

Optimising Land Use Outcomes: The Role of Private Finance



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Government of Ireland

Environmental Protection Agency

The EPA is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

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2. Office of Environmental Enforcement
3. Office of Evidence and Assessment
4. Office of Radiation Protection and Environmental Monitoring
5. Office of Communications and Corporate Services

The EPA is assisted by advisory committees who meet regularly to discuss issues of concern and provide advice to the Board.

EPA RESEARCH PROGRAMME 2021–2030

Optimising Land Use Outcomes: The Role of Private Finance

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EPA Research Evidence Synthesis Report

Independent scientific research funded by the Environmental Protection Agency

by

KPMG Sustainable Futures

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This report is based on research carried out/data from May to September 2024. More recent data may have become available since the research was completed.

The EPA Research Programme addresses the need for research in Ireland to inform policymakers and other stakeholders on a range of questions in relation to environmental protection. These reports are intended as contributions to the necessary debate on the protection of the environment.

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Executive Summary

This evidence synthesis report, prepared for the Environmental Protection Agency by KPMG, explores the role of private finance in delivering sustainable land use outcomes in Ireland. Our research addresses questions around the role of “green” finance in supporting government land use objectives, the motivations of private investors, and alignment with funding models and financing instruments, and it highlights market opportunities, limitations and risks within the Irish and global contexts.

Context and Findings

Ireland faces significant challenges in protecting and restoring nature and biodiversity, meeting climate targets, addressing socioeconomic issues, and fulfilling housing and infrastructure needs. These challenges create a complex landscape of competing land use demands, necessitating careful balancing to avoid trade-offs that could further harm the environment or livelihoods. The potential for private finance to deliver sustainable land use outcomes is therefore multifaceted and requires interventions sensitive to Ireland’s specific historical, environmental, economic and social dimensions.

We find that the “matchmaking” process between private investors, landowners and project developers is piecemeal, often failing to deliver desired land use outcomes or returns on investment at scale. Misalignment in motivations, uses of technical language, success measures and timelines between stakeholders hinder collaboration and successful transactions. Moreover, the fragmented nature of land ownership in Ireland presents both challenges and opportunities, requiring tailored finance solutions and strong and inclusive place-based partnerships that can respond to local environmental and social needs. Public finance will remain crucial for laying the foundations for de-risking private investments, and the state should look to increase support to create an enabling environment that directs private finance to projects that align with national, EU and global targets. Ongoing updates to national mapping, along with more detailed land use categories, will provide a strong evidence base for decision-makers. However,

greater access to open-source or reasonably priced spatial data and tools is essential for investors, project developers and decision-makers in identifying areas in the greatest need of financing and opportunities to make an impact. A package of carefully designed incentives is crucial in motivating landowners, project developers and investors. This needs to be coupled with targeted stakeholder engagement and investment in training and upskilling to increase private finance in the areas where it is needed most. Stewardship from the government is also required to ensure that projects are aligned with national targets and that rigorous methods of impact evaluation are utilised.

Although we find that no single financial model or instrument currently dominates in Ireland, results-based payments schemes, blended finance and credit-based instruments are receiving the most attention. Moreover, we posit that establishing trusted local intermediaries to act as brokers between landowners and financiers, aggregating projects into investable portfolios, could prove highly beneficial.

We present six recommendations and considerations:

- 1. Develop a national vision and framework for sustainable land use and nature finance.** Integrate clear objectives, desired outcomes and a robust package of supports and incentives. This should be coupled with the development of an Irish climate and nature credits “standard” and register.
- 2. Develop an investment road map and allocate public funds to de-risk and attract private finance.** Set out a clear road map of investment to provide clarity and confidence for private investors. The state should consider reallocating funds to specifically de-risk and attract private finance to deliver sustainable land use outcomes.
- 3. Support increased collaboration and training/education programmes.** Enhance targeted collaboration between financial services and land use stakeholders through pre-competitive fora and cross-sector initiatives. Increase funding for bespoke education and training programmes

for financial services, landowners and project developers.

4. Standardise monitoring, verification and reporting, and improve access to spatial data.

Develop standardised processes for monitoring, verification and reporting of sustainable land use projects and activities to ensure consistency and reliability of data to track returns on investment and progress towards national targets. Improve access to spatial data and tools to support informed and transparent decision-making.

5. Explore the role of private finance to support rural succession and transition planning.

Investigate how private finance can aid in land succession and transition planning, ensuring that

financial resources are effectively mobilised to support thriving rural communities with diverse and sustainable land use practices.

6. Explore the role of trusted intermediaries and critical landscape-scale projects.

Identify and support intermediaries to act as trusted neutral brokers between private finance and project developers. These intermediaries should possess the expertise to work with both project developers and financial services and should operate within a clear code of practice. In addition, the state should identify landscape-scale projects suitable for large-scale private finance to support the protection and regeneration of Ireland's most important landscapes and habitats and meet requirements under the EU Nature Restoration Law.

1 Introduction

1.1 Ireland's National Land Use Review and Purpose of the Report

Ireland's Land Use Review (LUR) is a comprehensive multi-departmental and multi-stakeholder initiative aimed at optimising land use across the country to balance environmental, economic and social objectives by ensuring that policy decisions are based on international best practice and the most up-to-date data on land use categorisations. Launched as part of the Programme for Government, the review is being conducted over a number of phases. Phase 1, completed in March 2023, provides a detailed evidence base on the environmental, ecological and economic characteristics of various land types in Ireland. It highlighted that, at present, approximately 78% of Ireland's land is privately owned and roughly 67% of land cover is agricultural land, underscoring the significant role private landowners have to play in land use decisions. Phase 1 also identified key areas where private finance can contribute to fostering more sustainable land management practices, specifically identifying peatland rehabilitation as crucial for carbon sequestration and suitable for investment. Scott *et al.* (2023) also noted that private capital investments and incentives are required for land use projects that encourage sustainable practices in traditional economic sectors (such as agriculture and forestry) to mitigate environmental impacts and align with national climate and sustainability goals. Building on the Phase 1 findings, Phase 2 of the LUR will identify key demands on public and private land to inform and develop policies and measures that will support environmental and socioeconomic objectives at national and local levels. This phase may also look to identify specific measures and actions in consultation with stakeholders, including private landowners and financial institutions.

This evidence synthesis report, prepared for the Environmental Protection Agency (EPA) by KPMG Sustainable Futures as part of LUR Phase 2, explores the role of private finance in delivering sustainable

land use outcomes in Ireland. It synthesises existing literature, stakeholder insights and case studies to provide a comprehensive understanding of the challenges and opportunities associated with leveraging private finance for environmental and social goals. KPMG understands that this research undertaken within the Fast-Track to Policy funding is a critical part of the LUR and the current Programme for Government.

Some of the research questions to be answered as part of this engagement are as follows:

- What is the potential role of “green” finance in supporting government objectives regarding land use?
- What are the motivations of potential investors and how are these aligned with funding models?
- What types of “green” finance models may be applicable to optimising land use outcomes?
- In an Irish context, what are the market opportunities, limitations and risks involved in leveraging private finance to support desirable land use change?

1.2 Context – Ireland's State of Nature and the Nature Finance Agenda

Despite Ireland's deep cultural connection to land and land management, the country's nature and biodiversity have experienced severe decline in recent decades. Some 85% of habitats are in unfavourable condition (46% unfavourable – inadequate and 39% unfavourable – bad) and 46% of habitats have experienced ongoing decline since 2013 (NPWS, 2019).¹ More than 31,000 species have been documented in Ireland, but, of the 3466 species assessed under the Red List conservation assessment process, almost 24% were found to be under threat of extinction. These statistics highlight the urgent need for robust interventions to protect Ireland's vital biodiversity and critical habitats (National Biodiversity Data Centre, 2024).

¹ Latest data available at time of writing.

Existing land use practices in Ireland and across the world have been a significant driver of the nature degradation and environmental impacts experienced to date. This poses a risk for human well-being and the future of our economy. As noted by the European Central Bank (ECB, 2024), our economy cannot survive without nature. Just as a stable climate enables the conditions for humans to thrive, biodiversity enables the natural world to be productive, resilient and adaptable, and to provide ecosystem services that are vital for the functioning of the global economy (Dasgupta, 2021). This is particularly true for traditional sectors, such as agriculture and forestry, that are directly dependent on the natural environment and have strong sociocultural and economic significance to Ireland as a nation.

Effective rural transition planning is important to ensure the future of farming and rural communities while also bolstering their role as environmental stewards. Succession planning is one of the most significant challenges, with 94% of Irish farmers identifying it as an issue and nearly half (48%) yet to name a successor (Freiberg, 2024). Providing structured guidance and support is important to help farmers navigate the complexities of passing on their farms and securing the long-term sustainability of their businesses (Ifac, 2024). One in four farmers does not prepare cashflow budgets or forecasts, leaving them vulnerable to financial instability. Offering practical

tools and advice can strengthen their financial resilience through these transitions. In addition, a growing number of farmers (52%) are concerned about the impact of changing weather patterns on their operations, highlighting the need for support in adapting to climate change as part of any rural transition strategy (Freiberg, 2024).

The Irish and global economy is embedded within the natural world – not external to it. This presents significant risks and opportunities for the financial sector. In recent years, economic and financial actors have started to assess the complex interlinkages between nature losses and risks to economic activities and the financial system (Svartzman *et al.*, 2021). An emerging research topic and increasingly urgent priority for financial institutions, nature finance is concerned with how financial and capital markets operate and align in order to deliver nature-positive returns. The nature finance agenda is driven by the risks and opportunities presented to financial systems as a result of the inherent dependency of the economy on the natural world. The financial sector is waking up to and increasingly taking action on the issue of climate change, by integrating climate risk assessments and modelling into financial decision-making. In recent years, nature has arrived on the financial sector's agenda, thanks in part to landmark studies by the Dutch, French and Malaysian central banks, and non-governmental organisation and industry initiatives such as Business for Nature and Finance for Biodiversity (Ball *et al.*, 2023).

Globally, it is well recognised that the protection and regeneration of nature and biodiversity is underfunded and that a large gap exists between public and private

Ecosystem services

Ecosystem services are the benefits that humans derive from natural ecosystems, categorised into four main types. Provisioning services are tangible products of ecosystems, such as food, timber and cotton. Regulating services include the benefits of natural regulating processes, such as pollination, air and water purification, and soil fertility. Cultural services are the non-material benefits of ecosystems, such as their contributions to education, recreation and tourism. Finally, supporting services are fundamental services that support the other three categories, including nutrient cycling, soil conservation and habitat creation. Some services fit into more than one of the four categories (IPBES, 2021).

Nature-based solutions

Nature-based solutions address societal challenges through actions to protect, sustainably manage and restore natural and modified ecosystems, benefiting people and nature at the same time. They target major challenges like climate change, disaster risk reduction, food and water security, biodiversity loss and human health, and are critical to sustainable development (Cohen-Shacham *et al.*, 2016; EEA, 2023; IUCN, 2024).

financing of projects. The Kunming–Montreal Global Biodiversity Framework (GBF) has identified a nature finance gap of US\$700 billion per year needed to halt and reverse biodiversity loss (Deutz *et al.*, 2020; WEF, 2024). In Europe, the majority of projects aimed at delivering nature-based solutions (NbS) are financed by public funds (EIB, 2023). In Ireland, the National Biodiversity Expenditure Review (Morrison and Bullock, 2018) found that, while a suite of legislation and policies is in place to protect biodiversity in Ireland, in practice the continued strategic focus in the agriculture, forestry and fisheries sectors is on increased production and intensification. In this context, it has been argued that the environmental and biodiversity measures being deployed are only touching the surface, and that the level of change required to meet the relevant targets requires

significantly more investment (Bullock and McGuinness, 2020). This underfunding and the significance of private finance have been recognised in recent research, such as the Irish Environmental Network’s *High-Level Recommendations for Funding Nature Restoration in Ireland* (Ní Dhúill *et al.*, 2024). There is clear need to develop, coordinate and implement effective financial instruments to leverage private capital for sustainable land use projects aligned with Ireland’s nature, climate and socioeconomic needs. This evidence synthesis report aims to address these topics and explore how best to engage private finance in Ireland, identify effective frameworks for enhancing community and ecological benefits, and outline the institutional, policy and research requirements for securing capital for preserving and restoring Ireland’s natural environment.

2 Review of the Evidence Base

2.1 Introduction

This chapter provides a review of evidence and literature on the potential role private finance has to play in achieving sustainable land use outcomes in Ireland and globally. This review aims to synthesise existing knowledge, drawing on international best practice, guidance documents and case studies on how private finance can potentially be leveraged to meet environmental and socioeconomic outcomes. **Section 2.2** outlines the policy and legislative context that shapes and governs land use and sustainability in Ireland, including the National Planning Framework, Climate Action Plan and National Biodiversity Action Plan (NBAP). **Section 2.3** outlines the current state of land use in Ireland and challenges to overcome. **Section 2.4** highlights the various financial mechanisms and instruments through which private finance can support land use objectives, while investor motivations are discussed in **section 2.5**. **Section 2.6** summarises a range of project case studies and, finally, **section 2.7** provides a synthesis of key findings and insights gained.

2.2 Policy and Framework Context

The topic of land use and ownership in Ireland is a complex, deeply historical and at times divisive one and must be viewed through intersecting social, cultural, economic and environmental lenses. If Ireland is to achieve national climate, nature and biodiversity goals and EU targets, our limited land area must be used more sustainably. Balancing this with social and economic development requires careful long-term planning. It is recognised that private finance mechanisms have the potential to deliver national land use outcomes while also taking into account development needs.

There is no doubt that effective regulatory and policy frameworks are critical to creating a market environment that encourages private sector engagement and enables the use of “green” or sustainable finance mechanisms for land use outcomes. This has been identified globally in policy documents published by, among others, the World

Bank, World Wide Fund for Nature (WWF), Blended Finance Taskforce and United Nations Environment Programme (UNEP). For example, the 2023 UNEP *State of Finance for Nature* report discusses how regulatory certainty and incentives such as tax breaks and subsidies can encourage the transition from harmful activities to the adoption of sustainable finance instruments (UNEP, 2023). In an Irish context, Climate-KIC’s 2023 paper *Dealing with Climate Change and Sustainability Targets – The Innovation Potential for the Irish Agri-food Sector* emphasises that clear and supportive policies are needed to deliver private investment in sustainable land use and points to the Irish government’s role in creating favourable conditions for private sector investments in sustainable land use. This was also called out in the 2020 paper *A Review of Options to Enhance Business Contribution to Ireland’s National Biodiversity Objectives* (Bullock *et al.*, 2020). It states:

Key state agencies/authorities (including NPWS, EPA and local authorities) have important roles to play in creating an “enabling environment”, i.e. policy frameworks and guidance by which business can take action on biodiversity.

Bullock *et al.* (2020)

In order to understand the potential in Ireland to leverage private capital for national land use outcomes, it is necessary to first understand the current regulatory and policy landscapes and their relevance to or significance for mobilising private finance. This section presents a summary of key policy developments, targets and disclosure frameworks at the national, EU and international levels that are relevant to encouraging private sector financing of sustainable land use. Figure 2.1 presents a high-level overview of these, illustrating the potential scope of influence on private finance. For more detail on the specific policies, frameworks, legislation and targets discussed, please refer to Appendix 1, which provides a summary of such measures, including their requirements and relevance to private finance.



Figure 2.1. High-level summary of key policies, regulations, laws and frameworks at the global, EU and national levels. See Appendix 1 for a detailed breakdown. UN CBD, United Nations Convention on Biodiversity; UNFCCC, United Nations Framework Convention on Climate Change.

At the global level, the GBF and the Taskforce on Nature-related Financial Disclosures (TNFD) stand out as two of the most important global frameworks for encouraging governments and the private sector to identify, understand and manage their risks and impacts related to nature, biodiversity and land use, and – most crucially – take action. Both the GBF and the TNFD framework have been significant drivers of the uptick in interest and action from government

and private sector actors in engaging with the topics of sustainable land use and the intersection between nature, biodiversity and climate (Blarel *et al.*, 2020; SAFIN and Convergence, 2021; Defra, 2023; Beavis *et al.*, 2024; Farmlytics, 2024; SBTi, 2024).

In the European context, against the backdrop of the European Green Deal, the ambitious and rapidly changing policy landscape has been a significant driver of progress among private sector actors in

recent years, with recently evolved sustainability and climate-related reporting requirements being phased in for companies across the EU. The Corporate Sustainability Reporting Directive (CSRD), European Sustainability Reporting Standards (ESRS) and the EU Taxonomy Regulation are examples of frameworks and standards that now incorporate nature and biodiversity. The aim of such frameworks is to enhance companies' transparency, reporting and disclosure on climate, nature and biodiversity topics. Further to this, under the recently approved EU Nature Restoration Law, Member States, including Ireland, will need to develop national restoration plans (NRPs) that include measures for specific sectors (including agriculture). It is expected that this will encourage corporate action and investment in the development and implementation of sustainable land use and nature restoration considerations as part of decision-making and transition planning.

Recognised as a global leader in enacting progressive environmental legislation, the EU has successfully struck a balance between nature protection and socio-economic priorities.

WEF (2024)

While reporting and disclosure frameworks such as the CSRD and the Regulation for sustainable activities are enhancing engagement and transparency on the climate-nature intersection in the private sector, there remains a lack of private sector investment in nature and land use projects across Europe and Ireland (EIB, 2023). Similarly, although the increasing recognition of nature and sustainable use of land as priority areas for strategic planning for the future of the EU and associated progressive targets have been driving further engagement, investment by private actors in projects has thus far not reached the scale required to deliver the necessary nature and land use targets. For example, the European Investment Bank (EIB) notes that private capital investment in NbS projects remains low across the EU (EIB, 2023). However, as emphasised by the summary table in Appendix 1, the Irish and European policy landscape clearly recognises the need to protect and restore ecosystems and encourage sustainable practices to meet ambitious targets. This is likely to result in further investment by private actors over time.

Ireland's planning, climate and biodiversity policy context also emphasises the role of sustainable land use in delivering national climate, biodiversity and nature goals.

However, while action on sustainable land use changes has been identified as a national priority – with the NBAP calling out the urgent need to protect and restore Ireland's ecosystems – specific mechanisms to encourage action and coordinate financing are thus far lacking (Government of Ireland, 2024a). Despite the level of funding required to address these needs at a national scale, the role of private sector finance has not been fully addressed or realised. The NBAP specifically emphasises the importance of increased and sustained funding for biodiversity conservation, leveraging corporate partnerships and developing new financing mechanisms. The plan also calls for the integration of biodiversity into financial and economic decision-making processes and supporting local biodiversity initiatives through grants and funding programmes. However, there is currently no specific framework through which private sector capital can be utilised to deliver the desired sustainable land use outcomes.

Overall, the policy context in Ireland and across Europe has firmly increased the pressure on companies and investors to support projects that contribute to biodiversity conservation, ecosystem restoration and climate resilience and that encourage sustainable land use practices. However, gaps remain in implementation and enforcement (Bullock and McGuinness, 2020; Ní Dhúill, 2024). Continued regulatory intervention and market-based solutions are required to bridge these barriers. This will also work towards unlocking the significant opportunities for private finance to support the delivery of national priorities, which are driven by growing global demand for more sustainable practices and corporate transparency when it comes to climate and environmental action (Climate-KIC, 2023). However, it should be noted that the policy context in Europe and Ireland is not mirrored globally. While there are global initiatives and frameworks in place, corporate action is not as prescribed or explicitly required in legislation in other regions (e.g. the United States) as it is currently in Europe and Ireland. While the CSRD has been designed to raise disclosure standards throughout global supply chains even if the parent company is

not based in Europe, the pressure on non-European actors will take time to embed.

2.3 Land Use in Ireland

2.3.1 Land cover classification: categories and scenarios

As noted in Haughey *et al.* (2023) Coordination of Information on the Environment (CORINE) land cover data have been used in Ireland to map categories of land use across the country and understand regional differences. The use of CORINE data has resulted in the identification of seven main land cover classes. Grasslands predominantly used for grazing in agriculture remain the dominant land cover in Ireland, reflecting the country's deep agricultural roots (Haughey *et al.*, 2023). However, the seven categories do not reflect the current ecological and economic nuance across the country, which is a lot more varied than the CORINE data set allows for. While the use of CORINE data was a necessary starting point to understand land classification in Ireland, the level of granularity does not provide enough detail to truly reflect the variety of ecosystems and variety in land use across the country. It should be noted that a major review of these land use categories is currently under way as part of Phase 2 of the LUR, which aims to increase the granularity and improve the quality of available baseline data to enhance integration of spatial analysis into land use planning, making a more nuanced variety of land cover and land use categories and classifications available.

