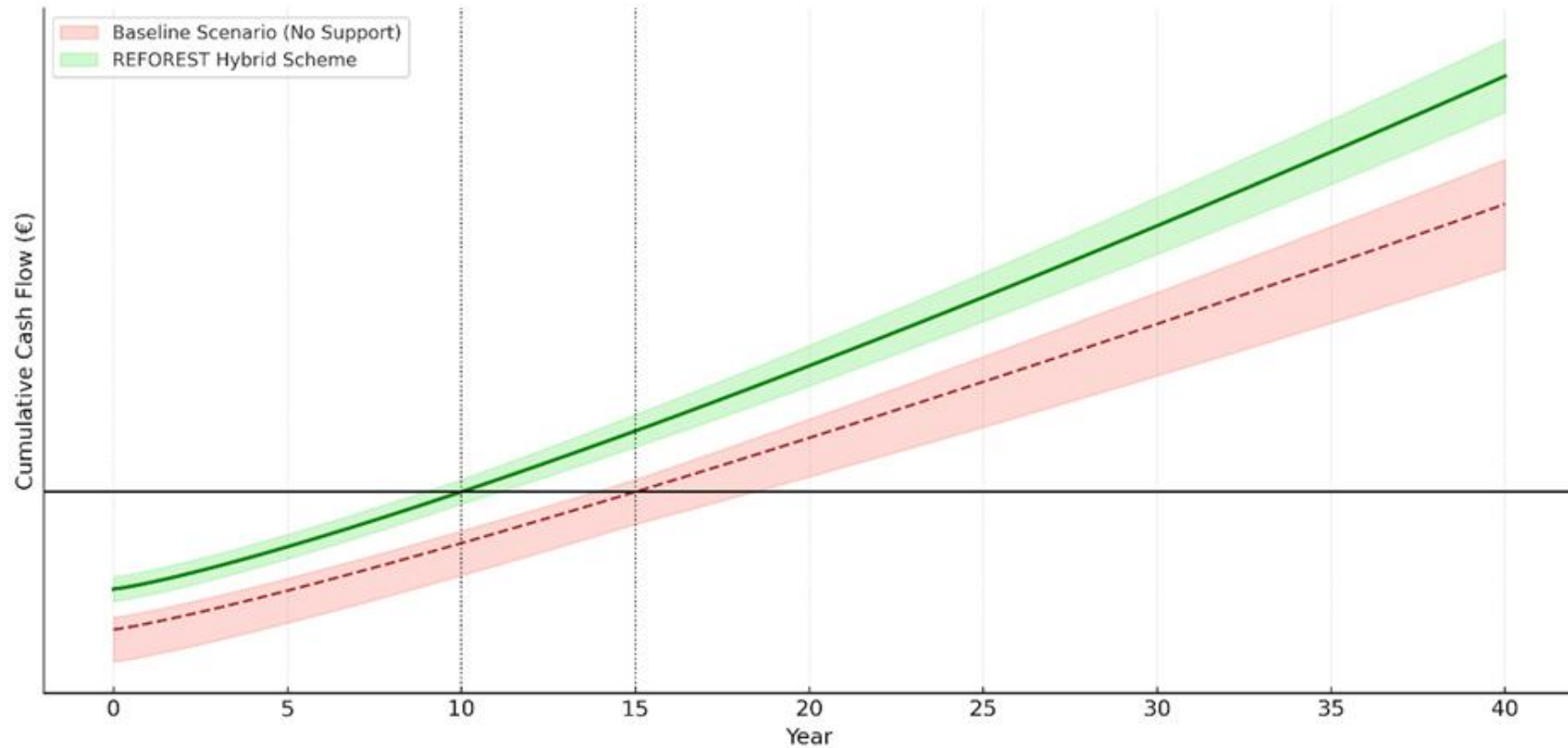
De-Risking and Blended Finance mechanisms**(1/2)

