



Working Paper

Leveraging private finance for the transition to sustainable agriculture

Institute for European Environmental Policy



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EXECUTIVE SUMMARY

The European agricultural sector stands at a pivotal moment. Decades of intensification have degraded ecosystems, eroded biodiversity, and made farming systems increasingly vulnerable to climate change. **A transition toward sustainable agriculture that produces sufficient nutritious food** while delivering outcomes, such as diversified, biodiverse landscapes, increased soil health, reduced greenhouse gas emissions, reduced intensity of livestock, increased extensification, and animal welfare, reduced input dependency and increased circularity and resource efficiency, is **urgently needed**. However, achieving this **transition at scale will require far greater financial investment than current public funding alone can provide**. Mobilising private finance is therefore essential.

This working paper explores the potential of private finance to support the transition to sustainable agriculture in the EU, identifying key barriers, mapping actors and their motivations, reviewing financial solutions, and scoping existing examples of such arrangements in the EU, before offering recommendations to scale effective approaches.

Transition barriers and the role of private actors

Farmers face numerous barriers to transition, including:

- High upfront costs for new practices and equipment
- Temporary yield declines and income insecurity during the transition period
- Limited access to technical knowledge and trusted advice
- Structural disincentives such as insecure land tenure and ageing farmer demographics
- Social and institutional inertia, including policy frameworks that continue to incentivize conventional practices

Private capital providers face their own set of barriers, such as unclear return prospects, data and credibility gaps (especially around monitoring environmental outcomes), small and fragmented investment opportunities, and high transaction costs.

Despite these challenges, a growing number of private actors—agribusinesses, financial institutions, institutional and impact investors, insurance providers, landowners, and technology intermediaries—are engaging in the transition. Their motivations vary but include:

- Enhancing supply chain resilience
- Meeting corporate sustainability targets (e.g. Scope 3 emissions)

- Improving long-term asset values
- Achieving environmental, social, and governance (ESG) investment objectives
- Unlocking market premiums for sustainably produced goods

Typology of private finance instruments

The study identifies four main categories of private finance instruments currently in use or under development in the EU:

Figure 1. Categories of solutions that unlock private capital for the transition

Categories	Instrument sub-types	Description	Transition barrier addressed
Payment for environmental outcomes	Private PES schemes	Environmental outcomes or sustainable practices are agreed on and paid for by beneficiaries within the local value chain.	Uncertain monetary benefits
	Carbon offset credits	GHG emission mitigation and/ or sequestration generate offset credits that are sold on voluntary carbon markets.	Temporary lack of income security
	Biodiversity credits	Biodiversity improvements generate offset credits that are sold on voluntary biodiversity markets.	
	Price premiums	Off-takers pay a bonus per kg on top of the market price, based on sustainable practices implemented or environmental standards met	
Debt-based Financing	Green bonds & loans	Bonds issued are tied to pre-approved 'green' projects, offered to the investment market, and repaid with interest.	Limited access to upfront capital
	Sustainability-linked bonds & loans	Bonds issued are linked to the achievement of sustainability targets, with finance terms being determined by ESG performance.	
	Loans on favorable terms	Agricultural lenders offer loan products on favourable terms, e.g., flexible repayment, to reward farmers for sustainable farming.	
Transition-risk Sharing	Research Pilots	Off-takers offer suppliers technical assistance & research to identify and test context-specific effective sustainable farming practices.	Knowledge gaps
	Practice-based capacity building	Off-takers offer suppliers technical support and advisory services to facilitate the transition.	Temporary lack of income security
	Purchase agreement & Min. price	Off-takers commit to long-term procurement agreements and/or offer a price floor that integrates the costs of sustainable practices.	
	Transition insurance / warranty	Insurers or industry partners offer fixed payments during the transition in case yields fall below historical production	Low long-term incentive
	Sustainable lease	Landowners offer long-term leases on the condition of farmers using sustainable practices.	
	Equity investment in enabling tech	Impact investors or impact funds invest private equity in scaling (tech) solutions that support the transition, e.g., bio-based fertilizer	Various*
Blended Finance	Blended Fund	Public/ philanthropic actors provide first-loss capital to crowd in commercial investors and offer farms financing & technical support.	Upfront capital + barriers for capital providers
	Guarantee	Public/ philanthropic actors insure a share of losses in case of non-repayment, thereby de-risking loans to farmers	

* Depending on the enabling technologies and solutions supported by the fund, e.g., advanced MRV technology that addresses credibility and data gaps, or improved bio-based fertilizer that results in reduced input prizes and increases monetary benefits from the transition.

Sources: Compiled from expert interviews and Deloitte et al (2025); Scherger (2025); Pollination Group et al (2024); World Economic Forum (2024); European Commission (2024); UNEP (2023); Wilson et al (2023); Field to Market (2022); OP2B / BCG (2023); Farminfin (2021)

Though promising, these instruments are often small in scale, fragmented, and nascent. Among the 35 case examples identified through this scoping exercise, the most common instruments were practice-based capacity building, research pilots, and loans

on favourable terms. Instruments like biodiversity credits, transition insurance, and blended finance funds remain largely underutilised in the EU.

Challenges and opportunities

While incentives like carbon credits and price premiums are important, they are often insufficient on their own to justify or fund the transition. Many farmers still face residual funding gaps even after applying existing support mechanisms. De-risking instruments (e.g., transition insurance, minimum price contracts) and improved access to capital remain critical.

Scaling private finance requires credible data to verify environmental outcomes, standardised MRV (monitoring, reporting, verification) systems, and larger investment opportunities. Financial institutions are beginning to mainstream natural capital accounting, which may shift cost-of-capital advantages toward more sustainable producers.

Greater transparency and coordination between actors are also needed to avoid risks such as double-counting, lack of additionality, and misaligned environmental outcomes.

Recommendations

- **Improve alignment and transparency among actors:** Establish shared MRV standards, facilitate peer learning, and promote collaborative value-chain partnerships.
- **Develop integrated support systems:** Create regional one-stop shops to guide farmers through technical and financial resources for transition.
- **Scale landscape-level initiatives:** Coordinate multiple actors across regions to aggregate demand and investment opportunities, making projects more attractive to conservative investors.
- **Promote blended finance mechanisms:** Use public and philanthropic capital to de-risk investments and crowd in private funding, especially for high-impact tools like transition insurance.
- **Reform EU agricultural subsidies:** Shift financial support away from environmentally harmful practices toward rewarding measurable environmental outcomes.
- **Introduce long-term policy objectives:** Establish binding EU-level sustainability targets for agriculture, with clear indicators and roadmaps to encourage investment and planning certainty.

Areas for further research

Our analysis identified several key issues that warrant further exploration to strengthen private financing for sustainable farming in Europe. First, there is a need to assess whether current financing mechanisms disproportionately benefit larger farms, potentially widening the gap for smaller ones. Second, while carbon offsetting is a major driver of private investment, more work is needed to ensure these efforts also deliver biodiversity co-benefits and avoid ecological trade-offs. Concerns about the credibility of carbon schemes, such as risks of double counting and lack of additionality require further attention. Finally, improved coordination between public and private funders is essential, but practical and legal barriers, including antitrust concerns, must be addressed.

1. INTRODUCTION

The European agri-food system needs changing. Intensification of agricultural production over the past several decades has culminated in soil degradation, biodiversity loss and water pollution (EEA 2025; Tikehau Capital, 2025). This, together with the growing threat of climate change – manifested through increasingly severe weather events such as worsening droughts (Berrebi et al., 2025; Moret-Bailly and Muro, 2024), means a change in current *modus operandi* is required if agriculture in Europe is to address these threats. **A transition towards more sustainable forms of agriculture is therefore essential if it is to maintain the adequate production of safe and nutritious food without degrading natural resources** (Moret-Bailly and Muro, 2024) (see Box 1).

Box 1. Definitions used in this study

Transition and sustainable agriculture

In this study, **transition** refers to the shift from conventional to more sustainable agricultural practices at the farm level. While we recognise that conventional farming encompasses a wide variety of practices, we broadly understand it to include those that contribute to the degradation of ecosystems and their functions (van Dijk et al., 2024). There is currently no universally agreed definition of sustainable agriculture. However, comprehensive farming approaches such as agroecology, regenerative agriculture, organic farming, and conservation agriculture are increasingly regarded as pathways toward sustainability (British Ecological Society, 2025). These approaches share a focus on improving the ecological and socio-economic resilience of agricultural systems. In the absence of clear, standardised definitions, this study defines **sustainable agriculture** through a set of desired outcomes. Specifically, we consider practices sustainable if they contribute to:

- The creation of diversified and biodiverse landscapes
- Improved soil health and fertility
- Lower greenhouse gas (GHG) emissions
- Reduced intensity of livestock production, increased extensification, and better animal welfare
- Decreased dependency on external inputs such as synthetic agrochemicals, fossil fuels, and irrigation
- Enhanced circularity and resource efficiency within farming systems

Transitioning to more sustainable forms of agriculture also brings economic benefits to farm businesses. For instance, the adoption of practices such as cover crops, reduced tillage, and organic fertilisation has been shown to reduce input costs for farmers within a short span of time (Moret-Bailly and Muro, 2024). Moreover, greater yield stability is gained after the transition, (typically after a 5-year span) as production becomes more resilient to extreme weather events and market conditions (Deloitte, 2025; Moret-Bailly and Muro, 2024).

Agriculture in Europe utilises 157 million hectares of land (Eurostat, 2022). Enacting change on such a scale will require vast resource and capital; especially since the transition will need to occur within a rather short timeframe if the sector is to deliver on key EU climate and biodiversity targets such as the EU's 2040 climate target¹ of reducing emissions by 90% and the Biodiversity Strategy for 2030². Additionally, the urgency for change is also driven by the pace in which climate change is increasingly having an impact on agriculture (Deloitte, 2025; Baldock and Bradley, 2023).

Current assessments indicate that public funding alone is insufficient to drive this transition. A study found the amount needed to transition all arable land in Europe to regenerative agriculture practices ranges from €212 to €547 billion annually; with only 2-6% of funding needs currently being met in arable farming in Europe (Deloitte et al, 2025). This is taking into consideration only transition to regenerative agriculture, with implementation of other modes of farming possibly needed as well – and the cost of it likely to vary across regions.

This working paper stems from a scoping study of downstream actor-farmer collaborations to finance sustainable agriculture transitions. The **purpose of this study is to explore and provide an overview of the arrangements and solutions currently being utilised between farmers and a range of value chain stakeholders** (e.g., retailers and food processors) and financial investors to support the transition to sustainable agriculture in the EU³ through **private finance** – which will play an increasingly prominent role in bridging the finance gap (UNEP, 2024; European Commission, 2024), together with driving market-based solutions, encourage sustainability within supply chains, and improve resilience of agricultural systems (OECD, 2024).

¹ https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2040-climate-target_en

² https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

³ For the purpose of this study, and to avoid any confusion, the findings presented in this paper pertain only to the EU.

Drawing on desk-based research as well as expert interviews⁴ and a stakeholder workshop with representatives of academia, farming organisations, environmental NGOs, and investor networks, the aims and outline of this paper are as follows:

- Understand transition barriers and financing challenges specific to sustainable agriculture.
- Explore the roles of key actors and their motivations for participating in these arrangements.
- Identify and examine key private financial arrangements currently utilised in the EU to support this transition.
- Assess opportunities and shortcomings to facilitate the scaling up of these arrangements.
- Provide recommendations to address risks and barriers and support solutions to this transition.
- Highlight key case examples of private finance instruments being utilised in the EU. These are presented in the **Annex** of the paper.

⁴ Eight expert interviews were conducted between February and April 2025. Their contributions are identified throughout this paper by referencing the sector they represent. Where multiple interviewees expressed similar views, we use group identifiers rather than individual attributions.

2. TRANSITION BARRIERS AND FINANCING CHALLENGES SPECIFIC TO SUSTAINABLE AGRICULTURE

Barriers for farmers to implement the transition to sustainable agriculture

Understanding the barriers that currently prevent many farmers from adopting sustainable farming practices is key to identifying solutions that might encourage an uptake at broader scale. This section therefore explores the challenges that stand in the way of the transition, both from the perspective of farmers, and private capital investors.