It is expected that the outputs of the LUR and a standardised approach to land use categorisation in Ireland will increase clarity and create a common language for all stakeholders to engage on spatial planning and land use needs. The implementation and analysis of more granular land use categories is expected to be an integral component of more effective and targeted investment decision-making across the public and private sector. For example, accurate and standardised data sets enable the identification of priority areas for afforestation, carbon sequestration and biodiversity protection, while at

the same time highlighting those areas that would benefit from community-led engagement to support more sustainable land use practices in agricultural communities. Filling the data gap in land use classifications in Ireland will enable more accurate planning, the integration of spatial data with policy, and the effective evaluation of large-scale projects for carbon sequestration, afforestation or biodiversity protection, all of which are essential for meeting climate and nature targets² (Haughey *et al.*, 2023).

2.3.2 Future of land use

The report *Land Use Review: Fluxes, Scenarios and Capacity* by Haughey *et al.* (2023) and, more recently, an article by Bishop *et al.* (2024) provide an important understanding of a range of land use scenarios for Ireland and the potential implications for sustainable land use outcomes that are aligned with Ireland's economic, social and environmental objectives. Their research showed that in order for Ireland to comply with net-zero targets, large-scale shifts in land use will be required – especially in the AFOLU³ sector. Abatement measures identified include ambitious soil re-wetting across the country, large-scale levels of afforestation, effective abatement of livestock emissions and up to a 30% reduction in ruminant livestock numbers.⁴

Terrestrial biodiversity loss is intricately linked to how we manage land, while continued biodiversity loss reduces the resilience of ecosystems to climate change extremes. This illustrates the fact that continued biodiversity loss hampers the effectiveness of mitigation within the AFOLU sector and that an evaluation of the trade-offs and synergies of proposed AFOLU land use changes is essential.

Haughey *et al.* (2023)

A shift in how land is utilised is clearly needed to build a climate-resilient economy and meet the goals of Ireland's social and environmental policies, particularly given the significant environmental challenges

² It is important to note that the ongoing development of a new national land use map will not include a national habitat map.

³ Agriculture, forestry and other land use.

⁴ Further, more refined scenario analysis is ongoing as part of LUR Phase 2 by the University of Galway.

posed by current land use practices, which have led to biodiversity loss and runaway greenhouse gas emissions (Haughey *et al.*, 2023). Aligning land use policy with the economic, environmental and social policies of Ireland creates significant opportunities to direct investment to priority landscapes and ecosystems. At this stage, the scale of the change required should not be underestimated, particularly if expansion of the agri-food sector remains a priority for the national economy. In the context of private finance, analysis by Haughey *et al.* (2023), Bishop *et al.* (2024) and others shows the importance of aligning future financial incentives with land use practices that deliver the government's social and environmental goals.

2.3.3 Challenges to overcome

The 2024 paper "Mapping the planet's critical areas for biodiversity and nature's contributions to people" by Neugarten *et al.* provides an analysis of nature's contribution to people around the world. Their research shows that Ireland stands out globally in the context of areas with high development potential that contain globally prioritised regions for biodiversity protection. Specifically, the paper states that more than half of Ireland's land area (60%) contains such prioritised areas. This indicates a significant overlap between areas important for nature's contribution to people and biodiversity and areas suitable for development, such as for agriculture, renewable energy and mining. This has implications for Ireland, as it presents an inherent tension between development of land and protection and restoration of nature.

Decision-making about Ireland's current and future land use is at an important junction, where the pressures of climate change, biodiversity loss and evolving socioeconomic demands are converging. While a challenge, this situation presents opportunities for the careful alignment of investment decision-making with national priorities for emissions abatement and biodiversity restoration via land use changes. However, the availability of appropriate data remains a significant challenge. Ireland faces the complex task of overcoming the significant data gaps associated with setting effective baselines and achieving the level of monitoring and evaluation of land use change projects necessary to ensure alignment with national objectives. As identified in Phase 1 of the LUR, challenges related to the coordinated use of

standardised baseline data and more granular land use categories must be addressed to ensure that spatial planning can be integrated with investment decision-making effectively. This will further encourage the use of private sector capital to finance projects at the scale necessary to deliver coordinated land use outcomes across the country effectively, while also appealing to investors that are motivated by clear, identifiable returns on investment.

2.4 Role of Private Finance in Delivering Land Use Outcomes

The widely recognised gap between public and private sector sources of capital for nature and biodiversity projects has resulted in nascent moves towards the development of specific financial mechanisms as a means of leveraging private capital for sustainable land use change and nature protection and restoration (Deutz *et al.*, 2020; Ball *et al.*, 2023; EIB, 2023). Investment is also being increasingly driven by evolving environmental policies and regulations and increased understanding of the intersection between climate change and nature loss. The Irish Environmental Network's June 2024 report *High-Level Recommendations for Funding Nature Restoration in Ireland* highlights the continued lack of funding and crucial role of private finance in driving nature projects. Ní Dhúill *et al.* (2024) present seven key recommendations: (1) investing in an overarching nature restoration plan, (2) rebuilding trust in environmental policy and schemes, (3) mainstreaming biodiversity through engagement and awareness raising, (4) boosting capacity and expertise in nature restoration, (5) scaling up best practice restoration projects, (6) providing multi-annual funding and (7) increasing blended funding. The report makes the case for collaborating with local stakeholders and developing an interdepartmental strategy on nature restoration, emphasising the need to learn from past policy failures (Ní Dhúill *et al.*, 2024).

Furthermore, the EIB, in its 2023 report *Investing in Nature-based Solutions: State-of-play and Way Forward for Public and Private Financial Measures in Europe*, highlights that just 3% of European NbS projects obtained the majority of their funding from private sources. Similarly, in Ireland, traditional funding sources (predominantly public and philanthropic) have played the most significant role in promoting and

delivering sustainable land practices to date. Examples include the Burren Programme,⁵ Wild Atlantic Nature LIFE, the Biodiversity Regeneration in a Dairying Environment (BRIDE) Project and the government's Agri-Climate Rural Environment Scheme (ACRES), which will be discussed later in the report (see Appendix 2). However, the scale of the challenge requires a much broader mobilisation of financial resources (EIB, 2023).

In this context, this section examines what types of financial instruments and models are available to deliver sustainable land use outcomes, with a focus on facilitating private sector engagement, aligning with investor motivations, and evidence from the research conducted in Ireland to date. There are a variety of innovative nature-related financing mechanisms, products and financial actors, as can be seen in Figure 2.2.

2.4.1 Sustainable finance models and instruments

The development and implementation of the financial instruments identified in the literature were informed by theories and concepts from the field of environmental economics, including the concepts of natural capital and ecosystem services valuation and the idea that nature can be framed as its own asset class with a clear value to the public (Hanley, 2015; Stout *et al.*, 2023). Such a concept proposes that nature, in all its forms, can be recognised as a valuable and investable asset. This idea is rooted in the understanding that projects that effectively enhance, preserve or restore ecosystem services, biodiversity and natural resources (e.g. through land use change and sustainable practices) provide a wide range of economic and societal benefits with a clear monetary value (Hanley *et al.*, 2015; Blarel *et al.*, 2020; Stout *et al.*, 2023). The variety of innovative nature-related financing mechanisms and products is expanding, as shown in Figure 2.2, and, although the total volumes are still modest, private financing has seen substantial growth, rising from US\$9.4 billion to over US\$102 billion in the last 4 years (WEF, 2024).

In this section, we provide a summary of some of the most commonly known financial instruments available in relation to nature and sustainable land use:

- green bonds;
- sustainability-linked loans;
- environmental impact bonds;
- corporate partnerships;
- payment for ecosystem services (PES) schemes;
- nature and biodiversity credits/markets;
- blended finance;
- debt-for-nature swaps.

Green bonds. A green bond is a fixed-income financial instrument that is used to fund projects that have positive environmental and/or climate benefits. The issuer of the green bond makes regular interest payments to the investors throughout the bond's term. When the bond reaches its maturity date, the issuer returns the original investment amount (the principal) to the investors, completing the financial cycle. The European Green Bond Standard (European Commission, 2020a) provides guidelines to ensure that funds raised are used for environmentally sustainable projects only. This instrument targets investors looking for sustainable investment opportunities (European Commission, 2020a). The EIB has issued climate awareness bonds⁶ to fund various projects aimed at enhancing ecosystem resilience and biodiversity conservation (EIB, 2021). These projects include forest management in Spain, restoration of wetlands in Poland and sustainable agriculture in Italy. However, it is important that innovative financial instruments such as green bonds continue to be scaled up and further developed. The significant progress made towards establishing a European Green Bond Standard will only enhance the market's role in sustainability. This is particularly relevant for Ireland, as it can leverage these green bonds to support its own sustainability initiatives.

Sustainability-linked loans. According to the World Bank, sustainability-linked loans are a way of linking interest rates to key sustainability performance indicators, promoting responsible business practices.

5 <https://www.teagasc.ie/environment/biodiversity--countryside/research/completed-projects/burren-life/> (accessed 5 December 2024).

6 <https://www.eib.org/en/publications/evaluation-of-the-eibs-climate-awareness-bonds> (accessed 5 December 2024).

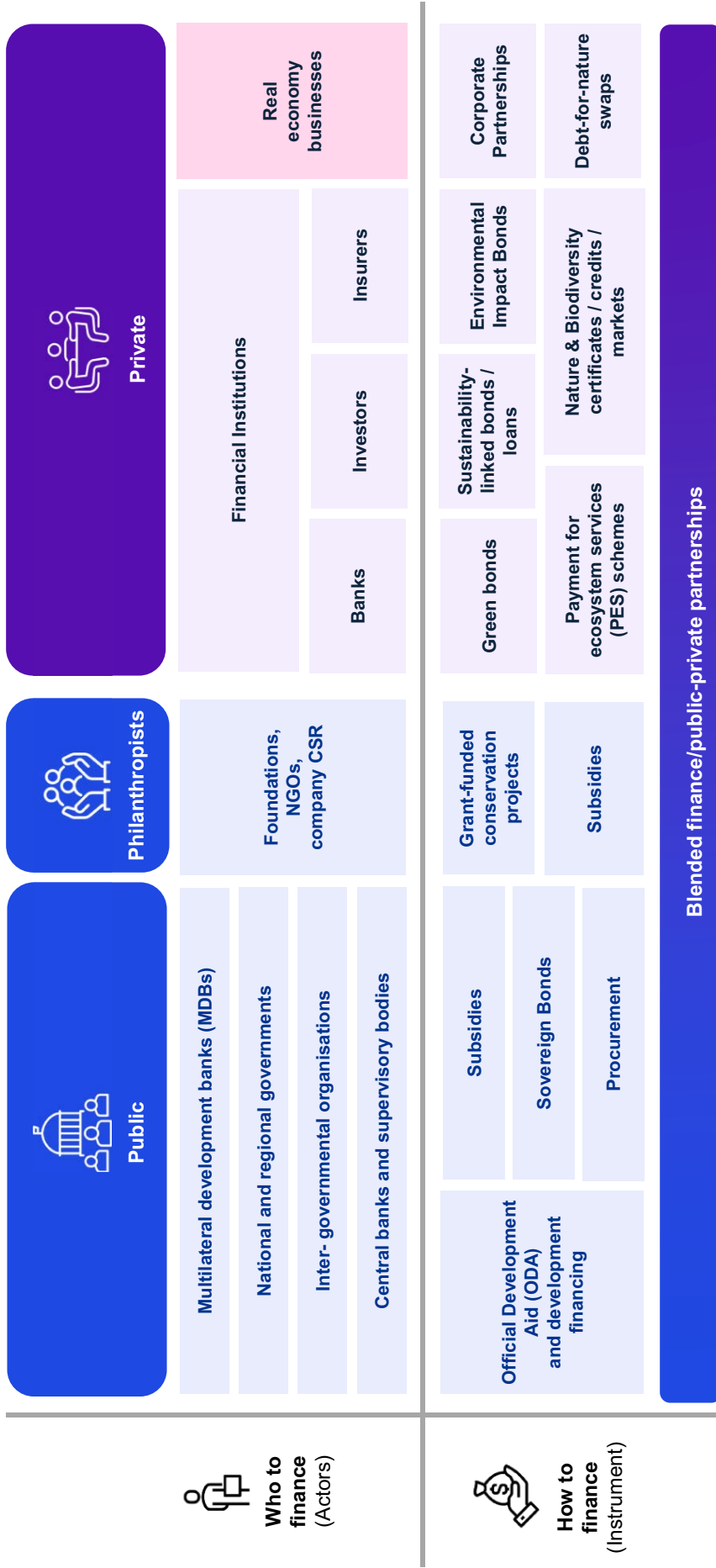


Figure 2.2. Financing the nature-positive transition – examples of who (financing actors) and how (financing instruments) to finance. CSR, corporate social responsibility; NGO, non-governmental organisation. Source: adapted from WEF and Oliver Wyman (WEF, 2024).

This instrument is beneficial for both lenders and borrowers, incentivising sustainable business practices by offering lower interest rates for companies that achieve specific environmental performance targets (De la Orden and De Calonje, 2020). In Ireland, this approach can be used to align financial incentives with the desired land use outcomes, encouraging multiple sectors across Ireland to adopt sustainable land use initiatives. A notable example of a sustainability-linked loan in Ireland is the partnership between Bank of Ireland and Kerry Group. They launched the Enviroflex sustainability-linked loan⁷ to support farmers in implementing sustainable farming practices. This initiative aims to provide financial incentives for farmers to adopt environmentally friendly methods, aligning their operations with broader sustainability goals (O'Donnell, 2023).

Environmental impact bonds. An environmental impact bond is an innovative financing tool that uses a “pay for success” approach, providing up-front capital from private investors for environmental projects. In the United States, environmental impact bonds have been used to fund projects that provide measurable environmental impact. For instance, the District of Columbia Water and Sewer Authority (DC Water) launched an environmental impact bond to finance green infrastructure projects aimed at reducing storm water run-off in the Rock Creek sewershed in the District of Columbia. The instrument targets investors interested in supporting projects with clear environmental outcomes. Goldman Sachs and Calvert Impact are two of the main investors in the project, and during the bond’s term investors receive a semi-annual coupon payment of 3.43%. At the mandatory tender date, which is just under 5 years after the project’s launch, investors will also receive a contingent payment. This additional payment will be based on how effectively the green infrastructure reduces storm water run-off (North and Gong, 2016).

Corporate partnerships. When the public sector and corporations work together, they can combine their resources and expertise to carry out large-scale NbS and landscape restoration projects. These partnerships are effective in attracting private investment, benefiting both the environment and the economy.

Norway’s International Climate and Forest Initiative (NICFI, 2020), the Climate Change Advisory Council (CCAC, 2020) and WWF (2020a) have all highlighted and demonstrated the potential for corporate partnerships to drive innovation and efficiency in project implementation, ensuring that projects are well funded and managed. For example, the partnership between Aviva and WWF (started in 2021) seeks to leverage the expertise from both organisations to restore UK landscapes. As a partnership they are advocating for the transformation of the financial sector, which is one of the biggest indirect drivers of climate change in the UK (WWF, 2023). This partnership is an example of successful advocacy and engagement with the financial sector on its role in protecting and restoring landscapes, alongside targeted investments in an on-the-ground landscape programme in the UK. The work of Hometree in Ireland provides another interesting case study of combining corporate partnerships with individual giving and public money to plant native forests across a range of locations in Ireland (see Appendix 2 for more details). Similar corporate partnerships could be explored across Ireland to help deliver sustainable land use outcomes that are in line with national targets, particularly through targeted engagement with global technology firms based in Ireland. As highlighted by McGuinness and Bullock (2020) and Ní Dhúill *et al.* (2024) on mobilising private finance for biodiversity in Ireland, encouraging public–private partnerships and leveraging private sector investment are key opportunities. Corporate partnerships can deliver results – driving business transformation, delivering positive reputational and social capital for companies, and achieving ecological objectives and outcomes for environmental organisations and communities.

PES schemes. PES schemes, also known as payment for environmental services or results-based payment schemes, are incentives offered to farmers and landowners in exchange for managing their land to provide an ecosystem service⁸ such as flood prevention and attenuation. Robust PES schemes that provide clear, measurable benefits for ecosystem services have the potential to encourage effective stakeholder participation and longer term sustainability.

⁷ www.agriland.ie/farming-news/bank-of-ireland-and-kerry-launch-sustainability-linked-farmer-loans (accessed 5 December 2024).

⁸ Ecosystem services are the benefits humans derive from natural ecosystems, including provisioning (e.g. food, water), regulating (e.g. climate control), supporting (e.g. nutrient cycling) and cultural (e.g. recreational, spiritual) services.

Natural capital accounting

The natural capital approach involves measuring and valuing natural capital assets. Values can be expressed in many different ways, including in qualitative and monetary terms. Values can help reveal how natural capital is delivering important benefits to society and the economy (Natural Capital Ireland, 2021; Stout *et al.*, 2023). It provides a structured method to assess and report on ecosystems and natural capital, including their stocks and services (EEA, 2018). It also provides a framework for incorporating environmental data into the United Nations System of National Accounts (NESC, 2024).

The Department for Environment, Food and Rural Affairs (Defra) and the European Commission, among others, emphasise the importance of well-structured PES frameworks that offer financial incentives aligned with environmental outcomes, fostering widespread adoption and sustained engagement from landowners (Defra, 2013; European Commission, 2023).

The Irish Natural Capital Accounting for Sustainable Environments (INCASE) project highlighted the potential of PES schemes in Ireland. Natural capital accounts as described in Stout *et al.* (2023) were developed for four sub-catchments (Dargle, Figile, Bride and Caragh) using the SEEA-EA framework.⁹ The study found that most land assessed was highly managed, impacting ecosystem services, with peatlands, which are crucial for carbon storage, at risk from drainage, disturbance and land conversion. Ecosystem services across the catchments varied, with the Bride catchment excelling in provisioning services, Figile in regulating services, Dargle in cultural services and Caragh in non-use values. Understanding this nuance is crucial when it comes to developing projects that are strategic in their protection and enhancement of the various ecosystem service classes that act together to support ecological and social functions. The project highlighted that, despite data gaps recognised by Stout *et al.* (2023), as reiterated in the findings regarding land use

categorisations and the data challenges detailed in section 2.3 above, there is a need for integrated planning and stakeholder engagement to balance conservation and development. The INCASE project specifically highlighted the potential of PES schemes in Ireland as a tool for sustainable land management (of which ACRES, the Burren Programme and the BRIDE Project are examples – see Appendix 2). These schemes could involve compensating or rewarding landowners or managers for maintaining or enhancing ecosystem services, such as biodiversity conservation and enhancement. This could also incentivise the protection and restoration of critical ecosystems, like peatlands, which are vital for carbon storage and climate regulation.

Nature and biodiversity credits/markets. Nature and biodiversity credits are a relatively new and emerging financial instrument, drawing on experiences with carbon markets and carbon credits. The concept is to sell “credits” of nature, such as an area of protected or restored land, which is then managed for biodiversity and other environmental co-benefits. Biodiversity credits can enable private companies to fund initiatives like forest or peatland conservation or restoration, which result in overall positive biodiversity outcomes (WRI, 2023). There are a growing number of initiatives under way or in the pipeline in Ireland that involve credit-based mechanisms or financial products, such as the Woodland Credit from the Nature Trust and credits developed as part of a partnership between Bionua and Dunsany Estate in County Meath.¹⁰ See Appendix 2 for further international, European and Irish examples.

Similarly, integrating nature and biodiversity considerations into high-quality carbon credit projects can lead to not only environmental benefits but also financial benefits (WEF, 2020). According to the World Resources Institute, integrated carbon and nature credits incentivise private sector investments in conservation efforts, aiming for net-positive impacts on nature (WRI, 2023). WWF’s *Beyond Carbon Credits* blueprint emphasises that, while carbon credits can be part of the strategy for climate mitigation, the primary focus should be on high-quality NbS that benefit people, nature and the climate (Hacking *et al.*, 2021).

9 System of Environmental Economic Accounting – Ecosystem Accounting; see <https://seea.un.org/ecosystem-accounting> (accessed 20 January 2025).

10 <https://bionua.com/projects> (accessed 5 December 2024).

By meeting additional certification criteria related to nature, projects can earn premium prices for their credits. Several standards recognise the economic value of nature and provide incentives for projects that incorporate nature and biodiversity protection and restoration. These standards require project developers to demonstrate measurable positive impacts on biodiversity, such as the protection of endangered species, the restoration of degraded ecosystems or the creation of new habitats.

