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DEM	Demonstrator	
O	Other	

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More information on the project can be found at: <http://agroreforest.eu/>

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EXECUTIVE SUMMARY

The deliverable contains five Practice Abstracts submitted to and approved by the EIP-AGRI project database. This represents the second batch of abstracts produced within the project. Several potential topics were considered for this set of abstracts, and we selected those that demonstrate practical approaches and solutions that can be readily adopted and adapted by stakeholders.

The abstracts address five key aspects of agroforestry development and implementation, namely: Agroforestry value chains turn landscape diversity into economic opportunity; Agroforestry as a historical anchor for farm diversification; A hybrid financing approach for long-term success of agroforestry; Ethics in agroforestry living labs; and Turning woody biomass into long-term soil capital in agroforestry.

PRACTICE ABSTRACTS

The following five Practice Abstracts have been submitted to and approved by the EIP-AGRI project database.

ABSTRACT 1

Title: Agroforestry value chains turn landscape diversity into economic opportunity

Problem: Agroforestry systems produce a wide range of products, including timber, fruits, nuts, livestock products, cereals, honey and biomass. Yet many farmers continue to sell these products through conventional commodity markets that reward volume and standardisation rather than diversity and environmental value.

Solution: Agroforestry can create new forms of economic value by linking diversified production with innovative value chains. We show that farmers increased profitability not by producing more, but by producing and selling differently, and by retaining greater control over processing, marketing, and customer relationships. Rather than seeing trees as an addition to agriculture, ReForest research shows that they can become the foundation for new business opportunities and more resilient rural economies.

Benefits and Practical Recommendations:

- Build on diversity. Agroforestry enables multiple products to be produced from the same landscape and can spread risk and create multiple income streams.
- Reduce dependence on external inputs. Trees can improve soil fertility, reduce erosion, provide shade and shelter, and lower the need for purchased inputs, strengthening the overall economics of the farm.
- Add value before you sell. Drying, milling, pressing, bottling, or simple packaging can significantly increase product value while supporting market flexibility.
- Use quality and provenance to differentiate your products. Consumers increasingly value products linked to sustainable farming, biodiversity and local landscapes. Clear product stories can help access premium markets.
- Choose sales channels that match your scale. Direct sales, farm shops, online marketing and local food networks often allow smaller agroforestry businesses to retain a larger share of the final value.
- Cooperate rather than compete. Shared processing facilities, local producer groups and regional agroforestry networks can reduce costs and help smaller farms access larger markets.

Geographical Location : Belgium, Bulgaria, Czechia, Denmark, Germany, Hungary, Poland, Spain, United Kingdom

Additional information

How to Use the Results: Successful agroforestry businesses create value not only through what they produce, but through how they process, market and present their products. Farmers should begin by mapping their existing value chain and identifying where value is lost to intermediaries and where greater control can be retained on the farm.

The first steps often require little investment: direct sales, collaboration with local food initiatives, and simple on-farm processing can significantly improve margins. As the business develops, more advanced strategies such as certification, regional branding and cooperative marketing can further strengthen the market position. Working with neighbouring producers can also reduce processing and transport costs while expanding market reach.

The ReForest co-creation with farmers shows that the greatest economic benefits of agroforestry often come not from maximising yields, but from combining several complementary strategies: reducing dependence on external inputs, diversifying products, shortening supply chains and building a strong identity around the environmental and cultural values of agroforestry landscapes.

By linking landscape diversity with local processing, short food supply chains and distinctive farm identities, agroforestry can create products and experiences that conventional farming cannot easily replicate, supporting more resilient and profitable rural businesses.

For practical guidance and case studies from the ReForest Living Labs, visit www.agroreforest.eu.

Web-link: https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/agroforestry-value-chains-turn-landscape-diversity-economic-opportunity_en

ABSTRACT 2

Title: Agroforestry as a historical anchor for farm diversification

Problem: Many European farmers remain uncertain whether tree-based farming fits their local landscape and agricultural traditions. Agroforestry adoption is a cultural process, framed by economics and traditions. Landscapes with surviving agroforestry memory are more receptive to agroforestry, while the historical continuity provides the basis for differentiated value chains.

Solution: Many modern agroforestry systems are not entirely new but represent the restoration or adaptation of traditional landscape structures such as orchard meadows, wood pastures, hedgerows, scattered field trees and silvopastoral systems. This historical continuity creates cultural compatibility, the degree to which a new agroforestry system is perceived as belonging to the location. Culturally compatible systems are easier to adopt because they build on existing local knowledge, traditions and landscape identity.

Benefits and Practical Recommendations:

- Start with the history of the landscape. Before designing a new agroforestry system, identify traditional tree-based farming practices that existed in your region and consider how they can be adapted to modern conditions.
- Preserve existing landscape features. Mature trees, hedgerows and traditional orchards are often valuable productive assets as well as symbols of local identity.