With regards to farmers, several barriers stand in the way of their transition towards more sustainable forms of agriculture. The following represent some of the key barriers:

- **Limited access to capital for upfront investment:** transitioning often requires considerable initial capital for new equipment, cover crop seeds, or livestock for integrated farming systems (Deloitte, 2025; Moret-Bailly and Muro, 2024). This upfront cost can be a major burden for farmers with limited resources.
- **Temporary yield risks and income instability:** adopting new practices can temporarily reduce yields as soil systems adjust. Moreover, tangible benefits of sustainable agriculture, such as improved soil health, enhanced biodiversity, and increased resilience, often take time to fully materialize (Deloitte, 2025; Moret-Bailly and Muro, 2024). This can lead to income instability during the transition period and delay farmers' return on investment.
- **Uncertainty of effectiveness and benefits:** Farmers may hesitate to adopt sustainable methods due to uncertainty about their effectiveness in specific contexts. In addition to concerns over incorrect implementation impacting yields and profits, changing policy frameworks further increase uncertainty and reduce incentives to implement long-term changes. Moreover, subsidies which continue to support conventional agriculture discourage and farmers from adopting sustainable farm practices as this would put them at a disadvantage.
- **Knowledge gap:** Implementing sustainable agricultural practices often requires new and specialized knowledge in areas such as cover cropping techniques, no-till farming, or integrated pest management (Field to Market, 2022). This learning curve can be demanding and time-consuming for farmers. Limited access to tailored technical assistance further exacerbates this

problem and makes them more prone to errors, which consequently might impact their profitability (Field to Market, 2022).

- **Social scepticism from peers:** Farmers transitioning to sustainable methods may encounter scepticism or even resistance from peers who adhere to conventional agricultural practices. This social pressure and lack of community support can make the adoption process more challenging (Field to Market, 2022).
- **Structural disincentives:** Farmers who lack secure long-term rights to the land they farm may be less inclined to adopt sustainable practices as they have reduced motivation to make the necessary investments in soil health and other long-term improvements. Similarly, older farmers - the average age of farmers is 57 years in Europe⁵ - and especially those without a successor, might have little incentive to invest in long-term changes.

Barriers for private capital providers to support the transition

Other value chain actors -such as retailers and food processors, and actors from the finance sector - can help farmers overcome the transition barriers listed above by providing financial incentives, upfront capital, technical assistance, risk-reducing mechanisms, and other forms of support. However, private capital providers also face challenges that limit their involvement in supporting farmers in the transition to sustainable agriculture.

These barriers are a mix of challenges specific to financing sustainable farming and structural challenges that generally reduce agricultural producers' access to private finance. Within food supply chains, agricultural producers only receive a fraction of private sector funding (Pollination Group et al, 2024), and compared to other economic sectors, they pay higher interest rates on loans despite relatively low default risks and often face requests for high collateral and guarantees (EIB, 2020).

The following factors contribute to the limited deployment of private capital for sustainable agriculture:

- **Limited returns as hidden costs and benefits of farming practices remain externalized:** Positive externalities from sustainable agriculture are often insufficiently reflected by market prices, while negative externalities of conventional farming are externalised. Apart from certified organic crops, sustainably farmed produce hardly receives any market premiums. Similarly, while government

⁵ https://agriculture.ec.europa.eu/system/files/2023-12/event-report-useu-exchange-advancing-young-farmers-addressing-intergenerational-farm-issues_en.pdf

subsidies for agricultural producers comprise some environmental requirements, they do not factor in hidden costs and benefits to a large extent. This reduces the potential return on investment for financiers and disincentivizes the redirection of private capital into sustainable agricultural production (Pike et al, 2020; Pollination Group, 2024).

- **Incompatibility with financial sector's focus on short-term profits:** The short-time horizons and inflexible repayment schedules of most agricultural financing sources are often incompatible with the upfront costs, initial yield risks, and only gradual realisation of environmental benefits of sustainable approaches that tend to lower rates of return in the early years of the transition (Pike et al, 2020).
- **Uncertainty due to data and knowledge gaps:** Agricultural lenders usually favour the use of funds for conventional farming because its profitability is supported by a large amount of historical data. In comparison, datasets on the performance of sustainable/ regenerative practices are still new. In addition, many financiers have a limited understanding of what sustainable agriculture entails, and what the benefits and risks of the transition are – which contributes to a sense of uncertainty (Pollination Group et al, 2024).
- **Credibility concerns stemming from MRV challenges and heterogeneity of practices:** As interviewees from an investor network confirmed, when financing is tied to environmental outcomes, concerns over the robustness of monitoring, reporting, and verification (MRV) data is a disincentive for investors as robust data is key to prevent greenwashing and the reputational and litigation risks it implies. Farm-level heterogeneity in agricultural practices and outcomes further creates ambiguity for financiers as it clashes with their need for standardised guidelines, such as investment taxonomies, as the basis for preventing greenwashing.
- **High transaction costs for small loan and investment volumes:** Many agricultural producers are smallholders. Small loan volumes lead to higher overall operational costs for assessment and monitoring for lenders – which also explains higher interest rates for farmers (EIB, 2020). In the same vein, small investment volumes tend to be unattractive for many equity investors, which is why the agriculture sector has generally low access to equity markets which constitutes the largest portion of private sector funding (Pollination Group et al, 2024).
- **Characteristic sector risks:** Risks that are intrinsic to agriculture production – such as weather-related risks, risk of animal diseases, potential market crises, and exposure to climate risks – as well as the seasonal fluctuations in revenues and cash flow, and rather low profit margins, make the sector less attractive to

many financiers seeking more stable and predictable returns (EIB, 2020; Pollination Group, 2024).

Overall, uncertainty over return on investment and knowledge gaps are some of the inherent barriers that are shared between farmers and private capital investors. The transition barriers identified here also inform our assessment of the transition potential of financing solutions later in this paper. To put those financing solutions into context and explain their emergence, the following section provides an overview of key players and their respective motivations to support the transition.

2.1 Overview of key players and their motivations

The landscape of private sector actors involved in the transition to sustainable agriculture includes almost all **actors across the agri-food value chain**, several **established and new actors in the finance sector**, as well as fairly **new intermediary organizations** that specifically focus on coordination, advisory, and monitoring aspects of implementing transition projects. Our expert interviews and the review of policy and industry reports suggest that the **motivation to support the transition strongly varies across actor groups**.

For instance, agribusinesses' growing interest in sustainable agriculture is often driven by their own corporate environmental and climate commitments and by the economic necessity to ensure the resiliency of their supply chains. Established financial intermediaries, like banks and insurance companies, have a motivation to support the transition because sustainable practices improve farm-level resiliency and therefore reduce the risks of credit default or insurance payouts in the long run. Impact investors, non-profit project intermediaries, and philanthropic capital providers mainly seek impactful opportunities aligned with their mission to advance environmental and climate causes (Soil Values, 2024).

While there is only little involvement yet of private commercial investors, a motivation for more risk-avoidant institutional investors with long-term strategies can be the increase in value of land assets resulting from sustainable farming practices over time. Private investment funds might have a motivation to invest in sustainable agriculture opportunities to diversify their portfolio and enhance its ESG profile (Pollination Group et al, 2024) or capitalise on financial returns from agri-tech solutions (Soil Values, 2024).

The table below specifies the motivations of different private sector actors involved in the transition:

Table 1. Private sector actors and their motivations to support the transition to sustainable agriculture***Food value chain actors***

Actors	Motivation
Agricultural producers	<ul style="list-style-type: none"> • Cost savings for inorganic input due to soil health improvements • Increased profitability thanks to yield increases (varying across crops and regions) • Increased climate & financial resilience resulting from better protection during extreme weather events • Expected policy changes in the EU CAP • Higher revenues through certification of regenerative and/or organic produce that achieves higher price • Offtake premiumisation from food corporates and retailers
Landowners	<ul style="list-style-type: none"> • Increased land value over time via soil health improvements, increased resiliency, and higher productivity
Water utilities	<ul style="list-style-type: none"> • Improved water quality thanks to less pollution by agricultural producers upstream
Cooperatives, Processors & Retailers	<ul style="list-style-type: none"> • Enhanced supply chain resiliency • Reduction of supply chain climate emissions allows corporations with official climate commitments to 'inset' scope 3 emissions within their supply chain. • Marketing opportunities for nature-positive products can increase demand
Agri-tech companies	<ul style="list-style-type: none"> • Business opportunity in developing MRV technologies to measure and verify environmental outcomes of sustainable farming.

Finance sector actors

Actors	Motivation
Insurance companies	<ul style="list-style-type: none"> • Improved resilience against yield losses of farms adopting sustainable practices translates into fewer insurance payouts and/or lower yield loss compensations in the long run

Operational lending institutions (Cooperative banks & Commercial banks)	<ul style="list-style-type: none"> • Reduced credit risk of farms that adopt sustainable practices due to higher levels of resilience over the long term
Institutional investors (e.g., pension funds)	<ul style="list-style-type: none"> • Financial returns from acquiring and restoring degraded land assets through regenerative agriculture
Impact investors	<ul style="list-style-type: none"> • Investment opportunities aligned with their mission to drive positive environmental impact
Investment funds & other asset managers	<ul style="list-style-type: none"> • Enhanced portfolio strategy over longer time horizons through inclusion of sustainable/regenerative agriculture investments, as considering ESG factors can provide risk protection and enhanced returns, and meet the highest standards for sustainable investing, e.g., under the EU Sustainable Finance Disclosure Regulation.
Public (development) banks & Credit guarantee institutions – as part of blended finance	<ul style="list-style-type: none"> • Funding aligned with public interest mandate • Demonstrating the commercial viability of investing into sustainable agriculture and attracting private capital

Intermediaries and other actors

Actors	Motivation
Corporations outside the food value chain	<ul style="list-style-type: none"> • Offsetting of carbon and biodiversity impacts via the participation in environmental markets; attractive for companies that have official climate and biodiversity goals

Intermediary organizations (advisory MRV, coordination)	<ul style="list-style-type: none">• The business case of for-profit project intermediaries may involve providing agronomic advice, offering Monitoring, Reporting, and Verification (MRV) technology and methodologies to measure and certify carbon content, placing carbon units in the marketplace, and making upfront payments to farmers in exchange for a later share from carbon sales.
Philanthropic foundations - as part of blended finance	<ul style="list-style-type: none">• Funding aligned with mission-driven mandate• Demonstrating the commercial viability of investing into sustainable agriculture and attracting private capital

Sources: Compiled from interviews and various reports, incl. Field to Market (2022); Pollination Group (2024); EIB (2020); Deloitte et al (2025)

The following section explores how these different actor groups support the transition to sustainable agriculture, i.e., which instruments and mechanisms are available to them to help farmers tackle existing transition barriers.

3. SOLUTIONS TO UNLOCK PRIVATE CAPITAL FOR THE TRANSITION

Given that stakeholders both from the food system and the finance sector are increasingly motivated to support the transition to sustainable agriculture, a range of respective programs, initiatives, partnerships, financial products, and other arrangements has emerged. This **diverse landscape of solutions uses various mechanisms** to leverage private finance to facilitate the farmer transition to sustainable systems. Empirical analyses of private financing mechanisms emphasize that they are at **varying stages of maturity** (OP2B, 2023) – which also differs across regions and countries. Also, different solutions are often **complementary** and thus ‘stackable’, meaning they can be combined with each other.

For the purpose of our study, **solutions were clustered into four categories according to their core financing mechanism**, differentiating between: (1) market-based schemes that monetise the ecosystem services resulting from sustainable practices (**Payments for Environmental results**), (2) corporate programs and partnerships along the value chain that distribute the transition risk across several actors (**Transition-risk sharing**), (3) financial products designed to provide credit at lower cost for the transition (**Debt-based mechanisms**), and (4) blended finance tools that leverage public finance to attract private investment into the transition to sustainable agriculture (**Blended Finance**). Figure 1 gives an overview of these instrument clusters and provides short definitions.