While credit-based projects have the potential to attract significant interest from investors, capital oversight and accurate methodologies for monitoring and evaluation are crucial in these markets to ensure the credibility and scientific integrity of credits. As recently summarised by Trencher *et al.* (2024) in *Nature Communications*, the demand for low-quality carbon credits by corporate actors has undermined the integrity of the voluntary carbon market. Existing frameworks for credits that were originally accepted on the market as viable options for investors have recently been criticised by scientists and communities alike, calling into question the scientific integrity of carbon reductions and the social impact on communities forced to change land use practices. For example, Jones and Lewis (2023) highlighted evidence indicating that emissions reductions from overseas forest-based projects have been overstated. A 2024 report published by the Science Based Targets Initiative on carbon credits suggests that many existing credit-based mechanisms are not delivering their intended mitigation outcomes effectively (SBTi, 2024). Defra in the UK has further emphasised the need for rigorous monitoring, reporting and verification systems to track the performance of carbon sequestration projects (Defra, 2023). An article published in the *Financial Times* (2024) highlighted the unintended impact on Scottish land prices of investors purchasing land for carbon sequestration, nature restoration and rewilding projects. Applications for natural capital schemes via the UK Woodland Carbon Code directly contributed to a spike in land prices, with the value of hill land and Scottish estates trebling between 2018 and 2021. The inflation of land use prices had impacts on local communities and other land users. This case study provides some useful lessons for Ireland on the potential consequences of incentivising

investor-backed schemes and private land ownership for nature restoration without also ensuring community involvement.

The Voluntary Carbon Markets Integrity Initiative (VCMI) has been established to drive credible and net-zero-aligned participation in credit-based schemes. Following 2 years of stakeholder consultation and research, in August 2024 the VCMI published a “claims code of practice” intended as a best-practice guidance document to support stakeholders in building integrity and scientific efficacy into carbon markets (VCMI, 2024). By integrating robust oversight and engaging with high-integrity, scientifically effective credit-based mechanisms, there is potential to attract significant investments for land use projects that deliver measurable environmental benefits. However, such projects require careful monitoring and evaluation in line with best practice.

In Ireland, there is growing recognition of the need for an agreed framework for credit-based instruments to provide robustness and credibility to the market. For example, Climate-KIC and the Department of Agriculture, Food and the Marine (DAFM) are working together in a “deep demonstration” partnership with the objective of supporting the Irish land and agri-food value chain to identify and implement sustainable practices.¹¹ One of the objectives of the partnership is the development of a national carbon farming and nature credits “framework” that drives adoption of sustainable farm practices at scale and is aligned with EU and international best practice (Climate-KIC, 2024). Although the framework is being developed primarily for the purposes of the agri-food sector, it is hoped that this will provide increased clarity and robustness to the credits market in Ireland.

Debt-for-nature swaps. Debt-for-nature swaps involve reducing a debt burden to free up fiscal resources. In return, countries commit to conservation and environmental protection efforts (KPMG, 2023a). The funding can be directed towards a range of initiatives, such as protection of critical habitats, the development of NbS and restoration of carbon sinks to support decarbonisation. Alternatively, it can be used for nature-based coastal infrastructure, such as marshlands, mangrove forests or coral reefs. An example of this is the “Galapagos Bond”

11 <https://www.climate-kic.org/sustainablefoodireland/transforming-irelands-agri-food-system/> (accessed 23 January 2025).

introduced in Ecuador in May 2023. When finalised, it became the largest reported debt-for-nature swap, at US\$656 million. This follows the success of similar bonds in biodiversity-rich countries, such as in 2021 when Belize restructured US\$553 million of its debt through a debt-for-nature swap, which included commitments to protect its marine environment (The Nature Conservancy, 2021). Although debt-for-nature swaps are generally associated with more biodiversity-rich or developing economies, there may be a number of large, landscape-scale projects where this instrument could be used in an Irish context.

Blended finance. In simple terms, blended finance frameworks combine public funding with private investment to share resources, de-risk projects and enhance their scalability. Governments can incentivise private investment by reducing the costs and/or risks for private entities through blended finance instruments in order to catalyse private investment in activities that investors would otherwise consider too risky or unfamiliar (UNEPFI, 2021). This approach, supported by the United Nations Framework Convention on Climate Change (UNFCCC, 2015) and WWF (2020a), can attract a wider range of investors by sharing risks and rewards, thus enabling the development of large-scale sustainable projects. Blended finance models may also involve the strategic use of public, institutional or philanthropic funds to incentivise and attract private investment in sustainable projects.

In Berkelman's 2019 thesis "The role of intermediaries in blending investments for landscape restoration projects", the author identifies seven factors that are key to using blended investments successfully:

1. Project developers are crucial in connecting investments with local projects and stakeholders. Investment in operational funding is beneficial for an active market.
2. Fund managers play an important role in aligning investor requirements with blended finance funds, aiding market development.
3. Continuous donor funding to developers is needed to mitigate risks and ensure that projects reach an investment-ready stage, especially

to support building a proof of concept, on-the-ground restoration of the landscape, stakeholder management and capacity building.

4. Increased knowledge on blending standards can encourage public and philanthropic investors to de-risk private investments and support the development of a pipeline of "bankable" projects that have the potential to generate significant social and environmental returns.
5. A common landscape vision is essential to balance any trade-offs between the competing interests and land uses of stakeholders operating within the landscape.
6. Mobilising smallholder farmers is essential, requiring project developers to be a trusted, local voice collaborating with local authorities and other stakeholders.
7. Aggregating smallholder farmers through cooperatives or bankable portfolios reduces transaction costs and attracts large-scale investments.

These seven factors are largely applicable when using blended finance for landscape or catchment-scale projects in Ireland.

Outside Ireland, a number of organisations such as the Restoration Seed Capital Facility, the Blended Finance Taskforce and the Landscape Finance Lab have recognised that, in order to reach the scale of investment required, public finance must strengthen its capacity to catalyse and de-risk transactions as the private sector matures (RSCF, 2023). The Restoration Seed Capital Facility,¹² through blended finance, enables more private fund managers and investment advisers to set up dedicated investment vehicles that focus on forest and landscape restoration, build investable opportunities and increase the number of investment transactions successfully completed. Similarly, the Landscape Finance Lab¹³ has utilised blended finance to support large-scale NbS projects. One example is its investment in peatland restoration projects, which combine public grants with private investment to enhance carbon sequestration and biodiversity (Landscape Finance Lab, 2020).

12 <https://www.globallandscapesforum.org/wp-content/uploads/2023/02/rscf-white-paper-closing-the-nature-finance-gap.pdf> (accessed 9 December 2024).

13 www.landscapefinancelab.org (accessed 9 December 2024).

In 2021, HSBC, WWF and the World Resources Institute formed the Climate Solutions Partnership (backed by US\$100 million of philanthropic funding), which included the establishment of a “nature-based solutions accelerator”. A core element of the accelerator is to create a portfolio of bankable NbS projects and test the effectiveness of de-risking seed investments to attract further private finance.¹⁴

In the UK, the Blended Finance Taskforce is using a blended finance investment approach in its Mobilising Investment into Forest Ventures programme to combat deforestation and other environmentally unsustainable

land use practices that are contributing to global climate change. There will be an initial allocation of up to £150 million across five or six investment funds operating in selected tropical forest regions in Africa, Asia and Latin America. The programme’s investments will, over time, contribute to reducing deforestation rates by stimulating the growth of private sector investment in markets that create value from standing forests or incorporate forest protection into agricultural production (SAFIN and Convergence, 2021). Similarly, the UK government’s strategy to boost private sector investment in NbS emphasises the crucial role of

Biodiversity net gain

Biodiversity net gain (BNG) was introduced under the UK Environment Act (2021) and made mandatory in England as a new approach to development “that leaves biodiversity in a better state than before” and requires all new developments to achieve a “10% increase in biodiversity units” (Defra, 2024). The Chartered Institute of Ecology and Environmental Management (CIEEM) describes BNG as follows:

Where a development has an impact on biodiversity it encourages developers to provide an increase in appropriate natural habitat and ecological features over and above that being affected in such a way it is hoped that the current loss of biodiversity through development will be halted and ecological networks can be restored.

CIEEM (2019)

BNG is calculated using a metric developed by Defra that compares habitats before and after development. The Act also created a system of national “biodiversity credits”, which formalised the means by which developers can make financial contributions to biodiversity gain in sites.

Although there is no official guidance on BNG in Ireland, it is gaining traction among a range of public, semi-state and private companies (e.g. Dún Laoghaire–Rathdown County Council, Fingal County Council and Dublin City Council). In its briefing paper *Biodiversity Net Gain in Ireland (2024)*, CIEEM highlights a range of opportunities and challenges surrounding BNG and makes a number of suggestions on how BNG (or a similar approach) could be adapted or applied in Ireland. One of the critical elements it considers is the role of biodiversity offsetting or credits in cases where BNG cannot be achieved within a development site and where impacts need to be offset outside the development site. Although CIEEM supports offsetting as part of BNG in principle, it makes the important point that this could not function robustly in Ireland without a centralised “biodiversity net gain register” and a system to coordinate or manage these areas. This is an important point of consideration for the LUR, as a BNG-type system in Ireland could provide many benefits for protecting and enhancing nature and biodiversity and also for driving private finance into nature and sustainable use of land. (It should be noted that a number of individuals interviewed as part of the research for this report (see Chapter 3) were of the opinion that a BNG-type scheme in Ireland could be highly beneficial for encouraging greater private finance.)

¹⁴ <https://www.hsbc.com/news-and-views/news/media-releases/2021/hsbc-partners-with-wri-and-wwf-to-scale-next-generation-solutions-to-climate-change> (accessed 9 December 2024).

private finance in achieving its ambitious goals for nature recovery and sustainable farming, with the combination of public and private finance being at the heart of this (UK Government, 2023). In an Irish context, adopting blended finance models could be key to attracting private investment in sustainable land use, particularly in areas where private investors have been hesitant due to concerns about the risks associated with large-scale projects that are capital intensive, and the benefits of which are delivered only across the medium to long term (e.g. afforestation, peatland restoration, soil re-wetting, biodiversity restoration).

2.5 Investor Motivations for Investment in Sustainable Land Use

Investors are increasingly recognising the potential of sustainable land use investments, not only as an attractive financial opportunity but also as a strategy to achieve broader social and environmental objectives. Despite the challenges associated with engaging private investors in sustainable land use, the use of private financing instruments to fund projects and initiatives (as per the examples outlined in section 2.4) highlights the private sector's burgeoning interest in allocating capital to these initiatives as well as the potential for private capital to be used as a funding source for existing projects. In order to develop policy instruments as a means of funding projects that engage private investors effectively, it is essential to first understand investors' motivations. The *Bankable Nature Solutions Case Studies* report prepared for WWF details case studies on bankable nature solutions and identifies four main elements that motivate private capital investments in nature projects (Beavis *et al.*, 2024):

1. environmental impact and the desire to contribute to environmental sustainability/climate resilience;
2. the potential for high returns on investment through innovative/scalable models;
3. the development of more structured financial products that reduce the perceived risks associated with sustainable projects;
4. alignment with the global corporate responsibility/environmental, social and governance (ESG) policy landscape.

Alignment with ESG objectives. As identified by Vandermaesen (2024) and SAFIN and Convergence (2021), the increasing emphasis on ESG topics, global emphasis on biodiversity and nature preservation, and corporate responsibility across the global policy landscape have emerged as significant drivers for investors aiming to align their portfolios with sustainability goals. This is particularly true in the context of the EU, where ESG topics are a core part of corporate policies and legislation, from the CSRD to the EU Taxonomy Regulation (see Appendix 1). The development of sustainable land use projects presents tangible opportunities for these investors to meet such criteria, particularly those interested in agroforestry, biodiversity enhancement and water management. Aligning investments with regulatory frameworks and government policies promoting sustainability and capitalising on emerging green markets were identified as key motivating factors for UK private investors when engaging in overseas forestry projects (SAFIN and Convergence, 2021). Reporting and disclosure frameworks, from the mandatory (CSRD) to the voluntary (TNFD, Taskforce on Climate-related Financial Disclosures), are starting to normalise an increasing expectation on investors and corporate bodies to identify nature-related impacts, risks and opportunities and disclose changes to business models and investment strategies to achieve positive outcomes. These frameworks have been key drivers of the increasing global interest in encouraging investment in NbS and landscape-scale projects that deliver social and ecological co-benefits (Blarel *et al.*, 2020; SAFIN and Convergence, 2021; Defra, 2023; Beavis *et al.*, 2024; Farmlytics, 2024; SBTi, 2024). Ensuring the alignment of Irish projects with the relevant global frameworks is crucial for attracting the necessary private capital to fund sustainable land use initiatives. The 2023 UNEP *State of Finance for Nature* report highlights how investors are generally attracted to projects that offer financial stability in terms of return on investment and environmental impact, indicating that investor motivations are closely aligned with funding models that provide clear, measurable and verifiable environmental benefits and are aligned with the relevant regulatory and reporting frameworks.

De-risking and long-term financial returns. Many impact investors in sustainable finance products or initiatives such as NbS projects are motivated by structured financial products that reduce investment risks and uncertainties over long timescales. This is

highlighted by SAFIN and Convergence (2021) and Vandermaesen (2024), among others. The financial viability of projects that can deliver sustainable land use outcomes is often challenging given the uncertainty of and fluctuation in revenue streams, particularly in afforestation and peatland restoration or when developing nature and biodiversity credits. Investors are cautious about committing large investments to projects requiring long-term and regular injections of investment when there is a perceived lack of robust pricing mechanisms for ecosystems or a high risk of project failure (EIB, 2023).

De-risking and achieving stable, long-term financial returns are core motivations for investors looking to engage in projects related to land use change, particularly at the landscape scale (Blarel *et al.*, 2020; SAFIN and Convergence, 2021; Defra, 2023; Farmlytics, 2024; SBTi, 2024; WWF, 2024). In Ireland, Haughey *et al.* (2023) and Ball *et al.* (2023) highlighted the need to develop policy incentives that reduce perceived risks to encourage private investment in Irish projects. Despite ongoing challenges and associated risks, there is a growing recognition among investors that, with the right conditions, nature-related investments can offer attractive long-term financial returns (Gorman *et al.*, 2022). However, it is important to note that what constitutes an acceptable or attractive rate of return for investors depends on a range of factors such as the investment size, delivery timelines, geography, robustness of monitoring and verification, and alignment with stakeholder requirements. This has been demonstrated by projects in sectors like sustainable forestry, agriculture and agroforestry, which have shown clear potential to generate consistent revenue streams. For example, the Impact Biodiversity Fund¹⁵ set up by ASN Bank in the Netherlands has demonstrated that investing in sectors such as sustainable forestry and agroforestry can yield profitable returns while also delivering positive biodiversity outcomes (EIB, 2023). The dual benefit of financial returns and environmental impact is increasingly attractive to investors looking for sustainable investment opportunities.

Reputation and risk management. For many institutional investors (particularly insurance

companies and banks), investing in projects to deliver sustainable land use outcomes can be aligned with reducing their own exposure to nature and climate-related risks. For example, in a 2023 study commissioned by Ireland's International Sustainable Finance Centre of Excellence (ISFCOE), Ball *et al.* (2023) found that 58% of Irish lending (€56 billion) to non-financial corporations is "exposed to economic sectors that are highly dependent on 1 or more ecosystem service" and "94% of Irish lending (€92 billion) to non-financial corporations is exposed to economic sectors that have a high impact on 1 or more aspects of nature". These quantitative results mirror the findings of similar research carried out by the European Central Bank and central banks in France and the Netherlands that highlighted the urgent need for financial institutions to fully understand the nature-related risks to their bank lending and investment portfolios and to insurance investments and underwriting (van Toor *et al.*, 2020; Svartzman *et al.*, 2021).

The degradation of nature not only threatens ecosystem services, but also increases the risk of us reaching ecosystem tipping points, i.e. non-linear, self-amplifying and irreversible changes in ecosystem states that can occur rapidly and on a large scale. As I have said before, assessing nature-related risk is not some kind of tree-hugging exercise. We are talking about material financial risks, which – like any other type of risk – must be assessed, analysed and managed. From the perspective of central banks and supervisors, the degradation of nature makes our economies, our companies and our financial institutions increasingly vulnerable. We cannot ignore these vulnerabilities. Indeed, we need to deepen our understanding of how nature-related financial risk affects the economy and the financial system.

Keynote speech by Frank Elderson, European Central Bank Executive Board member, September 2024¹⁶

15 <https://beleggingsfondsen.asnbank.nl/home-particulier/fondsen-particulier/asn-biodiversiteitsfonds/asn-impact-investors-is-the-first-asset-manager-worldwide-to-measure-positive-impact-on-biodiversity.html> (accessed 9 December 2024).

16 <https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240906~54436f6891.en.html> (accessed 9 December 2024).

The financial risks associated with nature loss, climate change and unsustainable land use are becoming increasingly understood among insurers and financial market actors, particularly within institutions with European headquarters (EIB, 2023). By investing in (or supporting their clients to invest in) sustainable land use projects that align with climate and nature outcomes, companies in sectors exposed to nature-/climate-related risks can contribute to reducing their own exposure to these risks over time.

Highlighting this, as well as the reputational gains for Irish institutional investors, will be key to leveraging private capital for projects that serve national land use targets and speak to investor needs. Integrating sustainable land use projects into investment strategies can address client demand for sustainable investments while mitigating long-term environmental risks that could impact financial returns and supporting the financial stability of the economy.

Creating an enabling environment for private investment.

In order for Ireland to deliver on converging social, economic and ecological needs, a supportive policy and regulatory environment is required to encourage investors to engage with projects that are in line with land use targets and that appeal to their motivations and to reduce the strongly perceived risks surrounding these projects. It is clear from the literature, as outlined in Appendix 1, that the regulatory and policy landscape in Ireland (and across the EU) is rapidly changing and is pushing the public and private sectors to measure and disclose their nature-related impacts and dependencies. It is also helping them finance the changes needed to support their business model and the wider economy. Although this is broadly positive in terms of helping drive finance into sustainable land use projects to meet climate and nature targets, the level of investment being made is far from what is actually required. At the global level, this is evidenced by UNEP's *State of Finance for Nature* report (UNEP, 2022), which estimates the total funding required to finance NbS at US\$384 billion per year by 2025 and US\$484 billion per year by 2030. Current finance flows to NbS per year amount to US\$154 billion; therefore, without significant increases in finance, we could expect to see a US\$230 billion per year NbS finance gap by 2025.

For example, current evidence suggests that the government will need to do more to develop a supportive and targeted environment for private

finance to drive investment in forestry across Ireland. The CCAC's 2024 annual review emphasises the need to increase engagement with farmers and landowners to meet the afforestation target of 8000 hectares per year. Despite the Forestry Programme 2023–2027 being in its early stages, the report states that the necessary engagement level has yet to be achieved (CCAC, 2024). The significant potential of Ireland's forestry industry to boost carbon sequestration and storage through alternative management approaches, such as extended rotations and continuous forest cover, can also enhance timber production. According to the CCAC, Coillte is ideally positioned to showcase these methods, balancing carbon storage with the rising demand for high-quality timber. The report calls on DAFM to urgently engage with stakeholders to underpin the importance of forestry in Ireland's transition to a low-carbon, climate-resilient, biodiversity-rich economy. Addressing barriers to participation in the Forestry Programme is key to achieving these goals (CCAC, 2024).

It is clear that, if Ireland is to meet its environmental targets or indeed position itself as a leader, the government, regulators and industry bodies and initiatives will play a key role in providing the support for action now and in the long term (Bullock *et al.*, 2020; Ball *et al.*, 2023). A supportive policy landscape is needed that engages directly with investors and emphasises the state's role in incentivising and de-risking investments to encourage engagement and market development on projects that cumulatively work to meet national land use targets. Developing natural capital accounting and including it in national planning could further attract the private finance required to achieve the government's land use objectives, as monitoring and evaluation of investment impact could involve consistent and nationally recognised units of measurement (Molloy *et al.*, 2024). The outputs of the current LUR Phase 2 have the potential to encourage private sector engagement through an updated and more accurate land use categorisation system in Ireland, which would support an accurate baseline from which large-scale afforestation, sequestration and any land use zoning projects could be evaluated. Separately, a supportive environment for investors can have numerous co-benefits for communities in Ireland, including job creation and improved public health, which also align with investor interests in sustainable development.

2.6 Project Case Studies and the Role of Private Finance

In Appendix 2 we provide a summary of international, European and Irish case studies that highlight the role private finance has to play in projects targeting sustainable land use outcomes. We have aimed to provide examples of the models discussed in section 2.5, including credit-based schemes, corporate partnerships and PES schemes. Each case study has been assessed in terms of the insights gained and lessons learned relevant to Ireland's current context. What is most notable about the selection of successful international case studies is that they all have the same core principles: centralise the needs of local communities, encourage community cohesion and ensure equitable benefit-sharing among stakeholders. Such principles are evident in the financial stability achieved among farmers in Costa Rica's agroforestry PES scheme (noted as being of particular relevance to Ireland in Phase 1 of the LUR by Therivel (2021)) and the successful agri-environmental schemes in Kenya and Ecuador (summarised in WWF's 2020 report *Bankable Nature Solutions*). As opposed to focusing solely on conservation and expansion of protected areas (which may impact existing livelihoods), these projects were developed to support the financial stability and resilience of smallholder farmers by incentivising more sustainable and less intensive practices. The cooperative approach, where multiple farmers are involved, also promotes knowledge exchange and engagement among participants. This can also be an attractive model for investors, as funding can be injected into one centralised "home" but leveraged across multiple participants. The principles and frameworks of such schemes are relevant given Ireland's fragmented land ownership and the need to incentivise sustainable practices across multiple landowners and stakeholders.