- Build products around place. Consumers increasingly value products connected to recognisable landscapes and local heritage. Agroforestry provides an authentic story that supports premium markets.
- Develop value chains that reflect landscape diversity. Combining agricultural and tree products, local processing, tourism and direct sales can create businesses that are difficult to replicate in standardised commodity systems.
- Use local knowledge to reduce barriers to adoption. Engaging with older farming traditions and community experience can increase confidence in agroforestry and strengthen public support for landscape restoration.

Geographical Location : Belgium, Czechia, Denmark, Bulgaria, Germany, Poland, Hungary, Spain, United Kingdom

Additional information

How to Use the Results: Farmers and advisors should consider not only the ecological suitability of agroforestry but also its cultural fit within the landscape. Historic maps, local archives and conversations with local communities can reveal former agroforestry systems that may provide practical inspiration for modern designs. The ReForest research suggests that successful agroforestry development follows the following pathway:

Landscape memory → Cultural compatibility → Social acceptability → Distinctive products → Stronger value chains → Long-term agroforestry adoption

By reconnecting farming with the historical character of the landscape, agroforestry can become more than a land-use practice. It can provide the foundation for resilient rural economies, stronger local identities and value chains that reward the environmental and cultural richness of European agricultural landscapes.

Web-link: https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/agroforestry-historical-anchor-farm-diversification_en

ABSTRACT 3

Title: A hybrid financing approach for long-term success of agroforestry

Problem: Agroforestry creates environmental, social, and economic benefits, but these benefits emerge over different time scales. Conventional agricultural finance is generally designed for annual production systems and may not be well suited to long-term, diversified land uses. As a result, many farmers struggle to secure the investment needed to establish and manage these systems. We found that no single financial instrument can effectively support agroforestry throughout its entire lifecycle.

Solution: We developed a hybrid financing model that combines different financial instruments according to the stage of agroforestry development. Rather than viewing funding sources as alternatives, the model treats them as complementary tools that work together over time. This

approach reflects the multifunctional nature of agroforestry and recognises that different benefits are generated for farmers, society and the environment at different times.

Benefits and Practical Recommendations:

- Match finance to the stage of development. Early establishment costs are best supported by grants and cost-based payments, while mature systems can increasingly benefit from market-based mechanisms.
- Combine public and private funding. Public support can reduce initial risk and encourage investment, while private finance and environmental markets can provide long-term revenue.
- Do not rely on a single income stream. Agroforestry businesses are more resilient when they combine agricultural production with environmental payments, premium products and ecosystem service markets.
- Use risk-sharing mechanisms. Loan guarantees, insurance products and cooperative financing can improve access to capital and reduce the financial uncertainty associated with long-term investments.
- Integrate finance with value chains. The strongest business models link agroforestry production with local processing, product differentiation and environmental markets, creating multiple complementary revenue streams.

Geographical Location : Belgium, Bulgaria, Czechia, Denmark, Germany, Hungary, Poland, Spain, United Kingdom

Additional information

How to Use the Results: Agroforestry should be planned as a long-term investment, with a financial strategy that evolves as the system matures. Rather than relying on a single source of funding, farmers should combine different financial instruments to meet the farm's changing needs.

During establishment, focus on grants and cost-based support to reduce the initial investment burden. As the system becomes operational, explore action-based payments that reward sustainable management practices. Once environmental benefits become measurable, investigate result-based schemes and market opportunities such as carbon and biodiversity credits. Throughout the system's lifetime, strengthen the business case through product diversification, value-chain development, and private investment, where appropriate.

When developing a business plan, map available public support schemes, identify potential markets for ecosystem services, and consider how agroforestry products can access premium or local markets. A diversified financial portfolio will generally be more resilient than dependence on a single subsidy or market.

For advisors and policymakers, the ReForest research highlights that successful agroforestry expansion requires integrated financing strategies. Cost-based, action-based, result-based and market-based mechanisms should be designed to complement one another, creating a continuous pathway from establishment to long-term financial sustainability.

The central lesson is straightforward: different stages of agroforestry require different financial tools. A hybrid financing model can bridge the gap between early costs and long-term benefits, making agroforestry a practical and economically viable option for a much larger number of European farmers.

Web-link: https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/hybrid-financing-approach-long-term-success-agroforestry_en

ABSTRACT 4

Title: Ethics in agroforestry living labs

Problem: Agroforestry Living Labs bring together farmers, researchers, advisors, policymakers and businesses to co-design and test innovative solutions. These collaborative approaches generate valuable knowledge but also raise important ethical questions. Who owns the data collected on farms? How should technologies such as drones and artificial intelligence be used responsibly? How should environmental impacts be considered alongside the interests of human participants? While European legislation provides strong safeguards, many projects lack practical mechanisms to identify and manage ethical risks.

Solution: We developed a dedicated Ethics Protocol that was embedded within its co-creation methodology and Living Lab network. Initially focused on human participants, personal data protection and international research activities, the framework evolved alongside the project to address a wider range of ethical challenges associated with participatory research, environmental monitoring, digital technologies and landscape-scale innovation.