Figure 1. Categories of solutions that unlock private capital for the transition

Categories	Instrument sub-types	Description	Transition barrier addressed
Payment for environmental outcomes	Private PES schemes	Environmental outcomes or sustainable practices are agreed on and paid for by beneficiaries within the local value chain.	Uncertain monetary benefits
	Carbon offset credits	GHG emission mitigation and/ or sequestration generate offset credits that are sold on voluntary carbon markets.	
	Biodiversity credits	Biodiversity improvements generate offset credits that are sold on voluntary biodiversity markets.	Temporary lack of income security
	Price premiums	Off-takers pay a bonus per kg on top of the market price, based on sustainable practices implemented or environmental standards met	
Debt-based Financing	Green bonds & loans	Bonds issued are tied to pre-approved 'green' projects, offered to the investment market, and repaid with interest.	Limited access to upfront capital
	Sustainability-linked bonds & loans	Bonds issued are linked to the achievement of sustainability targets, with finance terms being determined by ESG performance.	
	Loans on favorable terms	Agricultural lenders offer loan products on favourable terms, e.g., flexible repayment, to reward farmers for sustainable farming.	
Transition-risk Sharing	Research Pilots	Off-takers offer suppliers technical assistance & research to identify and test context-specific effective sustainable farming practices.	Knowledge gaps
	Practice-based capacity building	Off-takers offer suppliers technical support and advisory services to facilitate the transition.	
	Purchase agreement & Min. price	Off-takers commit to long-term procurement agreements and/or offer a price floor that integrates the costs of sustainable practices.	Temporary lack of income security
	Transition insurance / warranty	Insurers or industry partners offer fixed payments during the transition in case yields fall below historical production	
	Sustainable lease	Landowners offer long-term leases on the condition of farmers using sustainable practices.	Low long-term incentive
	Equity investment in enabling tech	Impact investors or impact funds invest private equity in scaling (tech) solutions that support the transition, e.g., bio-based fertilizer	Various*
Blended Finance	Blended Fund	Public/ philanthropic actors provide first-loss capital to crowd in commercial investors and offer farms financing & technical support.	Upfront capital + barriers for capital providers
	Guarantee	Public/ philanthropic actors insure a share of losses in case of non-repayment, thereby de-risking loans to farmers	

* Depending on the enabling technologies and solutions supported by the fund, e.g., advanced MRV technology that addresses credibility and data gaps, or improved bio-based fertilizer that results in reduced input prizes and increases monetary benefits from the transition.

Sources: Compiled from expert interviews and Deloitte et al (2025); Scherger (2025); Pollination Group et al (2024); World Economic Forum (2024); European Commission (2024); UNEP (2023); Wilson et al (2023); Field to Market (2022); OP2B / BCG (2023); Farminfin (2021)

A cross-cutting distinction between solutions can be made according to **which transition barriers they predominantly address**: for instance, while some instruments mainly **incentivise the transition by increasing the** return on investment (RoI) for farmers, e.g., by offering higher prices for sustainably farmed produce, others **help de-risk the transition by addressing the temporary lack of income security** due to adaptation challenges and yield risks, and some are designed to **provide access to capital that covers the (upfront) costs** of transition investments. In addition, there are solutions that **address investment barriers for private capital providers** by using public finance in a way that reduces risks and increases potential returns for private investors.

Finally, since the provision of finance is often motivated by companies' ambitions to compensate for the environmental impacts of their own operations in order to achieve

their climate and/ or biodiversity goals, many instruments can also be classified as either **‘insetting’ or ‘offsetting’ mechanisms**, i.e., as offsetting impacts within or outside of the own value chain.

Structured along the four categories mentioned above, the following sub-sections describe the mechanisms identified - detailing briefly how they work, the barriers they address, the groups of actors that are typically involved, and a short assessment of opportunities and challenges.

3.1 Payment for Environmental Outcomes

The instruments in this category offer farmers market-based incentives to implement agriculture practices that create positive environmental outcomes, which are paid for by companies within their supply chain (price premiums) or beyond (e.g., voluntary credit offset markets).

Private Payment for Ecosystem Services schemes

Payment for Ecosystem Services (PES) schemes **incentivise the management or enhancement of natural resources, above regulatory minimum, by assigning a value to the benefits that ecosystem services provide** (Wunder, et al., 2008). PES are **typically implemented through voluntary contractual arrangements** between the beneficiaries of the ecosystem services – which can involve private and/ or public entities, and farmers who adopt land management practices that deliver the desired environmental outcomes, e.g., improved water quality (Jack et al., 2008; Defra, n.d.). These arrangements are usually tailored to specific contexts and landscapes. Examples include Vittel Water’s PES scheme in France, which is further described in the **Annex**.

Carbon Offset Credits

By **adopting practices such as no-till farming and cover-cropping, farmers can sequester carbon which is measurable and verifiable by third parties**. These carbon **gains can be sold as tradeable offset credits** (with one unit typically equivalent to one tonne of CO₂ mitigation) on voluntary markets, where companies or other organisations purchase them to offset GHG emissions. Alternatively, agribusinesses in the supply chain can purchase these credits (or “in-sets”) to offset their emissions from the supply chain. However, uncertainty around the credibility and additionality of these offset credits pose a challenge, especially for farmers who lack awareness of, and trust in current carbon markets (Gonzales-Gemio and Sanz-Martin, 2025; Barbato and

Strong, 2023). Examples include Verra’s verified carbon standard which is described in more detail in the **Annex**.

Biodiversity Credits

Biodiversity credits are “**a measurable unit of biodiversity**” (British Ecological Society, 2024) linked to verified improvements in, or restoration of, biodiversity in ecosystems, or the implementation of biodiversity-friendly farming practices. They are **typically traded on voluntary markets by governments, private actors, conservation organisations, and financial institutions**. Buyers – often businesses driven by regulation or branding motivation – use them to prove a net-positive impact (World Economic Forum, n.d.). **Farmers may generate and supply these credits to diversify and increase their income**. However, critics highlight the fragmented nature of many projects and raise concerns that such projects may be used to treating habitats and biodiversity as replaceable and justify habitat destruction in certain locations by habitat elsewhere (Wauchope, et al, 2024; World Resource Institute, n.d.). Examples implemented in the EU include Plan Vivo – a Scottish based company well-established in the voluntary carbon market, which are now developing their Plan Vivo Nature (PV Nature) standard to issue biodiversity credits in Europe and globally (see **Annex** for more information on Plan Vivo’s example).

Price premiums

Some **agricultural off-takers and cooperatives incorporate price premiums for sustainable produce into procurement agreements** which can act as an incentive for the transition by improving farmers’ income. A price premium is **paid as a bonus on top of the market price** per kilogram, based on the sustainable practices implemented or environmental standards met. To receive price premiums, farmers either collect a certain number of points by implementing measures, or they comply with minimum conditions outlined by the companies (Field to Market, 2022; OP2B & BCG, 2023; Wilson et al, 2023). A recent report indicates that price premiums⁶ paid under supply chain agreements for ten of Europe’s major crops (e.g., barley, oats, wheat, rapeseed oil and potato) range between 12-28 €/ton of agricultural output (Deloitte et al, 2025). Bonuses are also often used for ‘insetting’ by companies, where GHG emissions are offset within the supply chain. For instance, Arla, Friesland Campina, and Fonterra pay their members/ suppliers premiums for climate-friendly production of milk of around

⁶ Based on practices implemented such as, reduced tillage, cover crop, reduced inputs, crop rotation, etc.

3-5 EUR per 100kg (Scherger, 2025). Friesland Campina's sustainability bonus system is further described in the **Annex**.

3.2 Debt-based financing

Debt-based financing provides another mechanism to channel capital towards sustainable agriculture and address a key barrier for farmers seeking to transition – the limited access to upfront capital. This approach leverages already established financial instruments, such as loans and bond, to support the transition. The purpose is to utilise existing financial flows to provide the necessary upfront investment for farmers to transition towards more sustainable practices, with the expectation that the long-term economic and ecological benefits of the transition can underpin repayment. The benefit of utilising existing sources of finance is that it brings with it existing organisations and experts which can contribute to sustainability strategies and broaden the base of stakeholders involved in achieving sustainability throughout the value chain (Field to Market, 2022).

Sub-types within this category represents loan products at more favourable conditions; mechanisms include Green/Environmental impact bonds, Sustainability-linked loan and bonds; and loans with favourable terms.

Green / Environmental impact bonds & loans

These **bonds are financial instruments used to raise capital for projects which have environmental benefits as an outcome** – and which generally need to meet a set of criteria determined by the issuer to be eligible (ICMA, n.d.; BBVA, 2024). The bonds are brought to the market for investors to purchase, with the proceeds used to fund these projects. **Investors are repaid with interest, with rates usually tied to the revenue or cost savings generated by the project.** In contrast to sustainability-linked bonds, proceeds are only used for pre-approved projects. Such bonds offer farms access to lower-cost capital to cover upfront costs of the transition. Nonetheless, interest rates offered by green impact bonds, particularly in the case examples this study has identified, are comparably lower to other types of bonds, raising the possibility that the motivations of investors for these bonds go beyond financial – and that perhaps increasing interest rates might enhance the lucrativity and usage of these financial instrument in Europe. Examples include the Aardpeer initiative and bonds for sustainable farming transition, which is further elaborated in the **Annex**.

Sustainability-linked bonds & loans

Bonds of this nature are **linked to the achievement of sustainability targets which are set by the issuer**. The bonds are **offered to the investment market, and repaid**

with interest based on the ESG performance, which are measured using Key Performance Indicators (KPIs) (e.g., pesticide and water use efficiency, output per hectare, GHG emissions) and which determines the finance terms of the bond (LSE, 2023). This provides farmers with access to lower-cost capital to cover upfront costs of the transition. To maintain credibility and integrity of the sustainability-linked bonds market, it is crucial that targets and KPIs reflect outcomes which have actual and measurable positive benefits to the environment (ICMA, 2024).

Loans with favourable terms

Agricultural lenders offer loan products on favourable terms, this **could include lower interest rates, longer repayment period, or more flexible repayment arrangements**. This helps farmers to cover upfront costs of the transition – such as investment in new practices or equipment – and provide more financial stability during the transition period. An example of this instrument is the McCain Transition Financing Partnerships – which is detailed in the **Annex**.

3.3 Transition-risk Sharing

Corporate actors along the supply chain can help farmers share the risk associated with transitioning to sustainable agriculture practices in different ways:

Research Pilots

Some agribusinesses operating in the EU have launched **pilot projects or programs to identify the most effective regenerative farming practices**, such as the pilot program by Diageo (“regenerative agriculture pilots”) which is presented in the **Annex**. These are **implemented in cooperation with several of their suppliers** – often in a selected sourcing region or for a specific type of commodity that they process or market. The pilots usually aim **to create a knowledge base for scaling these practices** across the supply chain, and/or to educate suppliers on how to adapt their practices. Often, they are conducted in partnership with research organizations and agronomic advisors who carry out the data collection, research, and technical support activities. They might take the form of pilot farms or programs, which suppliers can apply to.

Practice-based capacity building

Many agribusinesses have started **to offer technical support and advisory services to their agricultural suppliers to facilitate the transition to sustainable farming practices**. Typically, companies work with a third-party organization to implement

these programs in the field (Wilson et al, 2023). Examples of corporations utilising this instrument in their supply chain include McCain, Unilever and Nestle.

Long-term purchase agreements & Minimum prices

Buyers might incorporate **minimum prices and/or make long-term commitments to purchasing produce from sustainable farms**. This reduces farmers' offtake risks and gives them certainty over the predictable income. A minimum price (or reference price) is usually based on the average production costs of the crop plus the costs of conservation practices and provides stable financial support to farmers during the transition, thereby reducing the risk of market volatility (European Commission, 2024; Pollination Group et al, 2024). An example of long-term purchase agreement is Carrefour's sustainable sourcing contracts.