There are also a number of existing schemes in Ireland that have demonstrated success. Although not privately financed, the farmer-led approach of the Burren Programme, Wild Atlantic Nature LIFE and the BRIDE Project offer instrumental and recognised blueprints for future schemes whereby private finance could be utilised to expand and upscale

these approaches across multiple regions or in areas requiring coordinated action across the community (e.g. those adjacent to notable/at-risk ecosystems). Another local example offering insights for future schemes is that of Hometree's Wild Atlantic Rainforest Project, which aims to reforest over 4000 hectares of temperate rainforest along Ireland's coastline. There is an entrepreneurial and community spirit to this scheme and it accepts funding from multiple stakeholders – individuals, local businesses, multinationals and other organisations that share its objectives. Engaging with the public and the simple articulation of the target have been key factors for success. The inclusion of local communities in tree planting and conservation efforts has brought notable benefits to community cohesion and enhanced local stewardship on afforestation, which is a national priority. Community involvement has also been exemplified by the Bioregional Weaving Lab in south-east Ireland, which aims to bring together diverse stakeholders (farmers, funders, communities, investors and the scientific community) to engage through the "4 Returns" framework.¹⁷ Global initiatives are also under way, such as those supported by the Biodiversity Finance Initiative (BIOFIN) and the EU-based initiative Biodiversity Restoration Using Large-Scale Finance (BIOFIN-EU), which is led by the University of Limerick.

What is clear from the case studies is that there is no project type or financial model that is preferred or dominant when it comes to the role of private finance. As will be discussed further in this report, it is critical that an enabling environment is created to align the right projects with the right finance in the right place.

2.7 Summary of Key Findings and Insights

Financing nature conservation and restoration is critical but not enough. Financial institutions must also allocate and scale capital towards the transformation of corporates' operations and value chains. While absolute volumes remain low, the relative growth of private finance flows has been significant, with an elevenfold increase during the past four years

¹⁷ The 4 Returns framework aims to tackle four main losses associated with land degradation – loss of hope, social networks, biodiversity and economic value – and regenerate the landscape to create four returns instead: return of inspiration, social return, natural return and financial return; see <https://commonland.com/4-returns-framework> (accessed 9 December 2024).

due to growth in alternative investments, traded debt, private equity, and more.

WEF (2024)

It is evident from the literature that the role of private finance is critical to driving sustainable land use outcomes across a range of measures and closing the nature funding gap that exists globally and in Ireland. While the potential of private finance is far from being fully realised, both in Ireland and abroad, there is a range of examples where private capital could be blended to support existing projects such as ACRES (currently financed solely by public funds) or any locally led or community-scale programmes. Similarly, private capital could be utilised to develop more ambitious large-scale projects aligned carefully with national land use targets as a means of delivering climate and biodiversity outcomes. While interest in investing in nature and related areas is growing, the market faces significant barriers that must be addressed to unlock its full potential and deliver the Irish government's social, economic and environmental goals. UNEP's 2021 report *State of Finance for Nature* discusses the mismatch between the investment preferences of financial institutions and the current maturity of projects that could deliver sustainable land use outcomes. Furthermore, projects must be developed to attract funding sources and deliver ecological outcomes while also aligning with investor motivations (Blarel *et al.*, 2020; SAFIN and Convergence, 2021; UK Government, 2023; Farmlytics, 2024; SBTi, 2024; WWF, 2024).

Ireland faces specific challenges when it comes to developing projects that deliver the government's objectives, including the following.

Fragmented land ownership. As identified in the synthesis report of Phase 1 of the LUR, the successful implementation of land use measures is influenced by whether the land in question is in public or private ownership (O'Rourke *et al.*, 2023). One of the significant challenges of attracting large-scale private finance in Ireland is the fragmented nature of land ownership and the underlying data. Globally, fragmentation of land tenure has been identified as a possible hinderance to the development and

delivery of nature and land use projects at the scale or pace required to meet necessary land use outcomes, and balancing the needs and motivations of landowners is a challenge (Hacking *et al.*, 2021). As identified in Scott and Faulkner's (2023b) analysis of the socioeconomic dimensions of land use as part of Phase 1 of the LUR, more plural forms of land ownership can lead to land use decision outcomes that generate community benefits and social justice or enhance natural capital more effectively. Understanding Irish land use dynamics is essential to understanding this potential and is being further addressed in Phase 2 of the LUR. Overcoming data needs and integrating spatial data with land use planning effectively while also engaging openly with landowners will be key to overcoming this challenge.

Matchmaking¹⁸ process between project developers and financiers. *The Nature of Finance* report (Ball *et al.*, 2023) and others make the case that the current process of "matching" nature and land use project developers with financiers in Ireland is not functioning effectively. The challenges in Ireland mirror challenges seen across Europe and globally. There is frequently misalignment between private sector actors and project developers, stemming from different measures of success, motivations, terminology and required timescales for return on investment. Land ownership and farming practices in Ireland are deeply intertwined with social, cultural and economic factors, while private finance and investment opportunities are often motivated by metrics such as return on investment and the guarantee of measurable and verifiable financial gains (EIB, 2023). Effective cross-sectoral engagement is necessary to bridge this gap, ensuring that private finance mechanisms are integrated effectively to fund local projects that are ecologically and socially effective, can be scaled up, and align with the values of local communities, while also balancing investor motivations (NESC, 2023).

Lack of ready-to-invest projects. A significant barrier is the lack of well-developed, investment-ready ("bankable") projects. Investors typically seek projects with proven financial sustainability, stable or guaranteed revenue streams and established business models (Hacking *et al.*, 2021). However, many initiatives across Europe are in the development/

18 "Matchmaking" is used here to mean formal (and to a lesser extent informal) collaborations, partnerships and transactions between two or more parties looking to connect funding and financing to projects and initiatives on the ground.

piloting phase, which makes it difficult to make a case for investment in these projects. The gap in project development is a significant barrier for larger institutional investors, which require projects to meet certain financial criteria to justify making an investment (EIB, 2023).

Monitoring and verification of land use outcomes.

Effective monitoring and verification of land use outcomes requires robust spatial planning and data on policy and project effectiveness. The verification and monitoring of land use projects is essential for building investor confidence and ensuring that projects deliver their intended environmental and social benefits (Defra, 2023). Although much work is under way to update and expand spatial mapping data and tools, the current state of Ireland's spatial planning and land use data presents ongoing challenges, particularly in integrating ecosystem services approaches or natural capital accounting as a means of project verification (Stout *et al.*, 2023).

Despite the challenges outlined above, the role of private finance in delivering land use outcomes is increasingly recognised, with the following key indicators of its potential in Ireland.

Reporting and disclosure and cross-sector collaboration.

As described in section 2.2, the financial services sector is becoming more engaged in environmental, nature and land use outcomes, driven largely by new reporting and disclosure frameworks and market forces across Europe. This shift presents a significant opportunity to incentivise and provide direction for Irish private sector actors and engage them in funding national land use objectives. A cross-sectoral nature finance delivery group similar to that proposed in *The Nature of Finance* (Ball *et al.*, 2023) could facilitate the necessary collaboration and knowledge transfer across stakeholders and increase private finance for the development, mobilisation and delivery of sustainable land use projects.

Existing success stories. There are already positive examples of landscape-scale initiatives in Ireland, such as Wild Atlantic Nature LIFE, the BRIDE Project and the work of Hometree. These initiatives have demonstrated or are demonstrating that it is possible to deliver both social and ecological outcomes that

benefit farmers, local communities and regional stakeholders. As outlined by the National Economic and Social Research Council in its 2023 report on just transition in the Irish agricultural sector (NESC, 2023), projects such as the Burren Programme have been recognised as some of the leading schemes of their kind in Europe, with the report describing it as “one of the best-developed and longest-running result-based agri-environmental schemes” in Europe. Lessons learned from these existing Irish projects, along with other large- and small-scale initiatives, and the reflections of practitioners and project developers, provide valuable insights into project design, stakeholder engagement and the management of social and cultural sensitivities in the Irish context.

Availability of expertise. It is evident from the research conducted to date and existing success stories identified in the literature (e.g. the LUR, INCASE projects, ACRES, Peatland Finance Ireland (PFI), Natural Capital Ireland) that Ireland possesses high-quality scientific expertise across practitioners, policymakers and private sector actors, which supports place-based projects targeting specific ecosystems and land use practices, including peatlands, forest ecology, biodiversity outcomes and sustainable agriculture. This depth of expertise is a key asset in ensuring that projects are designed and implemented effectively, enhancing their appeal to private investors.

This comprehensive review of literature from global to local contexts identified the strong potential for private finance in Ireland and its growing reputation for delivering successful agri-environmental results-based payment schemes. While there is some way to go in terms of the large-scale deployment of private finance, it is clear that Ireland has the potential to deliver innovative projects in this space – with high-calibre expertise among the national community of scientists, policymakers, academics and practitioners. Learning from their insights is crucial to further identifying the specific policy instruments and institutional support needed to progress the private finance agenda for nature in Ireland. Chapter 3 presents a summary of insights from a series of semi-structured interviews with key stakeholders to further refine the lessons learned from the literature in an Irish context.

3 Expert and Practitioner Stakeholder Engagement

To complement the review of the evidence base and gather diverse perspectives from the Irish and international contexts, a series of semi-structured expert interviews was conducted. These interviews aimed to identify the challenges, opportunities and lessons learned from previous research and from the practical implementation of private finance instruments for land use outcomes in Ireland while also filling knowledge gaps in the literature on the development and implementation of privately financed land use projects in Ireland.

3.1 Methodology for Stakeholder Engagement

We conducted eight semi-structured interviews with experts and practitioners with the objective of identifying the practical challenges, opportunities and insights gained from previous research, projects and initiatives in the Irish context. The stakeholder engagement process targeted investors and individuals from the financial sector, on-the-ground practitioners with experience in the development and implementation of place-based schemes in Ireland and policy experts with international oversight of leveraging private capital for land use outcomes. A longlist of stakeholders was developed, which was then narrowed down to a shortlist balancing subject matter, practitioner and industry perspectives. Prospective interviewees were then contacted and informed of the aims of the research. Interviewees verbally consented to participate and were free to withdraw at any point. The interviews were conducted via video call from June to August 2024. We have anonymised the interviewees but have provided a guide to their expertise and background to contextualise their contributions, insights and opinions (see Table 3.1). A summary of key discussion points and insights from each interview are provided in Appendix 3, with a summary of key findings and analysis presented in section 3.2.

Table 3.1. Anonymised summary of interviewees

Interviewee	Description of role
1	Financial services professional (policy)
2	Practitioner (place-based agri-environmental initiative)
3	Practitioner (place-based environmental initiative)
4	Academic (sustainable finance)
5	Financial services professional
6	Practitioner (land use)
7	Financial services professional
8	Practitioner (land use)

3.2 Summary of Expert and Practitioner Stakeholder Interviews

The interviews collectively underscored a critical need for enhanced capacity building and awareness regarding private finance for land use in Ireland. The fragmented nature of current “green” and sustainable finance efforts and the need for greater coordination and an overarching vision to guide private finance for land use outcomes were recognised as key challenges by interviewees. Stakeholders also recognised the need to engage with the financial services sector more effectively on their specific role and responsibility in delivering Ireland’s land use and nature outcomes. Acknowledging and respecting the deeply personal connection farmers have with their land was highlighted as a crucial element for the successful implementation of privately financed schemes, while building trust through stable, long-term funding mechanisms and meaningful community engagement also emerged as key considerations. Overall, the potential for leveraging private capital to achieve Ireland’s land use objectives and deliver environmental and socioeconomic outcomes was universally recognised across policy experts, academics, practitioners and financial services professionals.

3.3 Findings of Stakeholder Interviews

The interview process validated the finding that fragmentation of land ownership has significantly hindered previous sustainable or “green” finance schemes, as posited by Haughey (2021). However, drawing on international experience, interviewee 1 expanded on the idea of fragmentation being a barrier to progress in Ireland beyond landownership. It was noted that fragmentation and lack of coordination between sectors, project developers and investors, as well as academic siloing, are also barriers to progress. These barriers are further entrenched by the lack of an overarching vision in terms of state policy and ambition for the role of private finance in supporting land use change. The stakeholder engagement process also provided a potential mechanism for overcoming this fragmentation, with interviewee 1 highlighting a clear opportunity for stakeholders to coordinate via public–private working groups, aligning with studies that found that the sharing of learnings, insights and data in terms of public–private collaboration is critical to providing meaningful support to policies, incentives and outcomes for land use change (Ball *et al.*, 2023). However, interviewees also identified an urgent need for capacity building and enhanced awareness of nature-related risks, impacts and dependencies across all sectors to facilitate this collaboration. Educational and collaborative initiatives by the likes of Skillnet, Natural Capital Ireland and Business for Biodiversity Ireland¹⁹ are making progress but further coordination and capacity building is required.

Guidance documents and best practice case studies identified during the literature review demonstrated the importance of putting local communities at the centre of project planning, decision-making and implementation. For example, WWF’s 2021 guidance document *Beyond Carbon Credits* emphasised the need for equitable distribution of benefits and for projects to address social and environmental objectives, reiterated in the Irish context by the CCAC (2020). Our stakeholder interviews further confirmed this finding in the Irish context, while also providing concrete examples of how this can be successfully implemented, for example by leveraging pre-existing

relationships with local communities via a dedicated multi-stakeholder “convener” or “intermediary” role, as trust is significantly more difficult to build with “someone new coming into a region”. The ecological efficacy of local projects built on solid foundations of trust with the community was also singled out as being more impactful than larger projects that did not seek to properly engage local communities and thus did not achieve the necessary outcomes.

Related to this, interviewees emphasised the importance of building and maintaining trust with farmers and local communities through the stable and regular administration of funding, ideally over a long-term timescale. Interviewees 2 and 3 cited their practical experience with previous publicly funded schemes for land use, stressing that, historically, public finance mechanisms suffered from irregular payments over short to medium-term funding cycles and administrative constraints, which significantly damaged farmer or landowner trust and willingness to engage further. In particular, well-reported challenges with ACRES (Mag Raollaigh, 2024; O’Donnell, 2024; O’Toole, 2024) and significant concerns about how it is being administered and the level of impact it is achieving were raised by several of the interviewees. Our interviews also highlighted the novel role that private finance has the potential to play in overcoming some of these challenges, with interviewees 3, 6 and 8 suggesting that private finance could be mobilised to provide additional or supplementary operational funding for existing schemes as needed, thereby “guaranteeing” schemes and enhancing trust regarding the predictability of funding flows.

Practitioners and project developers both strongly emphasised the role of the state in de-risking private finance investments – particularly for larger or more capital-intensive land use projects where benefits are expected over a medium- to long-term timescale, for example, afforestation projects or those designed to sequester carbon or re-wet organic peat bogs at scale. This echoes the sentiments of Bullock and McGuinness (2020). The potential for using blended finance models for large-scale projects that aim to restore ecosystems as public goods was emphasised by forestry and peatland practitioners in this context. However, it was noted by stakeholders from the financial sector that credit-based schemes are attractive for investors,

¹⁹ www.businessforbiodiversity.ie (accessed 9 December 2024).

given their motivation to make a verifiable impact and the potential to sell the credit on at a later point if they wanted. Representatives from the financial services sector also emphasised the potential drawbacks of blended finance models from their perspective, citing the often significantly diverging philosophies of investors and the public sector and the “inordinate” level of coordination needed.

Finally, the stakeholder engagement process validated and advanced our understanding of issues regarding the successful monitoring, verification and enforcement of project outcomes for green finance schemes for land use in Ireland. The literature review found that previous studies identified the general risks and limitations of projects, emphasising the need for clear, transparent and robust frameworks and methodologies for the calculation and verification of the ecological benefits captured (e.g. carbon sequestered, biodiversity uplift achieved). Interviewees 4, 7 and 8 highlighted that in order to achieve this in Ireland, government standardisation or oversight of schemes, tracking their impact and conducting monitoring/verification, would be required. Moreover, stakeholders also emphasised

the importance of meaningful enforcement to avoid projects failing to achieve planned outcomes and the need to ensure real impact, rather than giving rewards for getting started or taking part in schemes. Interviewee 3 highlighted that, in their experience of engaging with farmers as part of agri-environmental finance schemes in Ireland, enforcement of scheme rules has been weak, damaging the trust and morale of those participating farmers who make efforts to protect nature and engage effectively. Future schemes will require robust governance and enforcement in order to retain engagement among their participants.

Collectively, the interviews revealed a complex tapestry in which enhanced coordination, community engagement, funding stability and robust verification represent crucial factors for advancing private finance mechanisms for land use outcomes. The findings of this stakeholder engagement process complemented and advanced our findings from the literature review, identifying new themes (such as biodiversity net gain (BNG)) and insights, which present important additional considerations for future private finance schemes for land use in Ireland. In Chapter 4, we provide a summary of our findings and analysis.

4 Findings and Analysis

In this chapter, we draw out key findings and insights from the review of the evidence base and stakeholder interviews to help shape key actions and recommendations for policymakers as part of the LUR Phase 2. A number of overarching findings, as seen in Figure 4.1, are explored in depth throughout the chapter.

As evidenced from both the literature and interviews, the potential for private finance to deliver sustainable land use outcomes in Ireland is multifaceted. To be utilised successfully, investors in projects and initiatives must navigate intersecting environmental,

economic and social dimensions. It is well recognised that Ireland faces significant challenges in protecting and restoring nature and biodiversity, meeting climate targets, addressing socioeconomic issues and meeting housing and infrastructure needs.

These challenges create a complex landscape of competing forces for land ownership and use. Moreover, the scale of change needed to meet these targets can easily lead to trade-offs. A focus on decarbonisation measures alone could further harm nature and biodiversity, while prioritising nature could cause unrest among rural communities and

Key Findings 			
Ownership Challenges Fragmented land ownership continues to prove a challenge to attracting and deploying private finance	Matchmaking Challenges Misalignment between private investors and developers is resulting in ineffective or inefficient delivery of social or environmental outcomes at scale	Land Use Monitoring Effective monitoring, reporting and verification (MRV) of land use outcomes to meet investor requirements requires extensive spatial & ecological data and standardised processes	Engaging Community Policies that incentivise the transition to sustainable land use practices through private finance must consider the needs of affected communities sensitively
Unified Effort Urgent need for collaboration, education and training within and between the financial services sector and for project developers / farmers / communities	Growing Interest A growing number of financial institutions, global technology & corporate actors are interested in funding nature / land use outcomes in Ireland	Public & Private There are opportunities for blending, integrating, or transitioning to private finance from public money and philanthropy	Role of Intermediaries Trusted intermediaries could play a crucial role in connecting finance to project developers and landowners
Context is Key The type of financial instruments used, timescales, project type, as well as return on investment are place-based and highly context specific.	Risk & Reward Over time with State stewardship and coordination, the share of risk and reward between public-private finance should begin to spread more evenly	Tracking Progress The State should help develop methods to assess and measure privately financed projects, ensuring they are properly accounted for and align with national, EU and international goals	De-risking Investment Public funds will continue to be needed to attract and de-risk private investments

Figure 4.1. Summary of findings and insights.

landowners because of perceived or actual negative impacts on rural livelihoods or cultural heritage (Haughey *et al.*, 2023a,b).

Where agriculture and forest areas coincide with existing important areas for biodiversity, there may be significant barriers to and trade-offs associated with land use change, exacerbated by conflicting land use objectives associated with different energy, food, biodiversity, water and climate policies.

Haughey *et al.* (2023b)

One example of how these challenges may manifest is exemplified by Ireland's requirement under the EU Nature Restoration Law to develop an NRP that includes voluntary actions in critical sectors, including agriculture and land use, land use change and forestry. As highlighted by the recent CCAC review of the agricultural sector, the NRP should lay out clear financial incentives. Balancing social, economic and environmental goals will be crucial to ensuring rural development and long-term ecologically positive projects in this regard (CCAC, 2024).

It is important to recognise that rural communities in particular face a range of socioeconomic challenges and opportunities in the context of land use and private finance. Policies and institutional arrangements that incentivise the transition to sustainable land use practices by leveraging private finance must therefore consider the needs of these communities with sensitivity and pragmatism. As the majority of rural areas remain heavily dependent on the agri-food sector, any policy shift towards climate- and nature-focused land use must be alive to the potential socioeconomic impacts. The small size of Ireland and the fragmented nature of land ownership present both challenges and opportunities. On the one hand, the large number of small landowners can make it difficult to implement and finance projects at the scale required to attract corporate investors. On the other hand, this fragmentation allows for more tailored and locally specific finance solutions that can be more effective in addressing the unique needs of different areas and can potentially be matched to specific private sector actors. Building strong local partnerships and fostering

collaboration among landowners, communities, state agencies and investors is fundamental to overcoming these challenges. In addition, putting decision-making in the hands of rural communities and farmers will be crucial to gaining their support and ensuring that the transition is inclusive and fair. It is essential that projects funded, developed or implemented through engagement with private sector actors are founded on just transition principles and are place based, ensuring effective inclusion of communities and ultimately leading to longer term, more ecologically effective outcomes.