Incentive Mechanisms	Brief Discription / Economic Rationale	CBA Model Application / Funding Channel	Real Case Study - Examples
Seed Funding and Grants from NGO and Philanthropic Foundations	Provide early-stage or transition funding for AF projects through grants, concessional loans, or catalytic capital from major donors, foundations, and impact-driven funds. <i>*Co-funding schemes that blend donor capital with public subsidies or guarantees</i>	<ul style="list-style-type: none"> One time - Upfront funding [€] Annual (periodic) - Seasonal/ Seed Funding funding [€] 	GIZ; Climate and Land Use Alliance (CLUA); Moringa Fund; Terra Bella Fund; UNDP Small Grants Programme; WWF Landscape Finance Labs; EIB/GEF blended pilot funds
Nature Capital Markets and Certification Schemes	External accredited organs that measure and certify carbon storage and biodiversity enhancements, increasing project credibility and investment appeal	<ul style="list-style-type: none"> Carbon Market Credits <i>*case study: analysis on the decision to join Carbon market – size and age matters</i> MRV funding support [€] Cost of Certification / Sponsors [€] 	Verra (VCS) and Jurisdictional and Nested REDD+ (JNR); European – ETS and Voluntary Schemes; CRCF Regulation Policy; Gold Standard; emerging biodiversity markets; JNR & jurisdictional REDD+
Impact Investment, Blended Finance & Crowdlending and Crowdfunding Platforms	Funds looking for positive social and environmental returns. Series of online platforms that raise funds from many investors, ideal for community-based, cooperatives or smaller agroforestry projects.	<ul style="list-style-type: none"> Loan amount [€] Interest Rate [%] Repayment of loan from year [grace periods] Annual Repayment amount [€/year] 	AraraSeed; Growahead; Crowdfarming ; Greenmatch, Sitawi Finance for Goodblended funds under GEF/IFAD; Triodos sustainable agriculture financing
Risk-Mitigation / Sharing Instruments	Reduce the financial exposure of farmers and lenders, enabling long-term investments with delayed returns. These instruments cover early losses, climate shocks, or credit risk, making lending more accessible and lowering financing costs.	<ul style="list-style-type: none"> Initial investment risk covered by Guarantee instruments (collateral component) [€] First-Loss Capital & Climate Insurance <i>*case study: Parametric Insurance</i> 	USAID's Development Credit Authority (DCA), African Development Bank's Partial Risk Guarantees, European Association of Guarantee Institutions (AECM), AVHGA, ISMEA, emerging parametric insurance (e.g., Oxfam, WFP pilots)

De-Risking and Blended Finance mechanisms** (2/2)

Incentive Mechanisms	Brief Discription / Economic Rationale	CBA Model Application / Funding Channel	Real Case Study - Examples
High-Quality, Site-Specific Advisory & Technical Assistance Services	Specialised advisory services improve farmer decision-making, reduce design errors, and increase long-term productivity. Also improves access to financing by providing management plans, budgets, and documentation required by lenders or public authorities.	<ul style="list-style-type: none"> • One-time consultation cost [€] • Annual Cost of Service [€/year] • Rate over all experience with adv service [%] • Rate the service based on the design created from advisor [%] 	ReForest Living Labs, Agforward (UK) Agroforestry Network, Dehesa Advisory Service (Spain), Bavarian State Institute for Agriculture (Germany), (Danish) Agricultural Advisory Service, (Hungarian) Research Institute of Organic Agriculture, (Czech) Agroforestry Association
Integrated Value-Chain & Processing Infrastructure Finance	AF becomes economically viable when farmers have access to processing, storage, logistics, and market infrastructure. Dedicated finance for value-chain assets (e.g., nut cracking, fruit drying, timber processing, cold storage) increases product value and reduces post-harvest losses.	<ul style="list-style-type: none"> • Specific /favoring credit lines *case study on the decision to join cooperatives • Cost of shared cooperative equipment [€] • Annual operation and maintenance cost for infrastructure [€/year] 	Multiple Development Banks, European Investment Bank (EIB), IFAD Projects, national cooperative banks; development finance institutions (DFIs); IFAD value-chain projects; EIB agriculture infrastructure loans; national rural development grants; cooperative processing clusters in Spain, France, Italy.
Advance Purchase Agreements (APAs) & ESG-Aligned Procurement Contracts	Forward long-term contracts secure future revenue streams by guaranteeing the purchase of AF products before production. APAs reduce price volatility, support early investment decisions, and strengthen farmers' bargaining power in value chains.	<ul style="list-style-type: none"> • Carbon and biodiversity forward contracts / Price Guaranteed at [€/t] • Reduction in price uncertainty [%] • Additional price consumers are willing to pay for sustainable/regenerative products [%] 	Fairtrade International, Agroforestry Network, Forest Carbon Partnership Facility , Nestlé's Sustainable Sourcing Program, Propagate Ventures, Global Environment Facility, Mendelez
Digital Tools, Climate-Tech Startups & Data sharing Platforms	Collaborations that drive innovation, scale solutions, and provide financial or technical support. These partnerships can accelerate AF adoption trough better decision making and MRV levels .	<ul style="list-style-type: none"> • Digital Tool Subscription [€/year] • Planning and report generation cost [€/year] 	INRES Decision Analysis Modeling, The LandBanking Group;; FarmTree; DeepRoots; INTACT; FarmSafe; many others - check: Tools, Data and Projects Catalogue - DigitAF