Transition insurance & warranties

Transition insurance, i.e., **schemes that reduce financial risks associated with transitioning to sustainable agriculture practices**, could address farmers' concerns related to temporary yield loss during the transition. While this instrument is not yet used in the EU context, it was emphasized as a game changer in addressing transition barriers in an interview with a farming organisation representative. Similarly, industry partners or insurance companies can offer warranties, i.e., upfront guarantees of a fixed, per-acre payment to farmers if regenerative practice adoption results in yield loss relative to historical production (WEF 2024; Field to Market, 2022; OP2B & BCG, 2023).

Sustainable land lease

Asset investors acquire suitable farmland and offer long-term leases to farmers via contractual agreements that require the use sustainable agriculture practices. This will increase the value of these land assets in the mid- to long term. For farmers, this model reduces the uncertainty regarding access to land. Usually, this is combined with technical support and capital to adapt their business model. (Field to Market, 2022; Pollination Group et al, 2024; interview with representatives of a food system investor network). Examples in the EU are SLM and Regenerate Asset Management.

Equity investment in enabling technology

Apart from the financing needs at farm-level, **facilitating the transition also requires improved enabling technology, processes, and inputs, e.g., more affordable biological fertilizer, or advanced MRV technology that can deliver robust data on environmental results**. Private equity impact funds are a way to provide capital for

the development and scaling of these solution which create favourable conditions for the transition. Agribusinesses, along with impact investors and other financing partners can co-invest in in a fund that pools investment opportunities in such new technologies and business models to indirectly support their suppliers. For example, in 2022, Unilever, Tikehau Capital (an alternative asset management group) and AXA jointly created a private equity impact fund focused on regenerative agriculture, which is dedicated to accelerating and scaling companies providing solutions to enable the transition to regenerative practices (Deloitte et al, 2025; interviews).

3.4 Blended Finance

Blended Finance is a strategic **approach that uses concessional capital (typically from development finance institutions, state-owned banks, philanthropic capital, and impact investors) to catalyse additional private capital towards solutions for environmental or social impact** (Pike et al, 2020). The concessional finance usually **provides a cushion against potential losses, thereby reducing risks for private investors** who would otherwise hesitate to invest. While the use of blended finance for agriculture is growing, the sector still accounts for less than 10% of total financing volumes in blended finance markets (Field to Market, 2022), amounting to around \$14 billion globally. The majority of these funds are deployed in emerging markets, and only 18% of it is specific to climate-smart and sustainable agriculture (Pollination Group et al, 2024). Nevertheless, the structure has general applicability to both emerging and developed markets, and blended finance is considered a significant potential lever to unlock significant amounts of private capital on favourable terms, accelerate investment in sustainable agriculture, and demonstrate the commercial viability of sustainable agriculture projects (Good Food Institute Europe, 2025; Pike et al, 2020).

Blended finance funds

A blended finance fund is a **structured investment vehicle with different risk layers that uses concessional capital to de-risk private investments**. Public and philanthropic actors provide junior tranches of capital, i.e., they absorb losses first, while commercial investors provide the senior tranche of capital, which has priority in repayment and thus carries lower risk. In addition, concessional or grant capital is used to finance technical assistance which helps ensure investment readiness of projects. These structures allow to offer farmers low-interest rate, long tenor financing and technical assistance for the transition (Pollination Group et al, 2024). Food corporates, development finance institutions, and philanthropies that aim to increase their positive

impact can all be providers of concessional capital to enable blended fund structures. Commercial capital providers gain access to new, low-risk investment opportunities.

Guarantees

Guarantee providers insure a share of investment losses in case of non-repayment, thereby de-risking private capital, e.g., commercial loans to farmers, which allows for long tenor financing. This can also provide farms with access to credit who otherwise would not be eligible. Guarantees can also be used to further de-risk blended finance funds or concessional loans. Guarantees typically come from similar sources as concessional capital but since there is no immediate request for cash outlay, guarantees are an easier capital request to satisfy (Pollination Group et al, 2024).

Finally, several instruments were initially considered for inclusion in this scoping study but were not explored in depth due to uncertainties about their effectiveness, limited maturity, or uptake within the EU context. One such instrument is **reverse auctions**, a form of Payment for Ecosystem Services (PES), where buyers invite landowners, farmers, or businesses to competitively bid to deliver specific environmental outcomes at the lowest cost (Maguire, 2021). While conceptually promising, reverse auctions are not yet widely used by private actors in the EU and have shown potential downsides—particularly a tendency to incentivize short-term interventions over sustained, long-term environmental improvements. Another example is **certification schemes** which may offer higher prices for sustainable products, but the landscape remains fragmented, and the actual incentive effect is unclear. We also considered **sustainability-linked insurance products**, which offer favourable terms (e.g., reduced premiums or extended coverage periods) to producers who meet sustainability criteria (Pollination Group et al, 2024). Although such instruments may play a role in transition risk-sharing in the future, we found little evidence of their current use in the EU or impact in de-risking transitions. Similarly, **direct co-investment models** and **recurring payments** were excluded due to uncertainties around how they function in practice and potential overlaps with other mechanisms.

3.5 Current uptake of private finance solutions in the EU

The private financing landscape for the transition to sustainable agriculture in the EU appears to be relatively small scale (compared to other regions such as North America or the UK), and in the early stage of development. Understanding the full picture has also proved challenging given that the activities undertaken by companies in this area are not always transparent (Deloitte et al, 2025). Nonetheless, recent reports indicate

that price premiums and payment for ecosystem services as the most prevalent instruments used in Europe, followed by loans with favourable terms (Deloitte, 2025; IATP, n.d.).

Our collection of 35 case examples⁷ (see **Table 2**), gathered through literature review and key informant interviews, suggests that **most financial instruments presented in this paper are operationalised in the EU but vary considerably in scale and maturity**. Practice-based **capacity building, research pilots, loans on favourable terms and price premiums** being identified as the **more commonly used** instruments in our case examples, confirming to some extent findings reported by similar studies. **Loans on favourable terms** offered through partnerships between large food corporations and banks **are increasing**, and we identified **some examples of carbon offset credits and private PES schemes** being used. **Few bonds** related to sustainable agriculture have also been issued⁸, while on the contrary, **cases of blended finance have not been observed** – although recent initiatives from the European Investment Bank (see **Annex**) could spur greater utilisation of blended finance in sustainable agriculture transition. The same is true for biodiversity credits and transition insurance – with the latter instrument still lacking in this area but could play a role in transition-risk sharing (Deloitte, 2025).

⁷ Our compilation of examples is neither exhaustive nor fully representative of the private finance landscape. This is due to several factors, including limitations in publicly available information and the predominance of English-language sources. It is likely that there are arrangements in specific countries or regions that we are not aware of. Nonetheless, this exercise aims to offer insights into the current trends in private finance instruments. A full list of the examples referenced will be provided as supplementary material to this working paper.

⁸ See the example of Aardpeer initiative and bonds in the Annex.

Table 2. Count of private finance instruments used in this study's catalogue of case examples⁹

Categories	Sub-categories	Count
Payments for environmental outcomes	Private PES schemes	2
	Carbon offset credits	3
	Biodiversity credits	0
	Price premiums	3
Debt-based financing	Green/environmental impact loans	2
	Sustainability-linked loans and bonds	1
	Loans on favourable terms	5
Transition-risk sharing	Research pilots	7
	Practice-based capacity building	11
	Purchase agreement and minimum price	2
	Transition insurance/warranty	0
	Sustainable lease	4
	Equity investment in enabling tech	1
Blended finance	Blended fund	1
	Guarantees	0
	Total	42

These case examples provide some overview of the instruments being utilised within EU. The prevalence of price premiums, research pilots and practice-based capacity building instruments in the EU suggests a growing desire by food retailers and processors to increase the resilience of their supply chain and work with suppliers to achieve their climate commitments. In particular, large multinational corporations, for instance Diageo, McCain¹⁰ and Unilever¹¹, are active in this area, and were frequently cited in our interviews as some of the first movers in Europe. In contrast, private equity managers remain largely inactive in the space, as do insurance companies and banks – with the exception of specialised agriculture banks and impact investors, e.g., Rabobank, Crédit Agricole, and Triodos bank. Possible solutions and opportunities to drive the increased involvement of these actors (i.e., private equity, insurance companies and banks), along with other key recommendations, are further explored in the following sections.

⁹ As certain case examples arrangements utilise multiple instruments, there is some double counting.

¹⁰ Amongst the several programmes being run by McCain is their respective arrangements with Rabo Bank and Credit Agricole to provide *loans with favourable terms* to farms within their supply chain for the investment in technologies, equipment and practices.

¹¹ Unilever, through its [Climate and Nature fund](#) and [Impact fund](#) (in partnership with Tikehau Capital and AXA), are looking to enable their supply chains' transition to more sustainable agriculture through instruments such as *practice-based capacity building* and *equity investment in enabling solutions*.

3.6 Assessment of transition potential, shortcomings and opportunities of solutions

To be impactful, private finance solutions need to effectively address transition barriers both for farmers and for finance actors (see section 2) in order to enable broad uptake and ensure sufficient finance overall. While not every solution is suited for scaling, whether due to limited demand or potential risks, there are nonetheless key challenges that inhibit the scaling of promising approaches. This section explores these challenges in greater depth, discusses the transition potential of different private finance instruments, and considers emerging opportunities and risks in this field.

Currently, the **scale of private support** instruments available to European farmers is still **insufficient to bridge the finance gap** for the transition to sustainable agriculture (Deloitte et al, 2025). A new quantitative analysis by Deloitte et al (2025) finds that, on average, European farmers who transition to sustainable agriculture will still have a funding need between ~1400 to 4100 €/ha after currently existing incentivizing and de-risking solutions are applied. What are the challenges to scaling up existing financing? Several interviewees emphasized that the **hesitance of many value chain players and finance actors** to get involved remains a key challenge. Many agribusinesses in the EU do not have any programmes yet or are just starting with pilots, and the investment appetite of players who manage the bulk of private capital - such as insurers, institutional investors, and impact finance institutions - remains limited, which reflects the **persistence of certain barriers for private capital providers** (see also Deloitte et al, 2025; Pollination Group et al, 2024).

There is wide agreement that MRV technologies are key for scaling instruments tied to environmental results. Many financing mechanisms depend on robust and comparable environmental data, such as carbon and biodiversity credits and other ecosystem services payments, ESG-linked bonds and loans, sustainability-linked insurance, or price premiums (Deloitte et al, 2025). However, reliable and practical data collection remains a major challenge, for example for agribusinesses and food retailers who must report on their climate emissions and need to avoid greenwashing risks. A majority of the experts interviewed mentioned this as a key challenge to be overcome for scaling the abovementioned solutions. **Agri-tech companies, MRV providers, and fintech platforms increasingly play a role in closing this credibility gap**, as interviewees from a food system investor network pointed out. They develop and scale more sophisticated technological solutions to track and monitor GHG emissions and other environmental indicators and provide digital platforms that increase transparency.

Mainstreaming of natural capital accounting in financial institutions could be an important new driver for industry players to support the transition. In an expert interview, a representative from an impact investor network highlighted the uptake of natural capital accounting by mainstream financial institutions and asset managers such as JP Morgan as a new development that could shift the more systemic barriers to supporting the transition to sustainable agriculture. This pricing of environmental and climate risks results in a shift of cost of capital which decreases for sustainable companies. If followed by other players in the finance sector, this important shift in practices could be a strong motivator for companies in the agrifood sector to improve sustainability along their supply chain (Source: interview).

Instruments that offer investment opportunities at larger scale are key to attract private investors. For private investors, the small scales of investment opportunities are currently an important hurdle to engage in the sustainable agriculture field (EIB, 2020; Pollination Group et al, 2024). According to interviewees from an investor network, instruments that allow investment at larger scale are green bonds - which need to be launched by banks who then lend to farmers - and blended finance funds. However, the implementations of these instruments in Europe is currently still scarce.

When it comes to the feasibility of implementing support mechanisms throughout supply chains, several interviewees emphasized that agribusinesses with supply chains that are focused on just a few crops and are less dispersed are at an advantage, since effective sustainable farming practices differ between regions and crops.