At present, the process of "matchmaking" between private investors and on-the-ground project developers is often fragmented or ineffective at delivering the desired social or environmental outcomes at scale – requiring state intervention. While investors and project developers are increasingly eager to work together, the level of collaboration and coordination required to deliver ecologically impactful projects has made it difficult to get started. This stems from a variety of factors, including availability of investment-ready projects, differing use of technical language, measures of success and timelines, and diverging motivations of the stakeholders involved. Furthermore, the small size and disparate locations of the land involved in community projects in Ireland is not necessarily attractive for investors or corporate actors looking for larger scale impacts as they look to align them with their own internal nature and climate agendas. When it comes to metrics and timescales, landowners and project developers tend to focus more on ecological and scientific metrics, which typically evaluate impacts across a medium- to long-term period. In contrast, investors are motivated by quantifiable returns on investment, tradeable credits and perceived environmental impact over a shorter time frame. Although there are some notable examples of successful projects that match priorities and objectives (e.g. PFI's²⁰ engagement of corporate actors and the Native Woodland Trust's²¹ planting schemes), the number of impactful partnerships that have used private finance (in whole or in part) in Ireland to date is low. Furthermore, the existing partnerships have thus far been largely philanthropically funded – with low or no quantifiable financial returns. This points

20 <https://peatlandfinance.ie> (accessed 9 December 2024).

21 <https://www.nativewoodlandtrust.ie> (accessed 9 December 2024).

to a market that is not functioning as we need it to and requires intervention. Given the spectrum of challenges in incentivising and matching the right finance to the right place, there is a case to be made for identifying landscapes across Ireland where sensitive and iterative change is most effective, as well as those best suited to large-scale restoration or transformation.

In many respects, finance for nature and land use can be regarded as asset class agnostic: there is no one financial instrument (from credits to blended finance models) that has acted as a silver bullet for any type of ecosystem or ecological outcome. Furthermore, no single financial model is yet seen as the most favourable in Ireland or indeed globally. The type of financial instrument, timescale, project type and return on investment are highly context specific. Influencing factors range from landscape typology, ecological condition/extent and dominant industry type (and land use) to population density and specific socioeconomic, cultural or historical context. Therefore, it is critical that policies that aim to incentivise private sector engagement with the available financial instruments and models include clear requirements to ensure that projects are matched and adapted to local needs, balancing potential trade-offs while also meeting investor and market requirements.

Evidence to date indicates that PES schemes, or results-based payment schemes, are receiving considerable attention in Ireland, alongside nature restoration projects associated with the development of new renewable energy infrastructure. While our interviewees noted the recent uptick of interest in credit-based mechanisms and engagement with the carbon market in Ireland, PES schemes in particular have demonstrated considerable success in incentivising behaviours towards more sustainable practices and delivering positive outcomes across biodiversity metrics while supporting rural livelihoods. In fact, Ireland is emerging as a leader in such schemes in Europe.

It should be noted that results-based payment schemes also pose significant challenges when engaging private investors and corporate finance, due to the multitude of landowners, the depth of stakeholder engagement and coordination required and the often small amount of required financial investment. As a result, these schemes are generally

well suited for funding by public or philanthropic means. Most of the successful PES schemes in Ireland have been predominantly financed through public funding to date. However, despite the challenges mentioned, the demonstrated efficacy and community stewardship of these specific project frameworks present important opportunities for coordinated injections of private finance as a means of scaling them up across a wider range of communities and ensuring a more sustainable and longer term source of funding.

Given the complexities associated with delivering land use outcomes that protect Ireland's natural environment, the evidence would suggest that public funding will need to continue to take the initial lead in delivering project financing. This foundational support plus effective stewardship from the public sector is crucial, as it lays the groundwork for future investments and mitigates the inherent risks that many private investors are currently unwilling to accept. While the corporate sector and private finance have a clear responsibility to step up support, coordination and intervention by the state is required to ensure that privately financed projects are developed and coordinated with national targets in mind, rather than serving solely corporate interests or internal nature/climate agendas. There are important factors to consider here to ensure that private actors are bearing their share of responsibility for the environmental impacts and dependencies of their business models and activities (e.g. upholding the polluter pays principle). By establishing a stable and secure investment environment, public money can pave the way for more innovative financial strategies, such as blended finance, which can then attract and de-risk private capital. In Ireland, public money will probably need to continue (at least in the short term) to take on the larger share of risk – particularly in results-based payment schemes.

Over time and with careful state stewardship and coordination, the share of risk and reward between public and private finance should begin to be spread more evenly and indeed shift more towards private finance as the private sector is increasingly motivated and required to take action. That action will continue to be driven by regulation, investor expectations, the desire for reputational benefits and the need to support the resilience of their business models. The CSRD, EU Taxonomy Regulation and TNFD (among others)

are providing financiers and corporates with a clear regulatory direction and standardised disclosure frameworks. This clarity will support the deployment of capital, but the government must create the enabling environment to incentivise and direct finance to deliver the land use outcomes it requires. The state has an essential role to play, in terms of the stewardship required to create this enabling environment for private finance, by ensuring that all privately funded projects are based on scientific rigour, social integrity and do no harm principles, and are developed in line with national targets.

The role that a trusted local intermediary can play has emerged as a key finding from our research. These intermediaries can be newly established entities or be built into the remit of existing state, private, cooperative or community-based actors. The critical element is that they can act as a neutral, trusted and transparent intermediary between landowners or project developers and organisations or individuals looking to finance sustainable land use outcomes. These intermediaries must be trusted within communities and be able to respond to specific local needs and challenges (both environmental and social), while also being able to work credibly with multiple investors to bring private capital into a defined region or landscape. To do this, the intermediary must be able to work with both sides of the financing equation – understanding the specific challenges and opportunities on the ground and being knowledgeable about the science, culture and socioeconomics of the area, while also being able to speak the language of finance, to provide the legal structures, governance and measurable returns required by investors. The potential benefit of this model is that it can balance the needs of both sides by aggregating landowners or projects into investable/bankable projects or portfolios.

Moreover, intermediaries can be well placed to take a long-term view when matching investors to landscapes and initiatives, channelling finance to where it is needed most and seeking to minimise the peaks and troughs that can occur in direct relationships and funding cycles. These intermediaries would ideally also help to successfully blend private and public funds, acting as neutral brokers to create long-term investments that meet the needs of government, communities and financiers. Once systems and relationships are established, intermediaries should be able to operate at pace and scale. However,

implementing such a model needs significant stakeholder engagement and investment of time and resources. As illustrated by the administrative challenges with ACRES, the trust of farmers and landowners can be hard to win. The state would need to invest in the level of training and upskilling/engagement required to develop and test and trial this model. State stewardship of matchmaking landscapes and investors and developing a code of practice for intermediaries will be important to coordinate action and track and report impacts across projects and regions.

Our findings from this research complement and build on previous studies looking at the role of intermediaries. These include Wilson (2014) on social investments, Kangas and Ollikainen (2023) on biodiversity offsets, Lardoux de Pazzis and Muret (2021) on water-related investments and Berkelman's (2019) thesis on blending investments in landscape restoration projects. All acknowledge that intermediaries can be challenging to establish and need to be tailored to local and national contexts. However, they highlight the significant benefits intermediaries can bring with regard to aggregating "bankable" projects, brokering between unfamiliar project developers and financiers (Freireich and Fulton, 2009) and, in many cases, lowering transaction costs, reducing timelines and increasing impact.

In the case of large-scale finance that is unsuited to investing or unwilling to invest in small-scale initiatives (even those aggregated into portfolios), there is a case to be made for identifying large critical landscapes in Ireland where land is owned by a small number of parties, the state or one of its agencies, which can work directly with a large corporate or group of corporates to finance large-scale protection and regeneration initiatives. Large-scale afforestation of native woodlands or peatland re-wetting in critical ecosystems are examples of initiatives that could be well suited to this model. This could also include the identification of landscapes and habitats that are biodiversity "hotspots", critically endangered and/or require prioritisation over others for restoration. These larger projects may be better suited to landscapes that are less populated and already have some existing protections under law, and can therefore be connected more readily to corporates or financial institutions looking to invest much larger sums of money than smaller initiatives/PES schemes could accommodate.

With coordination and stewardship by the state, these larger scale projects should be developed directly in line with national targets and include measurement, reporting and verification methodologies from the outset, so that impact can be monitored effectively. This approach is likely to be beneficial as Ireland develops its NRP as part of the EU Nature Restoration Law. In addition, the Irish Environmental Network's report *High-Level Recommendations for Funding Nature Restoration in Ireland* (Ní Dhúill et al., 2024) outlines the need for accountability to be placed within a designated body. It makes the case that accountability for delivering nature restoration actions needs to be placed within various government departments or an independent "nature restoration agency" that oversee action.

One of the most significant barriers to understanding the risks to the finance sector of nature loss, and to driving investment into sustainable land use in Ireland, is a lack of relevant skills and capacity. From a private investor's perspective, this involves a deficiency in the business capacity, skills and expertise needed to fully understand the issues and opportunities related to sustainable land use outcomes. In addition, many on-the-ground organisations or landowner initiatives seeking funding lack the capacity, skills and expertise to understand the various private finance mechanisms available and how to access them effectively. Private banks and investors, and on-the-ground initiatives, often operate in very different spheres, each with their own language and understanding, making collaboration challenging, which was reiterated by stakeholders during the interviews. ISFCOE's *Sustainable Finance Skills: Deep Dive Study* published in November 2023 confirmed this skills gap, with financial sector participants from the banking, insurance and asset management sectors identifying nature and biodiversity as the most significant knowledge and skills gap in Ireland's finance sector (KPMG, 2023b).

However, positive steps are being taken to bridge this gap, with education and training courses being developed by Skillnet Ireland²² and other finance sector industry bodies for financial sector professionals looking to upskill. However, there is also a need for education among state agencies and local authorities, and for landowners and project developers to better

understand financial services, financing models and requirements. Moreover, there is a critical shortage of experts such as ecologists and professionals in the public and private sectors capable of working credibly across disciplines. Financing and further coordination to address this education and skills gap, alongside support for nature and landscape financing forums and collaboration, will be essential.

The state has a crucial role to play in developing the means and methodologies by which privately financed projects are assessed and measured to ensure that outcomes are verifiably in line with national climate, nature and biodiversity and water goals and are counted as such. As explained in section 2.2, existing national plans and targets outlined in Ireland's nationally determined contributions, NBAP and Climate Action Plan are clearly encouraging the implementation of specific measures (peatland restoration, carbon sequestration, more sustainable agricultural practices and nature restoration). Further detail on NRP and sector-specific measures will have to be submitted by the Irish government in response to the EU Nature Restoration Law. It is therefore important to ensure that projects that are being developed and implemented (with public and private finance) align with these plans in a measurable and verifiable way. A step towards this will be the enhanced categorisation of land types across the country (which is a key output of Phase 2 of the LUR), although, crucially, this will not provide a habitats map. State intervention will be required to ensure that there is a framework for engaging investors and corporate actors to develop, implement and account for verifiable privately funded action towards national targets, as opposed to nature projects that serve only investor interests or drive benefits to external parties.

Spatial mapping and land use cover maps, along with updated and consistently applied land use categories, should provide a strong evidence base and standardised framework for decision-makers. However, it is essential that this information is made open source or priced reasonably, as current mapping and data tools can be prohibitively expensive. The new maps under development will be critical for landowners and financiers to identify areas of greatest need and opportunity.

22 <https://www.skillnetireland.ie/skillnet-business-network/networks/sustainable-finance-skillnet> (accessed 10 December 2024).

In summary, the findings and analysis of insights from the review of evidence and stakeholder interviews identified clear challenges and opportunities.

Addressing these will ensure that the role of private finance in land use outcomes in Ireland is realised as effectively as possible to deliver meaningful, verifiable impacts alongside delivering benefits to

local communities. There are clear priority areas requiring state intervention in terms of stewardship, coordination, engagement, oversight, facilitation and verification of impact. Chapter 5 will provide specific recommendations and considerations to address these findings and facilitate the effective deployment of private finance.

5 Recommendations and Considerations

This chapter outlines six key recommendations, as shown in Figure 5.1, to support or optimise the potential role of private finance in achieving sustainable land use outcomes in Ireland. These recommendations aim to address key areas requiring intervention (as discussed in Chapter 4) and include actions for the state to support the effective mobilisation of private finance.

5.1 Develop a National Vision and Framework for Sustainable Land Use and Nature Finance

The evidence has shown that there is a multitude of private finance initiatives related to nature and land use in Ireland at present. However, they are piecemeal and variable in scale, impact and outcomes. There is a strong case to be made for the government developing a comprehensive and transparent overarching vision and framework for land use and nature finance, integrating clear objectives, desired outcomes and a robust package of supports and incentives. This vision should align with Ireland's broader environmental, social and economic goals as outlined in the Programme for Government, Climate

Action Plan, NBAP and EU Nature Restoration Law. Meeting the requirements of the Nature Restoration Law needs a coordinated, state-backed vision for action across the landscape – as well as a set of feasible and effective actions in key sectors (including agriculture). Therefore, by setting out a clear direction, the government can foster a cohesive approach to financing land use initiatives that integrates climate, nature and socioeconomic objectives. Moreover, it can reduce or mitigate the risk of poorly designed market-led initiatives and greenwashing or undesirable outcomes such as increasing competition within land markets and the capturing of benefits by external actors.

As outlined in Chapter 2, BNG is gaining traction among a range of public, semi-state and private companies. As CIEEM (2024) and others have highlighted, there is a range of opportunities and challenges when it comes to adapting the BNG approach for Ireland, but the benefits, particularly with regard to the role of private finance, could be transformative. The government should consider how a BNG-type scheme in Ireland could support national land use objectives and in tandem raise significant private finance.



Figure 5.1. Key recommendations to support or optimise the potential role of private finance in achieving sustainable land use outcomes in Ireland.

5.1.1 *Develop a national credit “standard” and “register”*

To facilitate effective collaboration between project developers and financiers, the government should explore establishing an Irish national credit “standard” that integrates both climate (carbon) and nature (biodiversity) factors. The voluntary credits market is currently market led and variable in quality and impact (as discussed in section 2.4). Important questions have been raised about the additionality of credits and if they are resulting in actual decarbonisation or market transformation. Creating a national credits standard for Ireland alongside a national “register” of credits, based on global best practice, should provide a consistent basis for evaluating and certifying projects and credits and ensuring that they meet high environmental and social safeguards in Ireland. It could also enhance investor confidence by providing a reliable mechanism for measuring and verifying the impacts of their investments and their potential tradeable value. The Climate-KIC and DAFM deep demonstration partnership should create a framework needed for such a credit standard, but further work may be required to ensure relevance and applicability across land uses and sectors. In addition, extensive stakeholder consultation with rigorous market testing is required to ensure that the standard and register are accepted and meet the specific needs of both the buyer and seller sides of the credits market.

5.1.2 *Develop an investment road map and allocate public funds to de-risk and attract private finance*

The evidence shows that the state will need to continue to be the largest funder of sustainable land use initiatives, recognising that it bears the responsibility for meeting national and EU targets but also that it has the ability to de-risk and attract private capital at scale. The state should therefore consider (re)allocating further funds specifically to de-risk and attract private finance to deliver desired land use outcomes. Further incentives could include tax breaks, grants and low-interest loans to encourage investment in nature restoration and sustainable land use projects. By setting out a clear road map of investment and incentives, similar to those used for

housing or infrastructure projects, the government can provide clarity and confidence for private investors. A road map could outline planned investments over the next 5, 10 or 15 years, setting out a direction of travel for phasing in private sector participation and in what capacity. The state has a role to play in encouraging greater innovation within financial services, working within a robust framework to ensure that new financial models and products are effective and sustainable and deliver the required benefits and outcomes from land use projects. This role may include signposting where PES schemes, blended finance models, credits or bonds are most desirable or effective and ensuring that the projects designed, funded and implemented by private actors, investors or large corporates are aligned with national targets. This could involve supporting landowners to develop nature restoration projects and access funding from local authorities, credit unions, cooperatives or other locally based institutions. By fostering a culture of innovation, the government can help support new financing models that are tailored to the specific needs of regions, landscapes and communities, ensuring that they are both effective and scalable.

Furthermore, the Central Bank of Ireland has adopted European-led metrics of climate risk as mandatory metrics for a range of financial actors, including insurers. This is evidenced in their recently developed guidance document for insurance undertakings on climate change risk.²³ There is a strong case to be made for the Central Bank of Ireland and the financial services sector conducting similar work to fully quantify the nature-related risks to, impacts on and dependencies of the Irish economy. Understanding these risks and the dependencies of the Irish financial services sector on the natural environment and coordinating engagement with relevant stakeholders on this topic should further encourage the deployment of private finance to support adaptation and mitigation measures and support land use outcomes.

5.1.3 *Support further collaboration and training and education*

State agencies can do more to actively support collaboration between financial services in pre-competitive fora and with land use stakeholders,

23 <https://www.centralbank.ie/publication/consultation-papers/cp151> (accessed 10 December).

i.e. landowners or on-the-ground project developers. This could involve enhancing the role of existing initiatives such as Business for Biodiversity Ireland²⁴ and Natural Capital Ireland or backing new initiatives such as those proposed in the nature finance road map by ISFCOE in December 2023 (Ball *et al.*, 2023). Such fora can facilitate dialogue and the sharing of best practices and can develop innovative financing solutions tailored to the unique challenges of land use projects in Ireland. By fostering a collaborative environment, the government can help bridge the gap between investors and project developers, ensuring that financial resources are effectively mobilised to achieve land use outcomes and share the risks and rewards across society and the economy. This is crucial to ensure coordinated progress.

Consideration should be given to further increasing funding for training programmes for landowners, farmers and project developers to help them access finance and develop effective sustainable land use projects. These could be deployed through ACRES or a new platform. These programmes should cover a range of topics, including financial services, financing models, nature, ecology, climate risk, legal frameworks, monitoring and verification, and social factors. In addition, coordinated support could be provided to formal matchmaking platforms and programmes to facilitate connections and partnerships between project developers and financiers at the national, regional and local levels.

5.1.4 *Standardise monitoring, verification and reporting and improved access to spatial data*

Measuring the impact of privately financed sustainable land use projects will be critical to creating a positive feedback loop between sustainable activities on the ground and investor expectations and return. Furthermore, to ensure that privately financed projects are being developed and implemented in alignment with national biodiversity, nature restoration, carbon sequestration and climate goals, a platform is needed that collates all data and accounts for the impact

of all projects, measuring their cumulative impact against the necessary plans, frameworks and targets (e.g. nationally determined contributions, NRPs as part of the EU Nature Restoration Law, NBAP-aligned projects). Access to verifiable and standardised ecological, climate, water and socioeconomic data and mapping resources will also be fundamental to successfully engaging investors, who are motivated by projects with verifiable outcomes. The government and its agencies have a key role to play in supporting the development of and access to free or low-cost online resources and databases. These resources could highlight areas of the country that are most suitable for collaborative PES-type schemes and those that are more suited to large-scale land use change or recovery, providing a strong evidence base for project developers and decision-makers. Furthermore, the underlying spatial data can act as a baseline from which project impact can be assessed. By making these data accessible, the government can support landowners and financiers in identifying areas of greatest need and opportunity in line with national priorities, ideally along with a range of cascading financial support in the areas of most socioeconomic need and highest nature/biodiversity value.

5.1.5 *Explore the role of private finance to support rural succession and transition planning*²⁵

In Ireland, the increasing average age of farmers underscores the urgent need for effective succession planning, with 94% of Irish farmers recognising it as a significant issue and 48% lacking a clear successor (Ifac, 2024). Concerns extend to inheritance and the transfer of land within families, as well as the possibility that some will leave farming altogether. There is already a range of government support for farmers around succession planning, but there is an opportunity to better align this support to encourage the transition to more sustainable land use practices. This could include up-front payments for landowners for large-scale restoration or regeneration where reduced farming activity is found to be mutually beneficial. An incentive or support system for farmers

²⁴ <https://businessforbiodiversity.ie> (accessed 10 December).

²⁵ Transition planning is included here as a term along with succession planning to recognise the need to engage landowners that are not running family-owned farms but are also looking to sell or transfer their land to the state, communities or other charitable or philanthropic causes.

who are passing their land on to family members to encourage them to set aside areas for nature could also be explored. Private finance schemes could be developed in partnership with corporate actors or through blended finance models that aim to support environmentally sustainable succession planning that maintains familial and cultural ties to the land, diversifies income streams and increases food system resilience but also encourages a greater stewardship approach to land use practices. The state and its agencies can ensure that land use transfers between family members or owners are supported and that the benefits for rural communities and for sustainable land use are realised over the long term, identifying potential areas for support or injection of private finance where needed.