Benefits and Practical Recommendations:

- Embed ethics from the beginning. Ethical considerations should be integrated into project design rather than treated as a compliance exercise after activities have begun.
- Protect participant rights and data. Clear procedures should be established for informed consent, data collection, storage, sharing and withdrawal from participation.
- Assess technologies responsibly. The use of drones, monitoring equipment, digital platforms and artificial intelligence must be evaluated for privacy, transparency, accountability and potential unintended consequences.
- Consider environmental impacts alongside human impacts. Ethical responsibility extends beyond project participants to include biodiversity, ecosystems, natural resources and long-term landscape sustainability.
- Review ethical risks continuously. As projects evolve, new technologies, partnerships and activities may introduce ethical challenges that require ongoing assessment and adaptation.

Geographical Location : Belgium, Bulgaria, Czechia, Denmark, Germany, Hungary, Netherlands, Poland, Spain, United Kingdom

Additional information

How to Use the Results: Researchers, Living Lab coordinators and project managers can use the ReForest Ethics Protocol as a practical framework for managing ethical risks in participatory innovation projects. Before launching activities, identify who may be affected, what data will be collected, how technologies will be used and what environmental impacts may arise. Establish transparent

procedures for consent, data management and stakeholder engagement, and revisit these regularly as the project develops.

For farmers and other participants, the framework provides a basis for asking important questions about data ownership, privacy, expected benefits and environmental responsibility. Ethical governance should not be viewed as an administrative requirement but as a foundation for trust, collaboration and long-term innovation.

The ReForest experience demonstrates that successful Living Labs depend on responsible stewardship of people, data, technology and the environment. By integrating ethical considerations throughout the project lifecycle, agroforestry innovation can be both scientifically robust and socially legitimate.

Contemporary Ethical Considerations: The ReForest Ethics Protocol recognises that ethical challenges continue to evolve alongside technological and societal change. In addition to traditional research ethics, the framework addresses:

- Bioethics, including responsible environmental research, stakeholder rights and informed participation.
- Environmental ethics, recognising obligations towards biodiversity, ecosystem health and the sustainable management of natural resources.
- AI and digital ethics, including transparency, fairness, accountability, privacy, cybersecurity and appropriate human oversight of data-driven decision-making.

By integrating these dimensions within a single framework, ReForest provides a practical model for responsible research and innovation in agroforestry and other landscape-scale sustainability initiatives.

Web-link: https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/ethics-agroforestry-living-labs_en

ABSTRACT 5

Title: Turning woody biomass into long-term soil capital in agroforestry

Problem: Agroforestry systems continuously produce woody biomass through pruning, thinning, coppicing, and other tree management practices. Farmers often recognise the potential of biochar but face practical barriers, including uncertainty about suitable technologies, regulatory requirements and the economic viability of on-farm production.

Solution: Biochar can be integrated into a circular agroforestry system in which woody biomass generated by trees is returned to the land as a stable soil amendment. We demonstrated how woody waste biomass can become a valuable farm resource that supports soil health, carbon storage and the long-term productivity of agroforestry systems. Biochar also creates opportunities for new business models by linking sustainable biomass management with emerging carbon and environmental markets.

Benefits and Practical Recommendations:

- Use locally available biomass. Agroforestry prunings, coppice material, shelterbelt management residues and other woody biomass are suitable feedstocks. The properties of the final biochar depend on both the raw material and the production process.
- Select technology appropriate to your scale. Small farms may benefit from low-cost flame curtain kilns, while larger operations can consider retort kilns or continuous pyrolysis systems. The choice should reflect projected biomass quantity, investment capacity and future business ambitions.
- Understand the regulatory framework. In many countries, biochar can be used on the farm where it is produced with relatively few restrictions. Commercial sales generally require product testing and registration, while access to premium markets may require certification.
- Integrate biochar into soil management. Biochar should be considered as part of a broader soil health strategy alongside organic matter management, cover crops and agroforestry design. It can improve soil structure, increase water-holding capacity, support soil health and support more resilient production systems.

Geographical Location : Belgium, Bulgaria, Czechia, Denmark, Germany, Hungary, Poland, Spain, United Kingdom

Additional information

How to Use the Results : Do not think of woody biomass as a waste product. Prunings, coppice material and other residues from agroforestry systems can become a valuable on-farm resource, improving soil health while creating opportunities for long-term carbon storage and new income streams.

The first step is to estimate how much woody biomass your agroforestry system produces each year and assess whether it can be converted into biochar. Small-scale production and trial applications are recommended, allowing evaluation of effects on local soils and crops before wider adoption. Biochar should be integrated into a broader soil management strategy alongside organic matter additions and good agroforestry practice.

If commercial production is being considered, investigate national regulations and certification requirements early in the planning process. Access to premium markets may require recognised standards such as the European Biochar Certificate (EBC), while emerging carbon and environmental markets may create additional opportunities for value generation.

The ReForest research demonstrates that biochar is more than a waste management solution. By converting surplus woody biomass into a stable soil amendment, farmers can start closing carbon and nutrient cycles, strengthen the resilience of their agroforestry systems and transform a disposal cost into a long-term environmental and economic asset.

For practical guidance and examples from the ReForest Living Labs, visit www.agroreforest.eu

Web-link: https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/turning-woody-biomass-long-term-soil-capital-agroforestry_en