Incentives can contribute to motivating the transition but are often insufficient to compensate for risks and provide upfront capital. Mechanisms that act as incentives by increasing farmers' income - like carbon offset credits, biodiversity credits, or price premiums - are often not big enough to compensate for temporary yield loss risks during the transition, or to fund the necessary upfront investments. On their own, these instruments are unlikely to be a primary driver of the shift to sustainable agriculture. To be effective, they need to be combined or sequenced with finance solutions that **address farmers' transition barriers, especially de-risking and capital needs**. While this need was recognized by several experts interviewed, it was particularly emphasized by a farming organization representative. For instance, prices that can be achieved for **carbon offset credits** on voluntary carbon markets have been well below the level needed to spur a substantial change in farm practices. **Price premiums** are often aligned with prices in ecosystem credit markets (Scherger, 2025). Another issue with credits is significant price fluctuations that make payments less predictable and create uncertainty.

A new approach to realise higher prices, and increase the return on investment for farmers, which was highlighted by an interviewee from a farming organisation, is the **bundling of carbon offset credits with biodiversity credits**, or the creation of nature credits that includes even other aspects. While buyers in voluntary markets are still mostly focused on carbon offsets, interest in biodiversity benefits is increasing. The growing interest from companies outside the food system in buying carbon offset credits created from sustainable agriculture could raise prices but is also concerning for food and drink companies who might lose the ability for 'insetting' throughout their value chain due to this competition.

Finally, while landowners may offer benefit-sharing arrangements, **tenant farmers are often among the main losers in carbon offset or biodiversity markets**, as they typically lack the authority to engage directly with buyers. As an interviewee from academia pointed out, in some cases, they might even be displaced to make way for carbon offset projects.

Transition insurance and warranties are instruments that could effectively address farmers' fears of yield-loss risks. These are not yet, or scarcely, implemented in the EU, but could be promising tools, especially when facilitated through blended finance mechanisms – as suggested by an interviewee from a farming organization. Similarly, **minimum price models, long-term purchase agreements, and land lease incentives** provide farmers with long-term certainty that helps reduce temporary risks during the transition.

With regard to **instruments that facilitate the access to upfront capital** for the transition, emerging partnerships between large agribusinesses and banks with agricultural expertise play a role in creating tailored **transition loans on favourable terms for farmers**. However, evidence from our case examples suggest that these financial products tend to be only available to suppliers of the food company involved in such partnerships. Between Green bonds & loans and **Sustainability-linked bonds & loans**, the latter have the advantage that they can also be used to refinance farmers' existing debt, which tends to be a significant additional concern for farmers. However, farmers usually do not have direct access to the option of issuing bonds. Agricultural cooperatives or agribusinesses might play the role of an intermediary issuing green bonds or sustainability-linked bonds.

There is currently limited information available about existing private arrangements that support the transition to sustainable agriculture, especially with regard to the environmental outcomes they exactly finance. Given the relatively low level of

transparency and coordination around these private financing mechanisms, there are **risks linked to a potential lack of additionality** and **double counting**. The credibility of mechanisms that aim to reduce companies' carbon or biodiversity footprint by financing sustainable farming depends on the financed projects being additional, i.e., the emissions reduction or carbon removal would not have occurred without the offset project. If the project would have happened anyway, the company cannot claim a net reduction in emissions. In practice, this particularly affects carbon offset credits. For inseting activities (e.g., premium prices) aimed at reducing a company's supply chain emissions, additionality is less relevant since the actual reduction of their scope 3 emissions is not dependent on any payments made.

Double counting occurs when a single emissions reduction is counted more than once because the same reduction is claimed by different entities toward their own targets - undermining trust in the voluntary carbon market and climate reporting. This might occur when financing mechanisms are stacked, and different buyers of offset credits, or other providers of finance support the same project. It might also happen when (international) companies count the same emission reductions from an activity in their supply chain towards their climate goals as the (host) country in the context of their Nationally Determined Contributions (NDCs) under the Paris Agreement. While this does not represent a legal issue if it concerns scope 3 emissions, it can undermine transparency and credibility (Meitner, 2024).

Another risk linked to the diverse landscape of instruments and actors involved, is the fact that **steering the sector towards certain desired environmental outcomes becomes tricky** – especially given the low level of transparency about what kind of sustainable farming practices exactly the different projects support. Private interests driving the financial support of a certain sustainable farming practice might not match the actual environmental requirements in a certain region. Consequently, without better coordination and transparency, the outcomes might not only mismatch what is required in a certain context but might also obscure the need for public action to achieve the outcomes that are not covered by private mechanisms.

Finally, private financing investments and arrangements might not provide the necessary **long-term perspective and stability** given that private actors do not have a public mandate to support the transition to sustainable agriculture and might withdraw their support in case they face any financial difficulties or the corporate strategy changes.

4. CONCLUSION AND RECOMMENDATIONS

This paper aimed to provide an overview of private finance arrangements to support the transition to sustainable agriculture in the EU. **Financial challenges play an important role among the barriers currently preventing many farmers from adopting sustainable farming practices** – e.g., limited access to upfront capital, temporary income insecurity due to yield loss risks, and the uncertainty of monetary benefits from the transition. Private investment in sustainable agriculture by value chain actors, investors, and financial institutions, could help address these challenges, but also faces a number of hurdles, such as data gaps, credibility concerns, and limited returns on investment.

Across the different groups of actors involved in supporting the transition, motivations vary significantly – from achieving corporate climate goals and improving supply chain resilience to reducing long-term credit default risks or benefiting from increased land asset values. As a result, a diverse landscape of private finance solutions has emerged. Differentiating them by their core financing mechanism, we identified **four categories of instruments, namely payments for environmental results, transition-risk sharing mechanisms, debt-based mechanisms, and blended finance tools**. Instruments under these categories address different transition barriers. For instance, solutions like carbon offset credits and private PES schemes, where farmers are paid for environmental results, mainly serve as an incentive by increasing the potential monetary benefits. In comparison, debt-based instruments such as green bonds or transition loans on favourable terms, improve the availability of capital for necessary upfront investments; and transition-risk sharing instruments, like capacity building programs and long-term purchasing agreements help tackle knowledge gaps and partly compensate for temporary income insecurity.

Nevertheless, **the current scale of private support instruments available to European farmers is still insufficient**, as a number of barriers for private capital providers persist. Key factors in overcoming these include improving MRV technologies, offering investment opportunities at larger scale, and ideally mainstreaming natural capital accounting in financial institutions. Also, **certain instruments are providing incentives but seem insufficient as standalone solutions** to effectively support farmers in the transition. These need to be combined with solutions that address farmers' risks and upfront capital needs. For instance, transition insurance and warranties – which are scarcely available yet – could effectively address farmers' fears of yield-loss risks.

Compared to other regions, the **EU landscape of private finance solutions for the transition to sustainable agriculture is still relatively nascent and small-scale** but

several agribusinesses, in particular international companies, have implemented research pilots, capacity building programs, and price premiums in their European supply chains. Carbon offset markets are developing, and several examples of private PES schemes, transition loans on favourable terms, green bonds, and equity funds can be found. However, some potentially impactful instruments like blended finance and transition insurance have not yet emerged in the EU market.

Recommendations

Increasing collaboration and transparency between different actors

Improving cooperation and alignment between different actors and mechanisms to **increase synergies** is one of the key recommendations provided by different policy reports and interviewees. This entails **both value chain partnerships** (Deloitte et al, 2025; BCG/OP2B, 2023) and **cooperation between private and public actors** to create favourable conditions and scale financing for the transition.

- **Aligning MRV standards and exchanging data:** While the collection of relevant data is essential to capture the full value of payments for environmental results, it should not overburden farmers and implementing actors. There is currently a multitude of frameworks, tools and data collection systems reflecting the diversity of experts, MRV organizations, value chain actors and other buyers of ecosystem services. To keep the uptake of these instruments practically feasible for farmers, these different actors will have to collaborate to standardize metrics. Similarly, farmer associations, value chain partners, implementers, scientific institutions and public bodies could exchange data to improve the evidence base for the economic and environmental benefits of sustainable agriculture practices.
- **Facilitating equipment sharing and peer learning:** The upfront investments necessary for a transition to sustainable farming are a key barrier especially for small and medium-sized farms. Equipment sharing could significantly reduce these costs and could be facilitated by local authorities, cooperatives, and advisors. Mentorship networks and living labs could help to connect farmers that are aiming to transition and facilitate shared learnings.
- **Creating a one-stop shop for farmers:** for farmers seeking to transition, the fragmented landscape of financing opportunities and the range of diverse information on sustainable agriculture practices can be a major hurdle. A hub that consolidates existing knowledge, guidelines, region-specific best practices, data, and resources to help farmers access funding, could serve as a one-stop shop for farmers (BCG et al, 2025).

Scaling impact through landscape approaches and blended finance funds

Activities by offtakers can give important impulses and provide a proof of concept but impact on a broader scale requires scaling transition financing to a landscape level. A critical mass of investment opportunities on such a level might also be able to draw in more conservative investors and insurance companies.

- **Landscape approaches** usually necessitate partnerships of different players across the value chain and public-private investment. An example of this is a new project by EIT Food and Foodvalley, Navarro 360°, which will invest €3 million over three years to support 80 farmers in northern Spain, to implement regenerative agriculture practices. It coordinates the value chain actors, helping to make farmers aware of incentives that are available to them, and builds alignment around KPIs and outcomes reporting (EIT Food, Deloitte et al, 2025).
- **Blended Finance Funds** can bundle investment opportunities and achieve a size of investment opportunities that is attractive for more commercial investors, thereby scaling finance for the transition. They could also offer promising de-risking mechanisms that are currently lacking, particularly transition insurance. Setting up and designing such a fund usually requires the mobilization of grant funding from multilateral development banks and/or the EU, as well as a partnership between philanthropies, public sector actors and offtakers.

Redesigning agricultural subsidy schemes to ensure policy coherence

Subsidies to the agricultural sector have helped to improve yields and increase farm incomes but they have also had unintended adverse effects by supporting environmentally harmful farming practices and unsustainable intensification, contributing to soil degradation, biodiversity loss, climate change, and animal welfare issues. In addition, they have tended to reinforce unequal distribution of wealth, where large producers benefit from support policies more than small farmers. Efforts to reform subsidy frameworks to mitigate negative environmental effects and/or to incentivize the production of ecosystem services have only had limited impacts so far, and mostly lack the policy coherence needed to shift incentives in the system – i.e., their effects are easily offset by the impact of business-as-usual policies reinforcing the current agricultural system (Baldock et al, 2025). This policy incoherence disincentivizes farmers from transitioning to sustainable agriculture, especially since, in practice, a combination of public and private finance would be needed to de-risk and fund the transition. It also makes it less attractive for investors and other private actors to take

initiative to fund farmers' transition. Reorienting agricultural subsidies that still support harmful conventional farming practices towards rewarding environmental outcomes is therefore essential for creating the right policy environment both for incentivising the transition to sustainable agriculture and leveraging private funding for it.

Long-term policy objectives to ensure planning certainty and steer the sector towards desired outcomes

Unlike sectors such as transport and energy, where the EU has set clear long-term sustainability targets, agriculture still lacks a comparable, binding framework aligned with climate and biodiversity goals. This policy gap has become increasingly evident in recent months with the third Simplification Package published by the European Commission in May 2025 (European Commission, 2025). It proposes changes to the Common Agricultural Policy (CAP) that risk weakening its alignment with key climate and environmental legislation (Ibbott, 2025). One significant change would remove the obligation to update the national CAP Strategic Plans in line with new policies, such as the yet to be adopted Soil Monitoring Law. This contradicts calls for stronger policy coherence (e.g. OECD, 2025) and sends conflicting signals about the role of agriculture in achieving EU climate and environmental targets (Ibbot 2025; Muro et al, 2025). The introduction of these revisions in the middle of the current CAP period (2023-2027) exacerbates what is already a complex and evolving policy landscape (Matthews, 2025; Muro et al, 2025). Establishing SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) long-term environmental policy objectives for the agricultural sector on EU level - supported by respective standards and indicators - would provide a clearer roadmap towards the transition to sustainable agriculture and increase planning certainty for both farmers, food companies, banks, and investors. At the same time, it would represent a basis for policymakers and others to steer the diverse landscape of funding instruments and activities in this field towards desired outcomes.