5.1.6 *Explore the role of trusted intermediaries and critical landscape-scale projects*

As outlined in Chapter 4, trusted and neutral intermediaries could play a crucial role in connecting finance to project developers and landowners. We recommend exploring different forms, either by expanding the scope and role of existing agencies, such as local ACRES offices, or by supporting new or existing non-state actors like farmer cooperatives or locally led grassroots initiatives. These intermediaries should possess a diverse skill set, including expertise in social, ecological and scientific fields, as well as financial services knowledge. They should operate within a clear code of practice and set of standards to mitigate conflicts of interest and ensure cross-community representation, transparent governance and effective fund management. State or local agencies could provide training and support to these intermediaries, along with an overarching “watchdog” to ensure good practice. In addition, intermediaries should have a clear legal structure and standing, enabling them to participate fully as legal parties in financial transactions and agreements.

In addition, recognising the need to match the right financial model to the right landscape, there could be significant benefits in identifying critical landscape-scale projects within Ireland where multiple or single landowners can be incentivised and supported to finance sustainable land use practices at the landscape, bioregion or catchment scale.

The role of the intermediary

The following are potential criteria for the role of the intermediary:

- is trusted within the relevant community or region and representative of the stakeholders in the location where they will operate;
- has paid personnel who understand programme management, ecology, natural capital accounting, multi-stakeholder engagement, financial services, legal frameworks and the monitoring and verification necessary for the project(s) in question;
- works to a national “code of practice” and has robust and transparent governance structures;
- has a recognised legal structure and credit rating so they can be a legal party to transactions;
- has access to stable operational funding (through public, philanthropic or private investors/corporate actors/local business sponsorship) to cover core costs (including administration and salaries) to ensure long-term viability.

These projects should aim to deliver co-benefits across a range of factors, including biodiversity, climate resilience and socioeconomic development. By identifying a small number of large-scale projects, the state can maximise the impact by creating flagship projects in the most ecologically important areas of Ireland to demonstrate the potential of NbS and, crucially, address national nature and biodiversity targets under EU and global frameworks. These projects should be selected based on rigorous criteria, including ecological significance, economic feasibility and potential for social benefits, and should align with the objectives in the forthcoming NRP.

5.2 Conclusion

It is clear from the research and analysis in this evidence synthesis report that private finance can and will play a critical role in delivering sustainable land use outcomes in Ireland. This is demonstrated

by a variety of successful initiatives and place-based projects under way in Ireland that are supported wholly or in part by private money. However, these broadly remain small scale, both financially and in terms of impact. The evidence shows that a market-led approach is very unlikely to deliver land use outcomes at the pace and scale required to meet national

climate, biodiversity and socioeconomic targets and objectives. However, if an overarching vision and framework is developed and underpinned by targeted policies and incentives, Ireland would be well placed to attract and sustain significant private finance to support sustainable land use and a just transition to a net-zero and nature-positive economy.

6 Further Research

The following areas merit further research to build on the findings and recommendations presented in this report.

- Explore and test the role and function of neutral intermediaries between landowners, project developers and financial services with a view to identifying core expertise and service criteria, a national code of practice and new or existing organisations or initiatives that could facilitate this intermediation.
- Identify the landscape-scale initiatives most suitable for deploying private finance at the largest scale with a view to prioritising ecological and climate outcomes in critically important habitats and in line with a future NRP. In addition, identify the regions, catchments or communities where private finance would be best deployed to support small- and medium-scale projects or results-based payment-type initiatives that look to balance environmental and socioeconomic outcomes and work more iteratively.

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Appendix 1 Summary of International, EU and National Policies and Regulations

Regulation	Overview	Key dates	Relevance to private finance
Global			
Kunming–Montreal Global Biodiversity Framework; https://www.cbd.int/gbf	<p>The GBF was adopted by 196 countries in December 2022 during the United Nations Biodiversity Conference (COP15). The historic agreement and framework aim to achieve the global vision of living in harmony with nature by 2050 and include four long-term goals for 2050 and 23 targets to be achieved by 2030. These goals and targets focus on conservation, sustainable use of biodiversity and equitable sharing of benefits (Convention on Biological Diversity, 2022).</p> <p>A key goal of the GBF is progressively closing the biodiversity finance gap. The plan aims to increase financial resources from all sources to at least US\$200 billion per year by 2030, including leveraging private finance and increasing domestic resource mobilisation. In addition, it aims to boost international financial flows to developing countries, with targets of US\$20 billion per year by 2025 and US\$30 billion per year by 2030. These financial commitments are designed to support conservation, sustainable use of biodiversity and the restoration of degraded ecosystems (Convention on Biological Diversity, 2022).</p>	<p>Adopted: December 2022.</p> <p>4 goals by 2050.</p> <p>23 targets by 2030.</p>	<p>The GBF calls on actors across society and economies, including financial institutions in the public and private sectors, to work together to transform our relationship with nature. In particular, the following shows the implications of this framework for private finance's role in delivering land use outcomes:</p> <p>Goal D. A clear ambition to align financial flows with the expressed vision of “living in harmony with nature” by 2050.</p> <p>Target 19. A substantial increase in public and private financial resources (at least US\$200 billion annually) towards addressing the nature-related funding gap.</p>
Taskforce on Nature-related Financial Disclosures; https://tnfd.global/	<p>The TNFD provides companies and financial institutions with a risk management and disclosure framework to identify, assess, manage and, where appropriate, disclose nature-related issues (TNFD, 2023). This is carried out using the locate, evaluate, assess and prepare (LEAP) approach, which outlines the steps to locate, evaluate, assess and report on nature-related risks and opportunities. It promotes sustainable practices and aligns with global biodiversity goals, such as those outlined in the Kunming–Montreal GBF. Ultimately, the TNFD aims to foster a nature-positive economy, ensuring that business activities contribute to the preservation and enhancement of ecosystems and biodiversity.</p>	<p>Released: 18 September 2023.</p>	<p>The TNFD's aim is to develop a framework for organisations to report on nature-related risks. This should improve transparency and accountability while also encouraging a shift in financial flows to nature-positive outcomes. The guidance on integrating nature into decision-making and risk management processes should therefore ultimately lead to further investment in sustainable land use outcomes.</p>

Regulation	Overview	Key dates	Relevance to private finance
<p>Science Based Targets Network (SBTN) and Science Based Targets for Nature; https://sciencebasedtargetsnetwork.org/; https://sciencebasedtargetsnetwork.org/company/guidance/</p>	<p>SBTN has introduced the world's first science-based targets for nature, a significant milestone towards helping companies take integrated action across freshwater, land, ocean, biodiversity and climate. These targets have been introduced against a backdrop of scientific consensus that emphasises that achieving global ambitions to limit global warming to 1.5°C cannot be achieved without preventing and reversing nature loss.</p> <p>Science Based Targets for Nature provides guidance for companies to holistically assess and prioritise their environmental impacts. These targets are designed to create a nature-positive future, offering businesses a pathway to contribute to ecosystem restoration, sustainable land management and biodiversity preservation.</p> <p>SBTN emphasises the importance of existing within the planetary boundaries – the limits within which humanity must exist to avoid destabilising the Earth's ecosystems. By aligning business practices with scientific evidence, businesses can manage their dependencies on nature, reducing risks such as supply chain disruptions, and increase long term-resilience by building nature-positive strategies.</p>	<p>2024: release of version 1 of target-setting guidance with expanded target-setting across all areas of nature.</p>	<p>The SBTN guidance is highly relevant to private finance, particularly with increasing pressure on corporations to take responsibility for their environmental impacts. Land targets serve as an example of how businesses, particularly those in the agriculture and land use sectors, are expected to set and meet targets that address deforestation, land conversion and restoration of degraded landscapes.</p> <p>Financial institutions and investors will play an important role in ensuring companies comply, providing funding for nature-positive investments and holding corporations accountable for their environmental commitments.</p> <p>SBTN's integration of comprehensive nature-based targets should support investors to assess risks associated with nature loss and create opportunities by backing companies that demonstrate clear, science-aligned action plans.</p>
Europe			
<p>Corporate Sustainability Reporting Directive and the European Sustainability Reporting Standards; https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022L2464</p>	<p>The CSRD is a reporting requirement for all large companies and all listed companies (except listed micro-enterprises) to disclose information on material risks and opportunities resulting from social and environmental issues, and on the impact of their activities on people and the environment (EU, 2022). The CSRD requires companies to report on intersecting environmental topics: climate change, pollution prevention and control, sustainable use of water and marine resources, biodiversity protection and resource efficiency. Part of the primary intended audience for CSRD reporting is investors and external stakeholders, as it is relevant to decision-making around investments. A major part of reporting is the disclosure of any anticipated financial impacts on the business from a specific area, which may include those resulting from a company's impact on biodiversity and ecosystems. The concept of double materiality, which states that companies must report both the impact of environmental topics on their business and the impact of their activities on people and the</p>	<p>Entered into force: 2023.</p> <p>From 2024: applies to all large companies already covered by the Non-financial Reporting Directive that meet at least two of the following three requirements: 500+ employees; €40 million in net turnover; €20 million in assets.</p> <p>From 2025: applies to all large companies that meet at least two of the following requirements: 250+ employees; €40 million in net turnover; €20 million in assets.</p> <p>From 2026: applies to small and medium-sized enterprises that meet at least two of the following requirements: more than 10 employees; more than €700,000 in net revenue; more than €350,000 in assets.</p>	<p>The CSRD and ESRS are increasing the focus on how companies finance nature restoration. The establishment of stricter sustainability reporting standards will influence investment decisions by providing more detailed information about companies' sustainability risks, opportunities and impacts. This enables investors to direct funds towards sustainable investments. Overall, this can help ensure that investments are directed towards projects that are not only financially viable but also environmentally sustainable and socially responsible.</p>

Regulation	Overview	Key dates	Relevance to private finance
	<p>environment, will continue to be a driver of environmental transparency and encourage corporate action on nature and biodiversity across Europe.</p> <p>To help companies comply with the CSRD, the ESRS were developed. ESRS E4 specifically addresses biodiversity and ecosystems, requiring organisations to disclose their impacts, risks and opportunities related to biodiversity (EFRAG, 2023). Aligning with the TNFD approach enhances transparency for investors on companies' exposure to nature-related risks and impacts. Both frameworks reduce uncertainty and align investment decisions with sustainable funding models, encouraging investments in sustainable land use projects.</p>	<p>From 2028: applies to all non-EU country companies with net turnover above €150 million in the EU and at least one subsidiary or branch in the EU.</p>	
<p>EU Taxonomy Regulation; https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32023R2486</p>	<p>The EU Taxonomy Regulation was established as a classification system that sets out specific criteria to define "sustainable" (taxonomy-aligned) economic activities. The ESG-related criteria are intended to align with a net-zero trajectory by 2050, as well as broader goals beyond only climate considerations. It is intended to distinguish between potentially sustainable ("taxonomy-eligible") activities and actually sustainable ("taxonomy-aligned") business activities so that companies' shareholders and investors have full transparency when deciding which sustainable activities to invest money in, and so that a company's journey from eligibility to alignment is documented with transparency.</p>	<p>Entered into force: 12 July 2020.</p> <p>Applies to those in the scope of the CSRD.</p>	<p>The EU Taxonomy Regulation is relevant to the use of private finance, as the specific criteria for all business activities listed in the underlying legislation (the EU Taxonomy Regulation Delegated Acts) require investment by companies to meet them. Through companies planning their future alignment with the taxonomy for relevant business activities, the EU Taxonomy Regulation will influence investments made – ensuring activities are sustainable while not committing any significant harm to other environmental objectives (which include ecosystem protection).</p>
<p>EU Deforestation-free Regulation; https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestation-free-products_en</p>	<p>Regulation (EU) 2023/1115 aims to ensure that products consumed in the EU do not contribute to deforestation or forest degradation globally (EU, 2023). This regulation, which came into force on 29 June 2023, requires companies to prove that certain commodities, such as cattle, wood, cocoa, soy, palm oil, coffee and rubber, do not originate from recently deforested land.</p>	<p>For large and medium-sized enterprise operators and traders, the application of the regulation will commence 18 months after its entry into force, specifically on 30 December 2024. This implies that these operators and traders are not required to comply with the regulation's requirements for products placed on the EU market before this date. For small and micro-enterprises, the compliance period is extended to 24 months after the regulation's entry into force, starting on 30 June 2025.</p>	<p>This regulation is relevant to the role of private finance as it affects investment and trade in commodities such as soy, beef, palm oil, wood, cocoa, coffee and rubber, along with their derivatives. Compliance with the regulation can influence private finance decisions related to land use outcomes by ensuring investments support sustainable practices.</p>

Regulation	Overview	Key dates	Relevance to private finance
<p>EU Biodiversity Strategy for 2030; https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en</p>	<p>The strategy sets out a comprehensive plan adopted by the European Commission to protect nature and reverse the degradation of ecosystems. It outlines over 100 actions to reverse ecosystem degradation (European Commission, 2020b).</p>	<p>Proposed: 20 May 2020.</p>	<p>This strategy recognises the need for both public and private financing to support conservation and sustainable use. Specifically, it calls for at least €20 billion a year to be mobilised for spending on nature through both private and public funding sources at national and EU levels.</p> <p>Similarly, under InvestEU a natural capital and circular economy initiative will be set up to mobilise at least €10 billion over the next 10 years, based on public/private blended finance.</p>
<p>EU Nature Restoration Law; https://environment.ec.europa.eu/news/nature-restoration-law-enters-force-2024-08-15_en</p>	<p>This new law sets ambitious targets and legal requirements to protect and restore nature. It mandates the restoration of degraded ecosystems, aiming to reverse biodiversity loss and improve ecosystem services across the EU. As part of Member State-level implementation, each country must develop an NRP, which will set a baseline from which progress can be measured and ensure no deterioration of status. The Irish government must present an NRP by 1 September 2026. Crucially, the plan will have to identify funding sources and instruments that will finance the restoration measures.</p>	<p>Approved: June 2024.</p> <p>Mandates the restoration of at least 20% of the EU's land and sea areas by 2030, with a goal to repair all ecosystems in need of restoration by 2050.</p> <p>First Irish NRP: 1 September 2026.</p>	<p>The EU Nature Restoration Law is expected to play a crucial role in shaping private finance's involvement in land use outcomes by creating investment opportunities in nature-positive projects, such as reforestation and sustainable agriculture.</p> <p>The increasing pressure on governments to identify land areas that need financing for restoration helps attract private and public funding by clearly showing where investments are needed to meet the law's targets (WEF, 2023). These areas will be identified through NRPs outlining the financial resources required to achieve these goals.</p>
<p>Common Agricultural Policy (CAP); https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-glance_en</p>	<p>The CAP, which has been a cornerstone of EU agricultural policy for decades, continues to evolve to meet new challenges, ensuring that it remains relevant and effective in supporting sustainable farming practices and rural development across Europe. It provides a more performance-oriented support system for European farmers with the aim of ensuring a sustainable future for agriculture by offering targeted support for smaller farms and providing EU countries with the flexibility to tailor measures to local conditions. It has a significant impact on Ireland's agricultural sector. The CAP 2023–2027 aims to protect family farm incomes, support the rural economy, ensure the production of high-quality, safe food and protect rural landscapes and the environment (DAFM, 2023; European Commission, 2023).</p>	<p>Effective: 1 January 2023.</p>	<p>The CAP significantly influences the role of private finance in delivering land use outcomes by providing a stable and supportive framework for agriculture. The CAP's direct payments and market measures reduce financial risks, making agricultural investments more attractive to private investors. By supporting rural development, the CAP creates opportunities for private finance to invest in projects that enhance the economic viability and sustainability of rural areas.</p>

Regulation	Overview	Key dates	Relevance to private finance
	<p>Despite continuous reforms promoting more sustainable practices, the CAP's legacy of environmental harm continues to be a contentious issue. It is worth noting that some critics argue that the CAP has historically caused significant environmental damage by providing subsidies that support intensive agricultural practices.</p> <p>WWF's recent report <i>Can Your Money Do Better?</i> (Vandermaesen, 2024) revealed that nearly 60% of the EU's CAP funds, which total €32.1 billion annually, are spent on destructive activities.</p>		
Ireland			
<p>National Planning Framework (NPF); https://www.gov.ie/en/publication/774346-project-ireland-2040-national-planning-framework/</p>	<p>The NPF is part of Project Ireland 2040 and sets the strategic vision for sustainable development, aiming to balance regional growth and environmental protection (Government of Ireland, 2024b).</p>	<p>Published: February 2018.</p> <p>First revision: began in July 2024.</p>	<p>The NPF is described as a "flexible" document that will guide public and private investment while also setting in motion more detailed planning documents that must follow. This will influence how private finance contributes to land use outcomes.</p>
<p>Climate Action Plan; https://www.gov.ie/en/publication/79659-climate-action-plan-2024/</p>	<p>The Climate Action Plan outlines measures to reduce greenhouse gas emissions and transition to a low-carbon economy, integrating land use strategies to enhance carbon sequestration and resilience (Government of Ireland, 2023).</p>	<p>Quarterly progress reports: these reports are published every quarter, highlighting the progress made.</p> <p>Annual progress report: the final progress report for each year is typically released in early March of the following year.</p>	<p>Ireland's Climate Action Plan underscores the role of private finance in achieving sustainable land use outcomes. It encourages public-private partnerships to maximise the impact of these projects. The plan aims to mobilise private capital to support initiatives such as reforestation, sustainable agriculture and conservation projects, which are essential for reducing carbon emissions and enhancing biodiversity (Government of Ireland, 2023).</p>
<p>National Biodiversity Action Plan 2023–2030; https://www.gov.ie/en/publication/93973-irelands-4th-national-biodiversity-action-plan-20232030/</p>	<p>The NBAP focuses on conserving and restoring biodiversity, promoting a whole-of-society approach to protect ecosystems (Government of Ireland, 2023). The implementation of the NBAP, nature directives and EU Biodiversity Strategy is supported by the Infrastructure, Climate and Nature Fund. This includes dedicated biodiversity funding from the annual Exchequer allocation to relevant government departments, with state bodies also receiving grants. Biodiversity research funding is delivered from organisations such as the EPA, Marine Institute and NPWS, with community engagement initiatives being supported by entities such as Community Foundation Ireland, Local Agenda 21 and the Peatlands Community Engagement Scheme.</p>	<p>The NBAP sets the national biodiversity agenda for the period 2023–2030.</p> <p>Published: January 2024.</p>	<p>Target 19 of the NBAP is to progressively increase the level of financial resources from all sources, including domestic, international, public and private resources. In line with this target, the NBAP will be supported by the Infrastructure, Climate and Nature Fund, while mechanisms to blend finance from the private sector will also be considered. Overseas development aid for biodiversity-related projects will be increased (Government of Ireland, 2023).</p> <p>Similarly, the NBAP outlines several actions that are geared towards finance, such as:</p>

Regulation	Overview	Key dates	Relevance to private finance
			<p>3B5. The Department of Finance will mainstream biodiversity within its climate and sustainable finance work.</p> <p>5B1. Ireland will strengthen the inclusion of biodiversity in international diplomacy and financing.</p>
<p>Future Ireland Fund; https://www.gov.ie/en/press-release/ea3ec-minister-mcgrath-publishes-the-general-scheme-of-the-future-ireland-fund-and-infrastructure-climate-and-nature-fund/</p>	<p>This long-term savings fund addresses expenditure pressures related to ageing, climate and digital transitions. Contributions of 0.8% of gross domestic product will be made annually from 2024 to 2035, with an initial transfer of €4.1 billion from the National Reserve Fund. Contributions can be reduced or halted if there is a significant economic or fiscal deterioration, as determined by the Minister for Finance and Dáil Éireann (Department of Finance, 2024).</p>	<p>Will support state expenditure from 2041 onwards. Contributions will be made to the Future Ireland Fund until 2035, after which a decision will be made on further contributions.</p>	<p>The Future Ireland Fund and the Infrastructure, Climate and Nature Fund help tackle financial challenges and support climate projects by providing steady funding. By attracting private investments, these funds can boost spending on environmental projects, ensuring consistent funding through economic cycles and reducing risks, making them appealing to private investors. This strategy reduces the risk of inconsistent public funding and encourages teamwork between the public and private sectors, helping Ireland move towards climate goals and better land use.</p>
<p>Infrastructure, Climate and Nature Fund; https://www.oireachtas.ie/en/debates/debate/dail/2024-04-10/20/</p>	<p>This fund supports expenditure during economic downturns, maintaining investment in growth-enhancing projects. It also backs environmental projects related to climate and nature goals. Up to 25% of the fund's value can be drawn down during downturns, and up to 22.5% can be used annually for climate and nature projects from 2026, with a cumulative maximum of €3.15 billion by 2030 (Department of Finance, 2024).</p>	<p>It is intended that €2 billion will be invested in this fund each year from 2024 to 2030, building a fund of up to €14 billion.</p>	
<p>Agri-Climate Rural Environment Scheme; https://www.gov.ie/en/service/f5a48-agri-climate-rural-environment-scheme-acres/#what-the-agri-climate-rural-environment-scheme-acres-is</p>	<p>ACRES was introduced in Ireland on January 1 2023 as part of the country's CAP Strategic Plan 2023–2027. This €1.5 billion scheme aims to address biodiversity decline while providing income support to up to 50,000 farm families (Government of Ireland, 2024c). ACRES evolved from the Green Low-Carbon Agri-Environment Scheme, which laid the groundwork for the new, more comprehensive approach to agri-environmental measures. The aim of ACRES is to support farmers in implementing environmentally friendly practices, addressing biodiversity decline while providing income support (DAFM, 2023).</p>	<p>Introduced: 1 January 2023.</p>	<p>While the administrative and technological requirements of delivering a scheme such as ACRES effectively remain a challenge, the framework of the scheme itself provides valuable lessons to learn from when identifying opportunities for private capital in Ireland.</p>
<p>Ireland's Citizens' Assembly on Biodiversity Loss; https://citizensassembly.ie/report-of-the-citizens-assembly-on-biodiversity-loss-report-launches/</p>	<p>The assembly, consisting of 100 members, including 99 public representatives, was formed to explore ways the state can better address the biodiversity loss crisis (Citizens' Assembly, 2023). It proposed constitutional changes to protect the environment and made 159 recommendations, including sector-specific actions for agriculture, freshwater, marine environments,</p>	<p>Published: March 2023.</p>	<p>Ireland's Citizens' Assembly on Biodiversity Loss explicitly stated its support for the state to become a global leader in sustainable finance models. Recommendation number 3 from the final report reads: "The ambition of the State needs to be significantly increased to reflect the scale of Ireland's biodiversity crisis.</p>