Stylized Cumulative Cash Flow Projection – **Baseline** vs. **ReForest Scheme**



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.

Dynamic Management Tool + EMEA's Financial Scheme





JOIN REFOREST, THE DIGITAL PLATFORM FOR THE AGROFORESTRY COMMUNITY:



Description:

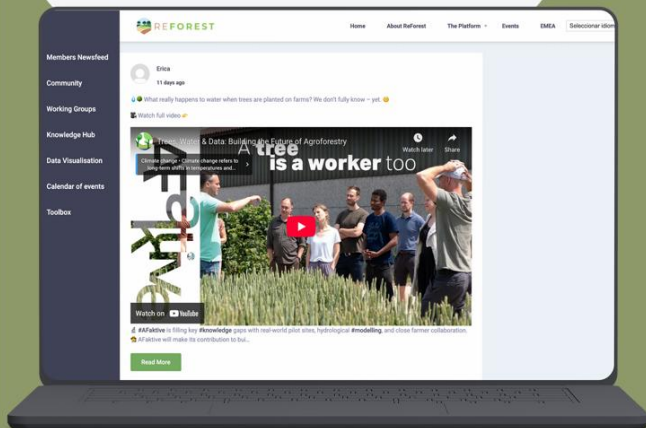
ReForest Engagement Platform is a European platform that supports the adoption of agroforestry by providing scientific tools, fostering collaboration among stakeholders, as well access to Knowledge Hub.

Objective:

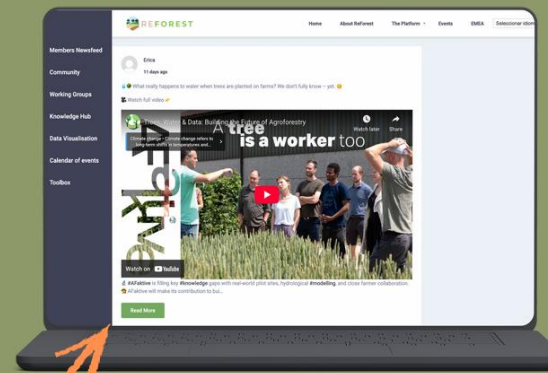
The goal of the ReForest platform is to help stakeholders across Europe use agroforestry by sharing knowledge, tools, and support to make farming more sustainable and effective.

Target:

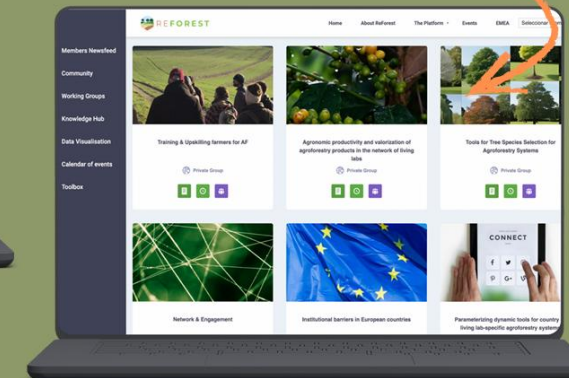
Farmers, Advisors, Researchers, Private Sector, Policymakers, Agricultural Stakeholders, NGOs.



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