Areas for further research

Several questions emerged from scoping and analysing the existing private financing arrangements for the transition to sustainable farming in Europe. While they go beyond the scope of this study, further examining these issues seems highly relevant to inform next steps for policymakers and other actors seeking to bridge the finance gap for the transition

- First, it would be important to assess the distributional effects of the private financing instruments and arrangements we looked at. Are some of them more accessible to large farms, thus exacerbating the gap in opportunities between large and small farms? And if so, how can small farms still benefit?
- Another area for further research is related to the high interest in carbon offsetting and insetting that we identified as a major motivation for food companies and other actors to financially support the transition. How can this motivation be leveraged to generate co-benefits of carbon farming beyond climate outcomes, and also deliver for other pressing issues, especially the protection against biodiversity loss? While farming practices that mitigate carbon emissions or sequester carbon can indeed provide co-benefits for biodiversity, this is highly context-specific, as a carbon farming practice that is beneficial in one area could be potentially be harmful elsewhere (Scheid et al, 2023).
- Related to carbon offsetting is the question of how the identified risks of double counting and a potential lack of additionality can be addressed in practice to prevent concerns about credibility.
- Finally, seeing that increased coordination both between different private actors and between public and private capital providers, has been highlighted as a major point for improvement by many stakeholders, a key question becomes how to overcome the current hurdles to cooperation. For example, how can corporate concerns about compliance with antitrust laws be addressed? What tools are needed to better coordinate public and private finance (e.g., agreed outcome metrics, benchmarking systems etc.)? And who would be best suited to have a coordinating role, both at landscape level, and to provide a one-stop shop solution, as mentioned above?

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ANNEX: SELECTED CASE EXAMPLES

Vittel PES Scheme

Payment for Environmental Outcomes

Overview	Description
<p>Financing instrument: Payment for Ecosystem Services</p> <p>Geography: Vosges, France</p> <p>Established: 1989 project start, 2004 full adoption</p> <hr/> <p>Provider of finance: Nestlé Waters (owner of Vittel)</p> <p>Recipients: individual farms (26 farms as of 2013)</p> <p>Intermediaries and partners:</p> <ul style="list-style-type: none"> • Agrivair • INRAE (National Research Institute for Agriculture, Food and Environment) <hr/> <p>Area covered: 10,000 acres</p> <p>Scale of financing:</p> <ul style="list-style-type: none"> • ~ €24 million overall funding within first 7 years • Per farm: ~€200/ha/year payments + €150,000 for initial modernization 	<p>Objective: To reduce ground water nitrate pollution in Nestlé Waters' Vittel water catchment area, which had been caused by agricultural intensification in cattle ranching and maize cultivation in the 1980s.</p> <p>Development & Structure: Nestlé started by launching a research programme in partnership with the French National Institute for Agronomic Research (INRA) to identify the optimal farming practices to reduce nitrate levels. To negotiate and implement the programme, the company created the local intermediary Agrivair, which negotiated long-term contractual agreements (5-30 years) with each individual farm.</p>
<p>Incentives for farmers</p> <ul style="list-style-type: none"> • Cost coverage for new equipment and modernization (<150,000 € per farm) • Guaranteed income during the transition period (5 years) through cash payments (~200 €/ha/year) • Free technical assistance for annual individual farm plans • Land debt is eliminated; Vittel-owned land is granted in usufruct for up to 30 years, farmers get extra farmland 	<p>Financing requirements & Monitoring</p> <ul style="list-style-type: none"> • Replace maize cultivation with hay/alfalfa for animal feed • Adopt extensive cattle ranching including pasture management • Reduce carrying capacity to a max. of one cattle head/ ha • Replace chemical fertilizer with composted manure, no use of pesticides • Modernize farm buildings for optimal waste management • Balance livestock feed for optimal productivity
	<ul style="list-style-type: none"> • Farming practices, livestock stocking rate, and proper animal waste management are monitored by Agrivair • All farm accounts are reviewed by Agrivair • until 2004, soil nitrates levels were monitored year-round by INRA • Water quality is monitored daily by Nestlé Waters

Verra Verified Carbon Standard Program

Payment for Environmental Outcomes

Overview	Description
<p>Financing instrument: Carbon offset credits</p> <p>Geography: Europe & Global</p> <p>Established: 2006</p> <hr/> <p>Provider of finance: Buyers of carbon credits on the market</p> <p>Scale of financing:</p> <p>~ USD \$5.87 per tonne (as of June 2025)</p> <p>Uptake: 121 projects in Europe (~4000 projects globally; as of mid-2025)</p> <p>Intermediaries and partners: Independent auditing organizations (Validation and Verification Bodies) – e.g., SCS Global Services, 4k Earth Science Private Limited, etc.,</p>	<p>Objective: The Verified Carbon Standard (VCS) Program, developed by Verra, a nonprofit corporation headquartered in the US, issues carbon credits for projects that demonstrably reduce or remove GHG emissions, including in the EU. The standard-setting program aims to provide buyers in voluntary carbon markets with quality assurance through rigorous requirements and methodologies, and transparent information about certified projects.</p> <p>Development & Structure: The VCS program was established in 2007 through a collaboration between environmental and business leaders. It is now the world's most widely used GHG crediting program and also the most widely used standard in the AFOLU (agriculture, Forestry, and other Land Use) sector. Verra's programs provide frameworks that support the design and implementation of carbon reduction projects, and sector-specific methodologies that must be followed to quantify GHG benefits. To be certified under the VCS program, projects undergo an independent assessment by third-party auditors (validation/verification bodies) based on the VCS standard's rules and requirements. Once validated, they are eligible to be issued Verified Carbon Units (VCUs), with one VCU representing one metric tonne of CO2 reduced or removed from the atmosphere. All information on certified projects is publicly available in the Verra registry system, which tracks every VCU, thereby preventing double-counting.</p>
<p>Incentives and benefits to farmers</p> <p>Through the adoption of sustainable farming methods like reduced tillage, cover cropping, improved nutrient management, or agroforestry, farmers can enhance soil carbon sequestration and reduce on-farm GHG emissions. VCS provides the framework through which these measurable climate benefits can be quantified and certified as VCUs. Farmers can then sell these VCUs in the voluntary carbon market, generating a new revenue stream. This direct financial compensation helps offset the initial costs and risks associated with transitioning to regenerative practices.</p>	<p>Requirements & monitoring</p> <ul style="list-style-type: none"> • The issuance of VCUs depends on the compliance with Verra's quality assurance principles: additionality; real and measurable; conservative; permanent; independently verified; Uniquely numbered and transparently listed. • Registered projects must continuously collect data on emission reductions or removals and submit regular monitoring reports. For AFOLU projects, verification reports must be submitted within 5 years of the previous report. • Verra ensures independent verification of the claimed emission reductions, correct application of the methodology, and compliance with VCS rules and requirements • Verra also has a VBB performance monitoring program, assessing the performance of Validation and Verification Bodies, which is captured in individualized scorecards once a year, as a basis to strengthen auditing capacity

Plan Vivo Nature Standard For Biodiversity Credits

Payment for environmental outcomes

Overview	Description
<p>Financing instrument: Biodiversity credits</p> <p>Geography: Europe and Global</p> <p>Established: 2023</p> <hr/> <p>Provider of finance: Buyers of credits in voluntary biodiversity markets. Plan Vivo indicates that there is an anticipated increase in private investment in this market, especially from philanthropic foundations, impact investors, large asset owners and corporations.</p> <p>Scale of financing: Plan Vivo do not sell or set pricing for credits. However, a pricing guidance is being established.</p> <p>Recipients: Farmers/land managers/local communities</p> <p>Intermediaries and partners: Fauna & Flora and Pivotal</p>	<p>Objective: Plan Vivo, a foundation with longstanding experience in carbon credit standard setting, have launched a new standard for biodiversity credits (PV Nature), with global applicability. PV Nature seeks to scale up funding towards projects which has a holistic impact; those which produces positive biodiversity outcomes and restore critical ecosystems - rather than simply offsetting negative environmental damage (further explained under "Financing Requirements") - in addition to bringing benefits to the local community. This latter is achieved by requiring projects to employ a participatory approach, with local communities, landowners, and relevant government bodies being involved in project design and implementation, in order to be eligible.</p> <p>Development & Structure: PV Nature, which was launched in 2023, was developed in partnership with Pivotal – a biodiversity data start-up. The development of the PV Nature Standard was tested through pilot projects in various diverse landscapes. The Bioestrela project in Portugal was one of PV Nature's pilot projects located in the EU. In order to obtain PV Nature Standard certification, projects would need to go through PV Nature's initial eligibility checks. The project's proposed interventions and technical specifications are then assessed by a panel of biodiversity experts, before validation from a third-party through a field visit is undertaken. Plan Vivo Biodiversity Certificates (PVCs) are then quantified and issued based on the PV Nature Standard methodology. The methodology uses a multi-metric approach: a combination of various biodiversity indicators, including broad species groups and habitat structure and connectivity, to ensure a comprehensive picture of ecosystem health is captured.</p>
	<p>Incentives and benefits to farmers</p> <ul style="list-style-type: none"> • Alternative income stream through the generation of biodiversity credits. • Training and technical advice with regards to land management and monitoring. • Adoption of land management practices which generate biodiversity credits also improves soil health and increases climate change resilience.
	<p>Financing requirements and monitoring</p> <p>Financing requirements: For projects to be certified and generate PVCs, it will either need to demonstrate measurable gains against the baseline, or meet one Key Biodiversity Area criteria or two Important Plant Area criteria. Projects with exceptionally low baseline, have been degraded over the past decade, or restored from more biodiverse habitats to less diverse habitats, are not eligible. Credits are also issued based on verified outcomes rather than forecast.</p> <p>Monitoring: Certified projects are required to submit an annual report with their monitoring results and request for issuance of PVCs. In addition, projects must also undergo third-party verification every five years.</p>

Friesland Campina's Sustainability Bonuses

Payment for Environmental Outcomes

Overview	Description		
<p>Financing instrument: Premium prices</p> <p>Geography: Netherlands, Belgium, Germany</p> <p>Established: 2018; updated in 2023</p> <hr/> <p>Providers of finance:</p> <ul style="list-style-type: none"> • Friesland Campina • Friesland Campina Cooperative members through deposit scheme <p>Uptake: all members (~10,000)</p> <p>Intermediaries & partners:</p> <ul style="list-style-type: none"> • Wageningen University <hr/> <p>Scale of financing:</p> <ul style="list-style-type: none"> • € 245 million in 2023 • Up to € 3.50 (on average €2.63) per 100 kg of milk • ~ Ø of € 25,000 p.a. / farm 	<p>Objective: Since many of Friesland Campina's customers (e.g., McDonald's, Mondelēz, Nestlé) have set their own climate goals including supply chain emissions reductions, the cooperative needs to demonstrate its sustainability performance transparently. At the same time, it wants to financially incentivize its member farms to improve their sustainability in line with company goals, with a particular focus on climate.</p> <p>Development & Structure: the 'Foqus planet Sustainable development' incentive system was built based on the company's existing quality audit programme. It rewards results across 4 themes: animal health and welfare, climate, biodiversity and grazing. Member farmers are free to choose the measures that contribute to the sustainability goals, and bonuses are paid depending on the results achieved. The maximum premium is € 3.50 per 100 kg of milk if a maximum score in all indicators is achieved. The system makes the financial return for specific sustainability results transparent in advance, with the highest bonus being paid for the GHG emissions indicator. It is partly funded by the company and partly by the member farmers themselves through a deposit of €0.60/100 kg milk.</p>		
	<p>Incentives for farmers</p> <ul style="list-style-type: none"> • A maximum price premium of € 3.50 per 100 kg of milk • Transparency on financial return for specific results • An online simulation programme calculating the sustainability effects of farm measures 		
	<p>Financing requirements & Monitoring</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>Scoring system of results in:</p> <ul style="list-style-type: none"> • Animal health • Climate • Biodiversity • Meadow grazing </td><td style="vertical-align: top;"> <p>Monitoring of 9 indicators, incl. via:</p> <ul style="list-style-type: none"> • A farm-specific carbon footprint assessment method, developed with Wageningen University • The 'Biodiversity Monitor', developed with the WWF and Rabobank • The 'KoeKompas' animal health assessment system </td></tr> </table>	<p>Scoring system of results in:</p> <ul style="list-style-type: none"> • Animal health • Climate • Biodiversity • Meadow grazing 	<p>Monitoring of 9 indicators, incl. via:</p> <ul style="list-style-type: none"> • A farm-specific carbon footprint assessment method, developed with Wageningen University • The 'Biodiversity Monitor', developed with the WWF and Rabobank • The 'KoeKompas' animal health assessment system
<p>Scoring system of results in:</p> <ul style="list-style-type: none"> • Animal health • Climate • Biodiversity • Meadow grazing 	<p>Monitoring of 9 indicators, incl. via:</p> <ul style="list-style-type: none"> • A farm-specific carbon footprint assessment method, developed with Wageningen University • The 'Biodiversity Monitor', developed with the WWF and Rabobank • The 'KoeKompas' animal health assessment system 		