Regulation	Overview	Key dates	Relevance to private finance
<p>National Water Action Plan 2024 and Community Water Development Fund; https://www.gov.ie/en/press-release/2f80b-minister-noonan-launches-overarching-national-plan-to-improve-water-quality-and-restore-freshwater-habitats/</p>	<p>peatlands, forestry and urban areas. The assembly also emphasised the important role of farmers in conserving and restoring biodiversity. The final report emphasises the need for urgent action and adequate funding to address biodiversity loss and includes proposals for constitutional changes to protect the environment.</p> <p>Ireland's recently released <i>Water Action Plan 2024: Ireland's Third River Basin Management Plan</i> is a significant national policy aligned with the Programme for Government and the EU Water Framework Directive. This plan outlines Ireland's strategy to protect and restore its rivers, lakes, estuaries, coastal waters and groundwater. By 2027, the plan aims to elevate 300 waterbodies to "good" status and implement targeted measures to improve over 500 more. It also includes a multibillion euro investment in waste water infrastructure, enhanced action on nitrates, and a focus on compliance and enforcement.</p> <p>In addition, the Community Water Development Fund for 2025 was announced, offering financial support to local communities and groups for projects that enhance local water bodies and improve water quality and biodiversity. The Local Authority Waters Programme manages the fund for the Department of Housing, Local Government and Heritage.</p>	<p>Released: August 2024.</p>	<p>Adequate funding must be made available to address this crisis. This is likely to require substantial and sustained increases in expenditure, which should be made available immediately and guaranteed in the long term" (Citizens' Assembly, 2023).</p> <p>In 2024, €520,000 in grants was made available for community and voluntary groups to protect and manage water quality, with these grants ranging from €1000 to €25,000. This public money can be used to help incentivise or be blended with private money to support similar projects and initiatives.</p>

Appendix 2 Summary of International, European and Irish Project Case Studies

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
International				
WWF Bankable Nature Solutions; https://wwfint.awsassets.panda.org/downloads/bankable_nature_solutions_2__1.pdf	Kenya	Government funding	<p>WWF's Bankable Nature Solutions (2020b) are "solutions for environmental challenges that at the same time generate an acceptable (risk-adjusted) return on the money invested". The Beavis <i>et al.</i> (2024) report for WWF sets out noteworthy BNS case studies, such as the following:</p> <p>Cinch Sustainable Agriculture</p> <p>Cinch, launched in Kenya in 2019, aims to support smallholder farmers to lease non-productive land to grow valuable cash crops. This model aims to boost land productivity, farmer income and environmental conditions. Landowners receive a monthly lease payment, quarterly dividends and a weekly salary if they work on the land. Cinch received a €300,000 grant from the Dutch Fund for Climate and Development, which was used to hire technical assistance, conduct environmental and social impact assessments, and engage with communities to attract and educate farmers (Beavis <i>et al.</i>, 2024). The project will look to scale up by raising €10 million in private equity or debt financing to expand their operations to an additional 1000 acres over a 3-year period.</p>	<p>Scalability and replication. By consolidating smallholder farms to achieve economies of scale, this model demonstrates how landowners in Ireland could benefit from pooling smaller projects into a single initiative or portfolio. This approach would enhance the attractiveness of projects to private investors, encourage sustainable agricultural practices and offer financial stability to landowners.</p>
WWF Bankable Nature Solutions (cont.)	Ecuador	Debt financing	<p>Financoop</p> <p>Financoop is a cooperative financial institution in Ecuador that supports sustainable agriculture by offering a sustainable credit line to its members. Nearly 20% of Ecuador's population relies on agriculture, most of whom are smallholders with limited access to formal credit. Financoop plays a crucial role by acting as a central cooperative for 135 financial cooperatives, providing investments, financial services, and technical assistance</p>	<p>Scalability and replication. The creation of a Climate Resilient Agriculture Protocol can be tailored to the Irish context by emphasising sustainable farming practices, for example through a green farming protocol, for financial institution funding. The initial funding for green credits to 10 member cooperatives enabled the refinement of new financial offerings, the development of a monitoring system to track credit line usage, and the creation of an environmental and social management risk system for</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
			to help local smallholders (Beavis <i>et al.</i> , 2024). It received a €235,000 grant from the Dutch Fund for Climate and Development in 2022, which supported the establishment of a green credit line to finance smallholders' investments, enhancing their resilience to climate change, and established a Climate Resilient Agriculture Protocol for projects (Beavis <i>et al.</i> , 2024). Financoop is aiming to expand the green credit line into 10 savings and credit cooperatives in the Sierra region. This will provide a credit line of US\$10 million to finance around 2700 smallholders' transition to climate-smart agriculture (Beavis <i>et al.</i> , 2024).	cooperatives. These efforts facilitated the replication of the protocol across additional cooperatives (Beavis <i>et al.</i> , 2024). This "trial and refine" method could be similarly applied to innovative financial instruments in Ireland.
Land Use, Land Cover and Ecosystems Monitoring; https://www.fao.org/redd/news/detail/en/c/1300319/	Costa Rica	Payment for ecosystem services	Costa Rica's 1996 "Forest Law" established a legal framework for a programme that compensates landowners for providing environmental services. This initiative encourages the conversion of agricultural and livestock farming lands into agroforestry and silvopasture systems. The programme prioritises funding for protection areas, followed by reforestation, natural recovery and plantations. Payments are made for four key ecosystem services: greenhouse gas mitigation, biodiversity protection, water conservation and scenic beauty. The programme is financed through a fuel tax, water use levies and contributions from national and international organisations. Certification programmes also provide additional income to farmers. As a result, Costa Rica has significantly increased its forest coverage and land under conservancy management, transforming its land use into a carbon sink. ²⁶	Paying for ecosystem services. As identified in Therivel's (2021) <i>Review of National Land Use Plans</i> , conducted as part of Phase 1 of the LUR, the Costa Rican approach could be adapted to address Ireland's very low woodland cover. Woodland cover is increased by paying for ecosystem services and encouraging landowners to convert to agroforestry and silvopasture. Implementing a certification system for products from these areas could provide additional income for landowners while promoting the flow of private capital into sustainable land use.
Amazon's Right Now Climate Fund; https://sustainability.aboutamazon.com/2023-report/	Global	Philanthropic funding	In 2019, Amazon created the Right Now Climate Fund, a US\$100 million fund for NbS to restore and conserve forests, wetlands and grasslands around	Paving the way. While this fund supports Amazon's broader sustainability goals, it is more of a philanthropic investment aimed at enhancing climate resilience,

²⁶ <https://www.worldbank.org/en/news/feature/2022/11/16/costa-rica-s-forest-conservation-pays-off> (accessed 10 January 2025).

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
<p>https://www.aboutamazon.eu/news/sustainability/planting-70-000-trees-with-parco-italia-through-amazons-right-now-climate-fund; https://www.aboutamazon.co.uk/news/sustainability/amazon-supports-projects-to-improve-uk-biodiversity-through-the-right-now-climate-fund</p>			<p>the world. This fund is used to finance projects that restore and protect forests, wetlands and peatlands around the world, including several significant initiatives in Europe. Specifically in Ireland, Amazon donated €2.5 million to the Nature Trust to aid in the rehabilitation of up to 500 hectares of degraded Atlantic blanket bog and restore it to a functioning peatland habitat.</p> <p>Other key projects include the Parco Italia urban forestry programme in Italy, aiming to plant 22 million trees across 14 metropolitan areas; the Woodland Trust's Emergency Tree Fund in the UK, which plans to plant over 450,000 trees; and the London Wildlife Trust's Rewild London Fund, focusing on rewilding efforts to enhance biodiversity and create green spaces in London. These projects illustrate Amazon's commitment to sustainable land use and environmental restoration across Europe.</p>	<p>biodiversity and community benefits. The fund's initiatives, such as urban greening and forest restoration, are designed to mitigate climate change impacts rather than generate direct financial returns. This aligns with Amazon's commitment to achieving net-zero carbon emissions by 2040.</p> <p>Amazon sets a strong example for other big tech companies. The fund showcases sustainability leadership, helps achieve internal climate goals, ensures regulatory compliance, and has the potential to lead to long-term financial benefits. By following its lead, other tech giants can contribute to global sustainability efforts while also gaining strategic advantages.</p>
<p>ASN Biodiversity Fund; https://www.greenfinanceinstitute.com/wp-content/uploads/2024/07/investing-in-nature_20240521.pdf; https://beleggingsfondsen.asnbank.nl/home-particulier/fondsen-particulier/asn-biodiversiteitsfonds/asn-biodiversity-fund.html</p>	Global	Impact funds Private finance	<p>The ASN Biodiversity Fund, launched in November 2021, is the first listed natural capital fund using retail sector investments. The fund is focused on channelling investments towards nature restoration projects and corporates that make a measurable, positive impact on biodiversity, and that create green jobs and support local communities.</p> <p>It has a global focus and invests in four sectors that have a large impact on biodiversity: regenerative and sustainable forestry; agroforestry; sustainable seas and fisheries; and eco-tourism. For every €1 million invested, it aims to restore around 230 hectares of land or sea. The fund has raised over €26 million from more than 1 million retail investors.</p>	<p>Investing in nature and biodiversity. The ASN Biodiversity Fund demonstrates that private finance can play a crucial role in biodiversity restoration by leveraging retail investments to support impactful projects globally. The fund shows that it is possible to achieve financial returns while contributing to environmental sustainability, with said returns generated from investments in impact funds that specialise in biodiversity and nature restoration, and from equity investments in some listed corporates. In the long term, the net estimated internal rate of return for the underlying investments lies between 5.0% and 15.0%. Overall, the fund demonstrates that private investments can drive substantial ecological improvements.</p>
<p>The Biodiversity Finance Initiative, a United Nations Development Programme-managed global programme</p>	Global	Grants Debt/equity	<p>BIOFIN, managed by the United Nations Development Programme, aims to increase financial resources for biodiversity conservation through innovative finance solutions. Operating</p>	<p>Innovative finance solutions. BIOFIN highlights several key lessons and insights regarding the role of private finance in biodiversity conservation. One significant insight is the</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
			in over 40 countries, BIOFIN collaborates with governments, civil society and the private sector to develop finance plans that raise and manage capital, reduce harmful expenditures and improve financial efficiency. BIOFIN's comprehensive methodology measures existing biodiversity expenditure, assesses future financial needs and designs effective finance plans to secure a sustainable future for people and the planet (UNDP, 2018).	importance of creating innovative finance solutions that engage both the public and private sectors. Its 2018 workbook emphasises the need for a comprehensive approach to assess the policy, institutional and economic context for biodiversity finance. It also underscores the necessity of mapping existing finance solutions and measuring current biodiversity expenditures from various sources, including private finance. By developing a biodiversity finance plan, countries can identify the necessary resources and policies to implement the most suitable finance solutions, thereby enhancing the role of private finance in achieving biodiversity goals.
Europe				
Biodiversity Restoration Using Large-Scale Finance EU; https://biofin-project.eu	Europe	Sustainable finance taxonomy Investment frameworks	BIOFIN-EU is a 3-year project funded by the European Commission that aims to mobilise mainstream finance to protect and restore biodiversity by creating a framework and technology for nature-positive investments. It will redirect financial resources from harmful activities such as fossil fuel use to sustainable options. The project will also develop a categorisation of NbS, good governance structures and stakeholder engagement tools (UL, 2023). BIOFIN-EU is actively innovating and experimenting with novel approaches for capturing, aggregating and analysing biodiversity and ecosystem services data. The goal is to minimise transaction and reporting costs associated with finance that supports the protection and restoration of biodiversity (BIOFIN-EU, 2024).	Leasing for biodiversity. BIOFIN-EU is undertaking a feasibility study on a large-scale "leasing for biodiversity programme" designed to address transaction costs, budgetary planning and farmer engagement with environmental restoration actions. The programme would be an adaptation of the US conservation easement programmes. Under the programme, farmers have an opportunity to lease land to the state while retaining agricultural use (grazing, storage of fodder) under specified conditions. From a lessor's (farmer's) perspective, an amendment would be required to allow the land to be used for biodiversity restoration activities rather than solely farming purposes. Leasing land would provide an income stream and alleviate the costs associated with incentivising behavioural change. This approach can be further extended to provide opportunities for farmers to become proactive participants in monitoring restoration outcomes. As a lessee, the state could achieve greater budgetary control over restoration activities, prioritise areas for participation and activate existing expertise gained in European Innovation Partnership projects and LIFE Integrated Projects to ensure appropriate and impactful interventions take place. The leasing programme has the

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
Natural Capital Financing Facility (NCFF); https://climate.ec.europa.eu/system/files/2016-11/ncff_guide_for_applicants_brochure_en.pdf	Europe	Blended finance Private equity investments	The NCFF, launched in 2014 by the EIB and the European Commission, funds biodiversity and climate adaptation projects in Europe. It offers loans and equity investments to projects that provide financial returns and positive environmental impacts (EIB, 2023). The NCFF uses a blended finance approach, combining public funds with private investments to de-risk projects and make them more attractive to private investors while also attracting private equity by investing in projects that demonstrate clear revenue streams, such as forest management (European Commission, 2016).	potential to intermediate public and private capital flows more efficiently and direct that capital towards measurable outcomes in a variety of settings, e.g. activities to protect freshwater ecosystems, peatland re-wetting and hedgerow restoration (UL, 2024). De-risking through blended finance. The NCFF shows how blending public and private finance can lower risks and encourage private sector investment in sustainable land use projects. Developing a similar national-level mechanism in Ireland will be an important step in creating an environment that can deliver the desired flow of capital into sustainable land use. This mechanism would also provide a platform for collaboration among investors, project developers, communities and subject matter experts, ensuring engagement in projects that are aligned with government objectives.
Rewilding Britain; https://s3.eu-west-2.amazonaws.com/assets.rewildingbritain.org.uk/documents/rewilding-finance-rewilding-britain.pdf	United Kingdom	Private investment and philanthropy Corporate partnerships	Rewilding Britain, established in 2015, promotes large-scale ecosystem restoration in the UK. The charity supports projects to restore natural processes, reconnect landscapes and reintroduce lost species, aiming to create self-sustaining habitats that benefit both people and nature (Rewilding Britain, 2024). A significant proportion of Rewilding Britain's funding comes from private donors, philanthropists and impact investors who are committed to environmental conservation and the restoration of the UK's natural heritage. These funds are used to purchase land, support habitat restoration and reintroduce native species. It has also established partnerships with businesses that are interested in enhancing their environmental credentials. Leveraging of partnerships for the development of rewilding projects is an important source of private finance.	Holistic approach to land management. Rewilding Britain demonstrates the success of holistic land management by combining ecological restoration with economic sustainability. Integrating eco-tourism and sustainable agriculture creates diverse revenue streams that support conservation. This model should be included in the government's LUR Phase 2 for sustainable outcomes. Public engagement and support. Strong public support and community engagement have been crucial for the success of rewilding initiatives in the UK, helping to overcome resistance and build widespread backing. This approach is highly relevant to private finance, as it demonstrates how sustainable land management can generate multiple revenue streams, making it an attractive investment opportunity. By investing in projects that combine ecological restoration with economic activities such as eco-tourism and sustainable agriculture, private financiers can achieve financial returns while contributing to environmental conservation.