Aardpeer Initiative and Green Bonds

Debt-based Finance / Transition-risk Sharing

Overview	Description
<p>Financing instrument: Sustainable Lease & Green Bonds</p> <p>Geography: Netherlands</p> <p>Established: 2021</p> <hr/> <p>Provider of finance: Various sources – including bonds, donations and foundation funding</p> <p>Scale of financing: €11.3 million (over three campaigns)</p> <p>Recipients: individual farms (13 farms; 167 hectares in total)</p> <p>Intermediaries and partners: Aardpeer is an initiative by <i>Stichting BD Grondbeheer</i>, <i>Triodos Regenerative Money Centre</i>, <i>Stichting Wij.land</i> and <i>Stichting Herenboeren NL</i>.</p>	<p>Objective: Aardpeer is a joint initiative of BD Grondbeheer, Wij.land, Herenboeren and Triodos Regenerative Money Centre (TRMC). The initiative seeks to remove land from speculative markets and offer an alternative approach to land acquisition for sustainable farming. This approach addresses the issue of increasing land prices in the Netherlands, which either pressures farmers to maximise their yields through intensification practices, thereby degrading soil health and biodiversity or forces farmers close to retirement to sell their land to the highest bidder – leaving the successor in a similar situation and continuing the cycle of intensification.</p> <p>Development & Structure: To solve this issue, Aardpeer purchases land, from the proceeds of the green bonds issued, and leases it out to farmers who would like to undertake environmentally friendly farming practices. The leases are on a long-term basis and at an affordable rate based on the farmers' revenues. The model ensures the land is held for seven generations to provide long-term property for sustainable land use.</p> <p>To raise the finance to buy the land, Aardpeer uses a crowd-lending platform to offer bonds at a competitive interest rate over the medium to long-term via green bonds. Over the course of three campaigns, one of the initiatives' partners (BD Grondbeheer) has raised over €11 million through the offering of 5-, 10-, 12-, and 15-year bonds with an annual rate 0.7% to 1.2%. Investors ranged from private individuals to institutional investors.</p>
	<p>Incentives and benefits to farmers</p> <p>Farmers are able to transition to/undertake nature friendly farming practices with stability (with the lease length of the seven generations) while not being subjected to the pressures of increasing land cost.</p> <p>It also enables larger farms to put more resources into developing more innovative ways to farm sustainably and scale up organic cultivation (e.g., Boerz farm).</p>
	<p>Financing requirements and monitoring</p> <p>Farmers who want to lease land through Aardpeer would need to provide a plan that meets the three core principles of Aardpeer: nature driven, socially connected and economically supportive.</p> <p>In terms of monitoring, farmers are required to provide an annual report on their progress to towards transitioning to nature-friendly farming (this is mostly based on trust). This enables Aardpeer to monitor development and report their impact to investors.</p>

Friesland Campina's Sustainability-linked Bonds and Loans

Debt-based Finance

Overview	Description
<p>Financing instrument: Sustainability-linked bonds & loans</p> <p>Geography: Netherlands, Belgium, Germany</p> <p>Established: 2023</p> <hr/> <p>Provider of finance: ING Bank NV</p> <p>Scale of financing: €1.4 billion total (including a €300 million sustainability linked loans with ING)</p> <p>Recipients: Friesland Campina</p> <p>Intermediaries and partners: BNP Paribas, HSBC, UniCredit and ABN AMRO, Bayerische Landesbank, Citigroup, HSBC)</p>	<p>Objective: FrieslandCampina's Sustainability-linked bonds and loans (SLBs) aim to secure favourable financing while driving measurable environmental improvements as they align the company's long-term financing strategy with its sustainability program and climate goals. The proceeds of these bonds or loans are used for general corporate purposes.</p> <p>Development & Structure: FrieslandCampina has developed a Sustainability-Linked Financing Framework that encompasses both bonds and loans as financing instruments. The framework identifies relevant key performance indicators (KPIs), namely GHG emissions, including Scope 3 (supply chain) emissions, percentage of sustainable packaging, and products compliant with nutritional standards. Any sustainable financing instrument issued by the company is linked to one or more of these KPIs. For each KPI, Sustainability Performance Targets (SPTs) are set – in alignment with the company's sustainability strategy – and each Sustainability-linked instrument applies one or more of these targets. The financial terms of the bonds or loans (interest rates; premium payments) will change depending on whether the selected targets are met or not at a specified date (so-called 'Target Observation Dates').</p>
	<p>Incentives and benefits to farmers</p> <p>If FrieslandCampina fails to meet the self-imposed targets at the set date, their cost of capital increases – which serves as a powerful incentive to achieve the stated goals. The SLBs thereby create a corporate-level financial imperative to support and enable member farms to increase their individual sustainability performance. The cooperative does this through programs that offer technical support, knowledge sharing, and premium prices – namely the "Foqus Planet" program which links farmers' milk price premiums to their individual sustainability performance, including reductions in GHG emissions.</p>
	<p>Financing requirements and monitoring</p> <p>KPIs include Absolute Scope 1 & 2 GHG emissions; Absolute Scope 3 GHG emissions; Percentage of sustainable packaging materials; and percentage of consumer products compliant with nutritional standards.</p> <p>Reporting:</p> <ul style="list-style-type: none"> FrieslandCampina's annual reports include its performance against the defined KPIs, as well as reporting on Sustainability-Linked Financing Instruments. The performance of the SPTs is published on the Target Observation Date stated in the respective financing instrument. <p>Verification: On an annual basis, all reported progress is verified by independent, third-party auditors.</p>

McCain Transition Financing Partnerships

Debt-based Financing

Overview	Description				
<p>Financing instrument: Loans on favourable terms</p> <p>Geographies: France, Poland, Netherlands (and non-EU countries)</p> <p>Established: 2022/2023/2024</p> <p>Provider of finance: McCain & partnering banks</p> <p>Partners:</p> <ul style="list-style-type: none"> - Rabobank - BNP Paribas Bank Polska - Crédit Agricole - GAPPI (Potato Growers Association) <p>Uptake:</p> <ul style="list-style-type: none"> - Initially 34 farmers in NL - open to: ~ 400 farmers in NL, ~ 800 in France, Poland: unspecified <p>Area covered: not specified</p> <p>Scale of financing: 40 mn € loan envelope in France; unspecified for NL and Poland</p>	<p>Objective: McCain, headquartered in Canada, is the world's largest producer of frozen potato products. To secure future supply and address the threats of climate change, rising input costs, and regulatory uncertainty, McCain is committed to mobilize 100% of their potato suppliers (~3,500 growers worldwide) to implement regenerative agricultural practices by 2030. Their goal is also to reduce scope 3 GHG emissions by 25% per tonne from potato farming, storage, and freight by 2030.</p> <p>Development & Structure: To achieve this, McCain has created a 'transition package' for suppliers, a major component of which are financing agreements with agricultural banks (as well as other instruments such as premium prices, commercial guarantees, capacity building, and research pilots).</p> <p>In the EU, the multi-year financing agreements have been implemented so far with leading banks in France, the Netherlands, and Poland, namely Rabobank, Crédit Agricole, and BNP Paribas Bank Polska. They give potato farmers who wish to invest in the transition to regenerative agriculture access to transition loans on favourable conditions, usually including preferential interest rates on investments in respective equipment. The arrangements vary by partnership. In the Netherlands and in Poland, they include accompanying technical training and expert advice for farmers. In France, loans are offered without administration fees and without having to provide a guarantee., and the interests are financed by McCain.</p>				
	<table> <tr> <th>Incentives for farmers</th><th>Financing requirements & Monitoring</th></tr> <tr> <td> <ul style="list-style-type: none"> • Exclusive access to loans • No guarantee needed • Preferential/ discounted interest rates • Complementary technical training/ advisory • No administration fees </td><td> <ul style="list-style-type: none"> • Participating farms need to be (aspiring) McCain suppliers • The KPIs for access to transition loans are not public, but McCain's regenerative agriculture engagement framework differentiates levels of progress from Onboarding to Leading: • Onboarding farmers must have (1) participated in a training, (2) completed a soil health assessment, and (3) meet one of 7 indicators (covered soils year-round; enhanced crop diversity; minimized soil disturbance; reduced toxicity of pesticides; ecosystem diversity; reduced agro-chemical impact; increased soil organic carbon matter) </td></tr> </table>	Incentives for farmers	Financing requirements & Monitoring	<ul style="list-style-type: none"> • Exclusive access to loans • No guarantee needed • Preferential/ discounted interest rates • Complementary technical training/ advisory • No administration fees 	<ul style="list-style-type: none"> • Participating farms need to be (aspiring) McCain suppliers • The KPIs for access to transition loans are not public, but McCain's regenerative agriculture engagement framework differentiates levels of progress from Onboarding to Leading: • Onboarding farmers must have (1) participated in a training, (2) completed a soil health assessment, and (3) meet one of 7 indicators (covered soils year-round; enhanced crop diversity; minimized soil disturbance; reduced toxicity of pesticides; ecosystem diversity; reduced agro-chemical impact; increased soil organic carbon matter)
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Diageo Regenerative Agriculture Pilots

Transition-risk Sharing

Overview	Description				
<p>Financing instrument: Research Pilots</p> <p>Geographies: Ireland, Scotland, Mexico</p> <p>Established: 2022 (Ireland); 2023 (Scotland & Mexico)</p> <p>Provider of finance: Diageo</p> <p>Intermediaries and partners:</p> <ul style="list-style-type: none"> • Agricarbon • James Hutton Institute • SAC Consulting • Scottish Agronomy <p>Uptake: > 64 farms (unspecified for Mexico)</p> <p>Area covered: not specified</p> <p>Scale of financing:</p> <ul style="list-style-type: none"> • Not specified; part of Diageo's £1 billion climate commitment 	<p>Objective: As part of their ESG priorities, the beverage alcohol company Diageo aims to half its scope 3 emissions – to which agriculture contributes 30% – by 2030. The company also aims to improve supply resilience. It therefore launched three regenerative agriculture pilot projects to build knowledge on, and advance, region-specific regenerative practices in key sourcing landscapes, and educate suppliers on how to adapt their practices to climate change.</p> <p>Development & Structure: The 3-year pilots cover 44 barley farms in Ireland (for beer production), 20 barley farms in Scotland (for whiskey production), and a network of agave farms in Mexico (for tequila production). They are conducted in partnership with research organisations and agronomic experts, such as the soil-analysis company Agricarbon, and Scottish Agronomy, to assess and monitor soil carbon stocks, measure the carbon sequestration abilities of agave and identify the most effective regenerative farming. The pilot outcomes will provide a blueprint to inform scale-up opportunities.</p> <p>In Ireland, where the Diageo brand Guinness leads the first pilot, the programme included the introduction of cover crop planting on participating farms, which already resulted in the measured improvement of biodiversity, soil health, and soil carbon sequestration.</p>				
	<table> <tr> <th>Incentives for farmers (info available for Irish pilot)</th><th>Financing requirements & Monitoring</th></tr> <tr> <td> <ul style="list-style-type: none"> • Inputs: Cover crop seeds distribution • Access to digital management system, incl. satellite monitoring, yield monitoring & cover crop assessments • Carbon footprint analysis & soil health assessment • Access to research results </td><td> <ul style="list-style-type: none"> • Farms need to be part of the Diageo supply chain to participate • The pilots' assessment and monitoring activities are part of scientific baselining; there is no performance monitoring yet. </td></tr> </table>	Incentives for farmers (info available for Irish pilot)	Financing requirements & Monitoring	<ul style="list-style-type: none"> • Inputs: Cover crop seeds distribution • Access to digital management system, incl. satellite monitoring, yield monitoring & cover crop assessments • Carbon footprint analysis & soil health assessment • Access to research results 	<ul style="list-style-type: none"> • Farms need to be part of the Diageo supply chain to participate • The pilots' assessment and monitoring activities are part of scientific baselining; there is no performance monitoring yet.
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Key learning points & open questions	<ul style="list-style-type: none"> • Maximum effectiveness in terms of carbon footprint seems to be essential for the company, which requires understanding regional conditions • Unclear how much the company is spending on this and how the scaling-up will be financed after the pilots 				

Nestlé Regenerative Agriculture Framework

Transition-risk Sharing

Overview

Financing instrument:

Practice-based capacity building

Geographies:

Europe and Global

Established:

2021

Provider of finance:

Nestlé

Scale of financing:

Figures for Europe not known; on a global scale, Nestlé is spending CHF 1.2 billion by 2025 for all supply chain activities.

Recipients:

Full figures within European context not known; however, Purina, under the Nestlé brand, is working with 450 farms in Europe to adopt regenerative farming practices (some of which are part of LENSs – see “Development and Structure”).

Intermediaries and partners:

Engaged with a wide range of partners. For instance, in France: Earthworm Foundation, Kemmap, Inrae and Agro-transfer.

For LENSs: Preferred by Nature, 3Keel, etc.,

Description

Objective: Nestlé aims to source 20% of its key ingredients from farmers adopting regenerative agricultural practices by the end of 2025, and 50% by 2030, in order to secure the long-term supply of key ingredients while addressing key environmental challenges. The company also made the commitment to achieve net zero GHG emissions by 2050, including indirect emissions (Scope 3). Since two thirds of their GHG emissions come from raw materials, it seeks to promote the implementation of sustainable agriculture practices and carbon mitigation throughout its supply chain.

Development & Structure: The Nestlé Agriculture Framework sets out the guiding principles and practices on which the company bases its supply chain activities for the transition to regenerative agriculture. Apart from financial support (like funding models and price premiums), the 3-pillar implementation framework includes 1) **technical support**, such as through training programs and advisory support (see below) for the adoption of regenerative practices at farm level, and 2) **collaborative activities** focusing on awareness creation, engagement, and training of stakeholders and suppliers. An example of this is the **Landscape Enterprise Networks (LENSs)**, which Nestlé is investing and is a partner of, and has projects in Hungary (33 farms; 13,479 hectares), Italy (57 cereal farms; 2102 hectares) and Poland (113 farms; 10841 hectares). Globally, Nestlé has invested CHF 1.2 billion over five years to support the transition to regenerative agriculture across its supply chain.

Incentives and benefits to farmers

- **Specialized training programs and comprehensive educational materials**, which are often tailored to specific crops, local climates, and regional needs.
- **Field agronomists and veterinarians working directly** with farmers to provide guidance on the implementation of practices (e.g., Diverse crop rotations, cover crops, minimum tillage).

Financing requirements & Monitoring

Financing requirements

- Farmer would need to be a supplier to Nestlé. In the case of LENSs, farmers would need to have an existing relationship, or willing to establish one, with a LENS partner and able to implement actions that are of interest to the funder.

Grading system & Nestlé Regenerative Agriculture Farm Assessment Tools

- Initial baseline assessment of farm examines the extent to which current farm practices are already in line with regenerative agriculture, and is repeated in the following years to show improvements.
- Assessments allows farms to be classified as: Engaged (level 1); Advanced (level 2); Leading (level 3).
- Farm assessments are done through third-party organizations or Nestlé staff verify the adoption of practices and the achieved outcomes. For instance, in Germany, Nestlé partners with Klim.eco to track regenerative practices and emissions reductions in dairy supply chains.

Carrefour's Sustainable Sourcing Contracts

Transition-risk Sharing

Overview

Financing instrument:

Purchase agreement and minimum price

Geographies:

Europe and Global

Established:

2019

Provider of finance:

Carrefour

Scale of financing:

€8 billion in sales from certified sustainable products by 2026

Recipients:

844 CQL products throughout the world involving a total of 16,872 producers – including 4,997 organic producers.

Intermediaries and partners:

- WWF France
- Open Agri Food
- CIRAD (French agricultural research and international cooperation organisation)

Description

Objective: French retail corporation Carrefour aims to reduce its Scope 3 GHG emissions by 29% by 2030. Their agricultural supply chain activities are designed to contribute 10% of this reduction target. As part of this, they aim for all suppliers of Carrefour Quality Lines brand products to use regenerative agriculture and agroecology practices (CQL is a brand within Carrefour that focuses on fresh products with strict quality requirements based on agro-ecology principles). In addition, the Group has made organic products a strategic focus of its food offering. One of Carrefour's initiatives to support their agricultural suppliers in adopting these farming practices is to offer them long-term contracts (3 to 5 years) with preferential conditions, in addition to purchase price and volume commitment.

Development & Structure: For organic farmers and CQL product suppliers, Carrefour offers long-term contracts that set future volumes and purchase prices in advance. The company also helps farmers transition to organic practices by offering them three to five-year contracts and favourable prices between conventional and organic rates during the transition. This initiative is in place in France, Belgium, Romania and Taiwan. In France, for instance, Carrefour supported more than 250 new French organic farmers in 2020, bringing the total to 2,150. Carrefour currently has 37,758 partners that are organic, local or CQL producers, with the aim of 50,000 by 2025.

Incentives and benefits to farmers

- **Pre-set future volumes:** provide farmers with stability and predictability.
- **Access to wider markets:** producers who are part of Carrefour's CQL are assured access to multiple markets.
- **Favorable purchase prices:** help compensate for potential initial yield reductions or increased costs associated with adopting new, sustainable methods.
- **Technical Support:** Is provided to suppliers to help them implement new, more sustainable agricultural practices like organic farming and agroecology.

Financing requirements & Monitoring

- **Financing requirements:** Farmers (within Carrefour's region of operations, such as France, Belgium, Romania and Taiwan) who are already undertaking organic farming practices, or those who plan/in the midst of transitioning to organic farming. Product specifications with each producer is established. This includes production methods and environmental protection obligations.
- **Monitoring:** Independent inspection and certification bodies (e.g., Bioagricert) are engaged to monitor compliance with specifications. Carrefour report indicates approximately 3,000 inspections and 1,000 products analyses are conducted yearly. These are reported against Carrefour's CSR and Food Transition Index – which sets annual targets for 17 indicators.

Unilever, Tikehau Capital and AXA's Regenerative Agriculture Impact Fund

Transition-risk Sharing

Overview

Financing instrument:
Equity investment in enabling technology

Geography:
Europe

Established:
2022

Provider of finance:

- Investors
- Founders: AXA, Tikehau Capital and Unilever

Scale of financing:

- Target fund size: € 1 billion
- Initial €300 million from the founders
- > €500 million investment commitments by Nov 2024

Recipients:

Companies across the food value chain that offer enabling solutions for regenerative agriculture

Description

Objective: The private equity impact fund is a collaborative initiative between insurance and asset management company AXA, consumer goods company Unilever, and alternative asset management group Tikehau Capital, with the aim to address the lack of funding in sustainable agriculture and foster positive dynamics around this transition. It is dedicated to investing in projects and companies working towards the transition, e.g., through scaling innovative technological solutions that facilitate adoption of regenerative practices.

Development & Structure: the fund leverages the expertise of the partnering founders: As an industrial partner, Unilever offers its deep understanding of the value chain. With its extensive experience in climate risk assessment, AXA will help create the framework and measure impact. Tikehau Capital serves as the fund manager, bringing its experience in private equity and impact investing to identify and manage suitable opportunities.

The investment portfolio comprises companies enabling regenerative agriculture across all stages of the agricultural value chain. It focuses on four vertical sectors: inputs (like bio-fertilizers), farm equipment and operations (e.g., precision farming), ingredient production, (such as plant-based alternatives), and cross-functional catalysts (like impact measurement).

A notable early investment are €120 million into BioFirst, a Belgian firm specializing in biological pest control.

Incentives and benefits to farmers

The fund benefits farmers implicitly by enabling the scaling of regenerative agriculture solutions. By investing in companies that offer such solutions, it increases their availability, quality, and affordability for farmers. For instance,

Financing requirements and monitoring

- **Impact dimensions:** To be eligible for investment, companies must demonstrate a net positive impact on at least one of three dimensions: biodiversity, climate, and water; and will have to have no negative impact on health and the well-being of farmers.
- **Selection process:** An **impact committee**, comprising representatives from Unilever, AXA Climate, and Tikehau Capital, examines the investment opportunities against a framework.
- **Performance tracking:** AXA Climate tracks tailored environmental Key Performance Indicators, including the reduction of environmental toxicity, CO2 emission reductions, and increases in biodiversity, like pollinator populations.

European Investment Bank Financing Initiative

Blended Funds /Debt-based financing

Overview

Financing instrument:
Blended Finance and Loans on favourable term

Geography:
Europe

Established:
2025

Provider of finance:

European Investment Bank

Scale of financing:

€3 billion EIB Group loans, matching other participating financial institutions unlocks close to €8.4 billion.

Recipients:

Small to medium farming enterprise, with share of loans earmarked for young, new and/or female farmers

Intermediaries and partners:

Financial Institutions

Description

Objective: European Investment Bank (EIB), the long-term lending institution of the EU, has established a **€3billion financing package for the Agriculture, Forestry and Fisheries sector**. The financing initiative will mostly be directed at supporting small and medium-sized enterprises along with mid-caps, with the aim of **driving investments in activities related to soil health, digital tools, water management and climate resilience**. In addition, this financing package also seeks to **facilitate more training in sustainable farming practices together with encouraging an increase in young farmers and the share of women in the farming industry**.

Development & Structure: Loans issued by the EIB will be **matched by other participating financial institutions, which will unlock approximately €8.4 billion of long-term investments** for the bioeconomy sector. The financing package will be spread over the next three years (2025-2027). In order to meet their **objectives of supporting young and new farmers, along with increasing the share of female farmers in the industry**, a portion of the loans will be earmarked for this group, who generally face more difficulty in obtaining traditional bank financing. The financing package will also **target green investments in order to help meet the EU's sustainability goals**. This package **also aims to deliver more favourable loan terms** by allowing financing to be enhanced with interest rate subsidies or capital grants from EU and national funds. Furthermore, financial institutions involved will benefit from enhanced advisory support.

On June 18th 2025, as part of EIB's financing package (above), the **EIB Group sealed a €250 million securitisation deal with Santander to boost investment for small and medium-sized enterprises (SMEs) and mid-caps in Spain**. EIB Group's investment of €250 million will allow Santander to mobilise an additional **€370million to enhance agriculture development, amongst other aims**. The investments will support a wide array of activities, including sustainable and regenerative agriculture, providing working capital for climate-resilient crops, and enhancing infrastructure and water management systems. Notably, about 10% of this funding is specifically allocated to young and new farmers, with the EIB also making them eligible for agricultural land acquisition financing.

Incentives and benefits to farmers

- New, young and female farmers will receive more support
- More support to invest/undertake activities related to soil health, digital tools, water management and climate resilience
- More training in sustainable farming practices

Financing requirements and monitoring

The nascent nature of this financing package means information regarding financing requirement and monitoring are unavailable.

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