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
Scottish Woodlands; https://www.scottishwoodlands.co.uk/	Scotland	Carbon offsetting Private investment	Scottish Woodlands Ltd, an employee-owned company, focuses on afforestation and reforestation in Scotland. It sequesters carbon by creating new woodlands and restoring degraded forests. With an annual turnover of over £100 million, it exemplifies how private finance can support environmental projects. Companies purchase carbon credits from Scottish Woodlands to offset their emissions, which provides a steady income stream to fund the ongoing management and expansion of the woodlands. The organisation attracts investment from private landowners and forestry companies interested in the long-term value of sustainable forest management and carbon sequestration (Scottish Woodlands, 2024).	<p>In addition, the strong public and community support for such initiatives reduces investment risks and enhances the likelihood of project success. This alignment with public sentiment and government objectives further incentivises private sector involvement, creating a robust platform for sustainable investment.</p> <p>Market-driven forestry. Scottish Woodlands exemplifies the success of market-driven forestry approaches, where private finance is effectively mobilised through carbon markets and corporate partnerships to invest in forestry. This model is particularly relevant for Ireland's net-zero goals, as it showcases how private finance can be attracted to sustainable land use projects. By leveraging carbon credits and forming strategic partnerships with corporations, Scottish Woodlands demonstrates how private investors can achieve both financial returns and environmental benefits. This dual incentive is crucial for scaling up investments in forestry, making it a viable and attractive option for private finance.</p> <p>Community engagement. In addition, Scottish Woodlands highlights the importance of engaging local communities in the development of new forests. This engagement ensures that projects are not only environmentally and financially sustainable but also socially sustainable.</p>
Ireland				
Wild Atlantic Nature LIFE; www.wildatlanticnature.ie	Ireland: Donegal, Leitrim, Sligo, Mayo and Galway	EU LIFE funding	<p>The Wild Atlantic Nature LIFE project is a 9-year project (2021–2029) aimed at conserving and restoring Ireland's blanket bogs, particularly in areas protected under the Natura 2000 network. These peatlands are important for carbon storage, water filtration and supporting biodiversity. The projects work closely with farmers and local communities to improve these ecosystems while maintaining sustainable livelihoods.</p> <p>The project, coordinated by the Department of Housing, Local</p>	<p>Results-based payments. The Wild Atlantic Nature LIFE project demonstrates how financial models can be designed to benefit both nature and local communities. By tying financial incentives directly to ecosystem health, the results-based payment scheme offers a practical approach that could be applied to a broader scope of initiatives. This project serves as a blueprint for developing NbS, from carbon sequestration to biodiversity recovery, across Ireland.</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
			<p>Government and Heritage, will focus on 35 blanket bog project sites in counties Donegal, Leitrim, Sligo, Mayo and Galway.</p> <p>A central feature of the project is the results-based payments scheme, where farmers receive payments linked to the environmental quality of the land they manage. This approach encourages the restoration and conservation of high-value habitats, allowing farmers to take an active role in protecting the landscape. Beyond that, the project includes efforts such as controlling invasive species, managing water systems and conducting regular ecological assessments to monitor progress.</p> <p>In recognition of its impactful work, the project was awarded the Natura 2000 Award for working together for nature in 2024, highlighting its success in balancing biodiversity conservation with local engagement.</p>	<p>The incentivisation of landowners through a results-based payment scheme is something that could be iterated and improve upon to attract private finance to invest in land use change across Ireland. By demonstrating a clear return on investment through improved ecosystem services, private investors are more likely to see the value in funding such initiatives. This approach not only ensures sustainable land management but also opens new avenues for private finance to contribute to environmental conservation. The success of the Wild Atlantic Nature LIFE project can therefore encourage further private sector involvement in similar projects, fostering a collaborative effort towards achieving environmental and economic goals.</p>
<p>The Burren Programme (Project ReFarm); https://www.npws.ie/research-projects/burren-life-programme; https://www.refarm.ie</p>	<p>Burren, County Clare</p>	<p>Public–private partnerships</p>	<p>The Burren Programme in County Clare is a landmark initiative in the intersection of agriculture and conservation, not only in Ireland but within Europe. The project was funded by the EU LIFE programme from 2005 to 2010 and later through a combination of public funding from the Irish government and the EU, ending in 2022 (NPWS, 2024).</p> <p>This project used an innovative results-based payments approach and was specifically designed to protect the unique limestone landscapes of the Burren, which are home to an extraordinary range of flora and fauna, many of which are rare or endangered. This project sought to develop sustainable grazing patterns that would maintain the delicate ecological balance of the area while supporting the traditional farming practices that have shaped the Burren’s landscape for centuries.</p> <p>The BurrenLIFE Programme was selected as one of the “best of the best” LIFE Nature projects in Europe in 2010, and in 2017 went even further to be recognised as the “best ever” LIFE project in the 25-year history of the programme.</p>	<p>Integrated approach. The Burren Programme’s success is down to its integrated approach, combining environmental, economic and cultural objectives. This holistic approach is frequently cited as a model for the development of similar schemes across Ireland. While publicly funded, the framework through which the scheme is developed provides an important basis for upscaling and mobilising further across the country, whereby injections of private capital could be leveraged for community and farmer-led projects aimed at incentivising more sustainable practices.</p> <p>Farmer-led conversation. Empowering local farmers to take the lead in nature protection and restoration ensured that the programme was driven by local knowledge and traditions, making the initiatives more sustainable in the long run. Furthermore, the scheme exemplifies the level of engagement and trust needed to support farmers in a meaningful and ecologically effective way.</p> <p>As an <i>Irish Times</i> article said: “The farmers controlled how they farmed; what mattered was the outcome. The more nature-rich</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
<p>Hometree and the Wild Atlantic Rainforest Project; www.hometree.ie/wild-atlantic-rainforest-project</p>	<p>Ireland: headquartered in County Clare and working across multiple counties</p>	<p>Philanthropic support Individual giving Corporate donations, partnerships and sponsorships Government funding</p>	<p>In 2024, the Burren Programme transitioned to Project ReFarm, which is a collaboration between Science Foundation Ireland, BiOrbic, Trinity College Dublin and the Burrenbeo Trust's Farming for Nature network. It aims to support, initially using private sector funding, the delivery of nature-positive outcomes by farmers across Ireland, using proven models pioneered in the Burren region. Research will be carried out on how best to package and present these nature-positive outcomes in a way that allows companies to meet their CSRD reporting requirements. The medium to long-term goal is to develop a funding mechanism through which companies can invest in farmers to deliver lasting benefits for nature and for society.</p> <p>The Wild Atlantic Rainforest Project, led by Hometree, aims to restore over 4000 hectares of native temperate rainforest along Ireland's west coast. The project focuses on removing non-native trees and promoting the natural regeneration of native woodlands to reverse deforestation. While most of its support has come from public donations, Hometree has received significant financial backing from philanthropic foundations and private donors who are interested in environmental conservation. These funds are essential for land acquisition and the long-term management of the forest (Hometree, 2024).</p> <p>Hometree is dedicated to establishing and conserving permanent native woodland in Ireland, promoting land regeneration and biodiversity through afforestation, restoration and education. Founded in 2014, Hometree has since planted over 30,000 pioneer trees, including Scots pine, willow and alder. The organisation has engaged hundreds of volunteers and supporters in its mission to reforest Ireland.</p>	<p>their fields, the more public money they got. A local office with a team of scientists, advisers and administrators dealt with paperwork and regulations." (McSweeney, 2024).</p> <p>Proven results. An independent evaluation revealed that the BurrenLIFE Programme delivered €9.4 million in public payments to local farmers, generated an additional €23 million in local economic spending and achieved €33 million worth of landscape and biodiversity improvements between 2010 and 2020. These figures highlight the economic and ecological benefits that can be achieved through such integrated and community-driven initiatives. By demonstrating these tangible returns, the programme makes a compelling case for attracting private finance to support similar sustainable projects.</p> <p>Source: <i>Evaluation of the BurrenLIFE Programme</i> for DAFM by AECOM (Murray <i>et al.</i>, 2020).</p> <p>Philanthropy as a catalyst. Philanthropic contributions can serve as a catalyst for large-scale environmental restoration projects in Ireland, demonstrating the feasibility and impact of these projects to attract further investment. Given the large number of global organisations based in Ireland, philanthropic funding could be considered a source that has the potential to be leveraged to help fund the development of sustainable land use initiatives across Ireland.</p> <p>Collaborative efforts. Hometree has partnered with over 50 businesses, from start-ups to multinational companies. Its fundraising efforts benefit from a mix of traditional and innovative methods, including partnerships, individual donations and corporate sponsorships. This demonstrates the potential of leveraging social networks and community involvement to secure funding for nature-positive projects. By showcasing successful collaborations and diverse funding sources, Hometree provides a model that can attract private finance, highlighting the role of businesses in supporting</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
Bioregional Weaving Lab (BWL) South East Ireland; www.bioregion.ie ; www.giy.ie/programmes/bioregional-weaving-lab	South-east Ireland	Philanthropic funding Institutional funding Private finance	<p>Funding for Hometree comes from partnerships with individuals, businesses and organisations that share its vision. Notable collaborators include the multinational company Medtronic. Hometree's efforts extend beyond tree planting to fostering a connection between people and nature.</p> <p>Hometree says that it accesses state funding allocated for landowners who can receive an annual premium when woodlands are created and registered under forestry schemes.</p> <p>BWL South East Ireland (formerly Bioregional Weaving Lab Waterford) is part of an ambitious EU-wide initiative that seeks to mobilise and support 1 million changemakers who will together contribute to restoring, protecting and regenerating 1 million hectares of land and sea in Europe. The BWL collective is described as a "growing assembly of 25+ international system-changing organisations, funders, and impact investors, initiated by Ashoka, co-led by Commonland and OpEPA, and grounded in a community of practice."</p> <p>BWLs are designed to implement systemic change, overcoming barriers and scaling up NbS that encompass food production, biodiversity conservation and well-being enhancement. Adopting a place-based approach, BWLs actively engage a diverse range of stakeholders, including those in the agricultural and marine sectors and social innovators, fostering a collaborative effort towards environmental sustainability (Grow It Yourself, 2024).</p> <p>The BWL's work in Ireland is underpinned by the 4 Returns framework. The framework is designed to tackle the four main losses associated with land degradation – loss of hope,</p>	<p>sustainable initiatives and the potential for scalable investment opportunities.</p> <p>Citizen engagement. Another critical factor to Hometree's success is citizen engagement. Hometree's approach includes involving local communities in tree planting and conservation efforts, fostering a sense of stewardship and connection to nature. This grassroots involvement not only aids fundraising but also enhances the sustainability of projects by ensuring local support and participation. Engaging citizens creates a strong foundation for projects, making them more appealing to private investors who value community-backed initiatives. The demonstrated community support can reassure private financiers of the project's long-term viability and impact.</p> <p>A bioregion can offer a relevant business case for communities, farmers, funders, investors and corporations. It has the potential to leverage specific liabilities in the region – such as drought, fire and flooding risk – with systemic innovations, NbS and regenerative practices that can be managed and monitored by local communities and financed through innovative, collective, blended financing models on a bioregional landscape scale.</p> <p>Community involvement. Projects that strategically place local communities at the forefront of development, monitoring and evaluation processes tend to experience enhanced engagement, trust and sense of ownership among participants. Leveraging pre-existing relationships within the community, possibly through a multi-stakeholder "convener" role, can be instrumental in fostering trust, which is notably more challenging to establish with external parties. A critical aspect to consider is the integration of communities into the governance mechanisms of private finance schemes, ensuring that modifications to land use are endorsed by local consensus.</p> <p>Contextual relevance of green finance. For green finance to</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
			<p>social networks, biodiversity and economic value – and aims to regenerate the landscape to create 4 returns:</p> <ul style="list-style-type: none"> • return of inspiration – giving people hope and a sense of purpose • social return – bringing back jobs, education and social connections • natural return – restoring biodiversity and soils for healthy and resilient landscapes • financial return – realising long-term sustainable income for communities. 	<p>effectively facilitate implementation, it must exhibit stability, regularity and spatial relevance. It is imperative to mobilise green finance in support of place-based, holistic and contextually sensitive infrastructure and farming practices, thereby enabling the necessary systemic change.</p> <p>Crucially, the BWL in south-east Ireland is supported by consistent and largely unrestricted annual funding from Commonland, based on trust and encouragement for prototyping and innovation. This type of funding is crucial for the establishment for such grassroots organisations.</p>
BRIDE Project; https://www.thebrideproject.ie	Ireland: north-east Cork and west Waterford	Landscape-scale results-based payments, PES	<p>The BRIDE Project is an agri-environment initiative located in the River Bride catchment area of north-east County Cork and west Waterford. Co-funded by the EU and DAFM through the European Innovation Partnership, the project ran from 2018 to 2023.</p> <p>The primary objective of the BRIDE Project was to develop and implement a results-based strategy to conserve, enhance and restore habitats in intensively farmed lowland areas.</p> <p>A key innovation of the project was its landscape-scale approach to biodiversity, encouraging groups of farmers within a specific area to collectively implement various habitat improvement measures. This community-based effort marked a departure from the random selection process of previous agri-environment schemes.</p> <p>In addition, the project introduced a results-based payment scheme, where farmers' habitats were assessed and scored, with higher quality habitats receiving greater payments.</p>	<p>Community-based collaboration. The BRIDE Project's success highlights the importance of fostering community-based efforts among farmers. Private finance can support these collaborative initiatives, ensuring that habitat improvement measures are implemented on a landscape scale, leading to more significant and sustainable impacts.</p> <p>Results-based payment schemes. The introduction of results-based payment schemes, where higher quality habitats receive greater payments, is an effective way to incentivise sustainable practices. Private finance can play a crucial role in funding these schemes, ensuring that farmers are rewarded for their conservation efforts.</p> <p>Innovative funding models. The BRIDE Project's approach underscores the need for innovative funding models that combine public and private finance. By leveraging private investments alongside public funds, it is possible to create more robust and scalable solutions for sustainable land use.</p>
FarmCredit; www.farmcreditproject.com/	Ireland	Cost sharing instruments	<p>Farmers can reduce emissions and increase biodiversity; however, it is costly. FarmCredit investigates whether a cost-sharing instrument is a viable financing mechanism to fund the sustainable transition needed</p>	<p>Cost-sharing viability. The project has shown that a cost-sharing mechanism involving the entire supply chain (processors, wholesalers and retailers) can be a viable way to fund sustainable</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
			<p>in the agricultural sector. This involves the entire supply chain, including processors, wholesalers and retailers, sharing the costs of primary producers' sustainable transitions (FarmCredit Project, 2024). The project is coordinated by Professor Yvonne Buckley, with principal investigators Professor Jane Stout and Dr Martha O'Hagan Luff, and postdoctoral researcher Dr Cian White. It is funded by DAFM's 2023 Research Call Tranche II.</p>	<p>agricultural practices. This approach helps distribute the financial burden more evenly and encourages broader participation. For private finance, this model is particularly relevant as it showcases a viable investment strategy that mitigates risk by involving multiple stakeholders. By spreading the financial responsibility, private investors can be more confident in the project's stability and long-term viability.</p> <p>Stakeholder engagement. Effective engagement with all stakeholders, including farmers, corporates, regulators and AgriTech providers, is crucial. Building trust among these groups is essential for the initiative's success, and private finance plays a crucial role in facilitating this collaboration. By investing in projects that prioritise stakeholder engagement and trust building, private financiers can ensure more sustainable and impactful outcomes.</p>
<p>Peatland Finance Ireland; www.peatlandfinance.ie</p>	<p>Ireland: multiple locations</p>	<p>Government and institutional funding Corporate partnerships</p>	<p>PFI was established in 2022 with the overall goal of establishing (and ensuring the management of) a national and catchment-scale financing system for peatland restoration in Ireland. PFI has been supported by NPWS, the Department of Housing, Local Government and Heritage, the European Investment Advisory Hub and the NCFF of the EIB. PFI works with a range of stakeholders to unlock financing and identify opportunities for communities and regional development. It is facilitated by University College Dublin and the Landscape Finance Lab.</p>	<p>A core goal of PFI is to develop a peatland standard to manage investment in peatland restoration in Ireland. The standard will enable results-based payments for peatland restoration through carbon emissions abatement. This emerging standard, expected by 2025, will include biodiversity credits, enabling landowners to receive payments for enhancing habitat quality.²⁷ This approach attracts private finance by offering measurable environmental benefits and economic opportunities.</p> <p>PFI will also create and oversee a financing system for peatland restoration across national and catchment scales in Ireland through the following phases. There are three phases in the development of this standard. Phase 1 demonstrated the potential for establishing a financing model for peatland restoration in Ireland at the end of 2021. Phase 2 of PFI's work will finalise the design of the financial</p>

27 <https://carbon-pulse.com/225400/> (accessed 11 December 2024).

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
The Nature Trust and The Woodland Credit; www.naturetrust.ie	Ireland: multiple locations	Credits	<p>The Nature Trust is an Irish not-for-profit founded in 2021 and backed by Coillte and Forestry Partners. It aims to increase native woodland cover in Ireland and, in turn, increase nature and biodiversity. The trust worked with Bank of Ireland to develop the Woodland Nature Credit to successfully connect corporate investments with the creation of new, non-commercial native woodlands.</p> <p>When launched in 2022, the Woodland Nature Credit was articulated as the first instrument of its kind in Ireland that delivers private funding to public natural capital projects. It works by “combining the ecosystem benefits of carbon sequestration, biodiversity uplift and amenity benefits into one instrument”.</p>	<p>instruments and actions that will enable investors to create a lasting impact by restoring peatlands and boosting local economies. This phase will also investigate possible strategies for decarbonisation of agriculture in peat areas. A move from carbon finance opportunities towards incorporating wider ecosystem benefit streams, in line with the gradual development and refinement of standards for nature restoration, including peatlands, is envisaged. This will include the integration of local benefits, providing communities with seed capital for restoration. The final phase will consist of mobilising the efforts from phase 2, refining the structures and developing a pipeline for full implementation.</p> <p>PFI shows the potential of ready-to-go projects in attracting private finance. These elements reduce investment risks and ensure that private funds are effectively utilised for environmental restoration.</p> <p>The Nature Trust has received significant funding from businesses such as Aviva and Axa. Aviva Ireland provided €5 million to support the Nature Trust’s native afforestation project. This funding will help plant approximately 1.2 million native tree saplings, creating around 400 hectares of new native woodlands across Ireland. It allows companies to support carbon sequestration and enhance biodiversity, aligning with sustainability goals and regulatory requirements. It also boosts corporate reputation while still offering potential financial returns. Importantly, the Woodland Nature Credits generated are not tradeable.</p>
Bionua, Coffee Angel and Dunsany Estate; www.bionua.com ; https://www.agriland.ie/farming-news/biodiversity-deal-is-first-of-its-kind-in-ireland	Dunsany Estate, County Meath, Ireland	Credits Corporate partnership	<p>This project highlights the partnership between Bionua and Dunsany Estate to promote environmental restoration through the development of credits covering carbon and biodiversity factors. Coffee Angel has agreed to purchase credits through allocating 5% of its profits over</p>	<p>This project is just one of number of early-stage credit schemes in Ireland that are attracting private investments. While Coffee Angel is willing to do this as a philanthropic effort, it is important to recognise that many companies are looking for tradeable credits as part of a wider decarbonisation pathway to</p>

Programme/project/initiative	Location	Project type/ financial instruments used	Summary overview	Lessons, insights and relevance to the role of private finance
European Green Transition – Carbon Credit Project Ireland; https://www.europeangreentransition.com/projects/carbon-credit-project-ireland/	Altan Farm, County Donegal, Ireland	Credits Revenue-sharing model	<p>the next 5 years to support the rewilding efforts on 750 acres of Dunsany Estate.</p> <p>Bionua uses satellite technology and on-the-ground sensors to monitor improvements in biodiversity and carbon capture at Dunsany. In the first year, the initiative is expected to capture over 80,000 kilograms of carbon. More importantly, the credits represent not just carbon removal but also the restoration of local ecosystems, including various plant and animal species.</p> <p>Altan Farm in Donegal spans 1370 acres of blanket peatland, a crucial ecosystem for carbon storage. Peatlands, covering 1.5 million hectares in Ireland, act as natural carbon sinks due to their waterlogged conditions that prevent plant material from decomposing fully. However, as a result of human activity many of these habitats have been degraded, causing them to release stored carbon and greenhouse gases back into the atmosphere instead of absorbing them.</p> <p>In May 2024, European Green Transition signed an exclusive 12-month option to investigate the potential to develop a peatland carbon sink programme and generate carbon credits in Ireland. The goal is to restore the degraded blanket bog at Altan, enhancing its ability to sequester carbon from the atmosphere. This initiative aims to not only generate carbon credits but also trade them with third parties, particularly corporations aiming for carbon neutrality.</p>	<p>meet internal and external climate and nature targets.</p> <p>The relevance to private finance lies in the growing demand for sustainable investment opportunities. Private investors are increasingly looking for projects that not only offer financial returns but also contribute to environmental and social goals. By investing in such credit schemes, private finance can play a pivotal role in accelerating the transition to a low-carbon economy. This alignment of financial and environmental objectives creates a compelling case for private sector involvement, driving innovation and scaling up efforts to combat climate change.</p> <p>The project is designed to be capital efficient by entering a revenue-sharing model with the landowner, rather than acquiring the land. This model has the potential to be scaled across other peatlands in Ireland, contributing positively to Ireland’s climate goals. The revenue-sharing model will not only enable the landowner to generate carbon credits but also trade them with third parties, particularly corporations looking to move towards carbon-neutral targets.</p>

Appendix 3 Expert and Practitioner Stakeholder Interviews – Detailed Notes

Interviewee no. and role	Summary of key insights and quotes
<p>1. Financial services professional (policy)</p>	<p>There is an evident and urgent need to build capacity and enhance awareness across both the public and private sector regarding the wider sustainable finance agenda. Interviewee 1 reported that collectively the Irish financial sector appears to not yet fully recognise the central role it will be required to play in driving private finance into nature and delivering land use outcomes. Moreover, from their perspective, it appeared that relevant government departments and public sector bodies require significant upskilling to leverage and effect the required change in the policy environment. In addition, interviewee 1 reported that public awareness of private finance for land use outcomes (and nature more generally) remains low, which has hindered its prioritisation by policymakers.</p> <p>Current efforts regarding green finance and land use are fragmented and require greater coordination between the public and private sectors. Interviewee 1 also highlighted how current efforts are hindered by the lack of an overarching vision to guide private financing, highlighting a clear opportunity for stakeholders to coordinate via public–private working groups.</p> <p>Historically, in terms of sustainable finance, Ireland has followed the examples set by larger financial centres. However, in terms of nature finance, Ireland has a real opportunity to take on a meaningful leadership role. While achievable, this will require an overarching vision for nature finance from the government in Ireland and genuine collaboration and coordination between stakeholders in the financial sector. Interviewee 1 is seeing positive signs across non-governmental organisations and on-the-ground initiatives such as Hometree and GoNaturePositive! in Trinity College Dublin but is concerned that there is a fragmentation of effort that will hold back progress without an overarching nature finance framework for the country. Moreover, other markets such as Switzerland, the UK and France appear to be seizing the nature finance agenda in a more coordinated fashion.</p>
<p>2. Practitioner (place-based agri-environmental initiative)</p>	<p>Farmers have a deeply personal connection to their land and can be resistant to initiatives that fail to recognise this. According to interviewee 2: “We need to break down the walls between farmers and nature. But farmers can be very resistant to outside influence”. It is critical to understand this when developing projects. Farmers want payments to be fair and transparent to incentivise doing better, not less bad. However, concurrently, we need “to keep the landscape complex” and we need “different people, doing different things in different places” to support rural communities and economies, according to interviewee 2. Incentivisation for farmers and landowners to change is key.</p> <p>Regulation of damaging practices lack robust enforcement mechanisms. According to interviewee 2, while many damaging activities are regulated, the enforcement against these infractions is very poor or absent in far too many cases. This has significant implications for private financing of nature-positive land use outcomes, as not only does it facilitate the continuation of harmful activities across the Irish landscape, but it also damages the trust and morale of participating farmers or financiers who make efforts to protect nature. Similarly, while the ambition behind schemes such as ACRES is very welcome, they are not working as they should and this is damaging relationships with farmers and slowing progress on nature-friendly farming practices. Private finance can be blended into or supplement existing result-based payment schemes with farmers, but public money must be used first for protecting and restoring public goods.</p>
<p>3. Practitioner (place-based environmental initiative)</p>	<p>Initiatives that meaningfully foreground local communities in the development, monitoring and evaluation of schemes enjoy significantly higher engagement and trust and a greater sense of ownership among participants. Projects benefit from leveraging pre-existing relationships with local people (i.e. via a multi-stakeholder “convener” role), as trust is significantly more difficult to build with “someone coming into the region”. Indeed, interviewee 3 reported that there is a clear need for locally relevant, multi-stakeholder conveners across the country. They must be “credible, neutral, but have local trust, and that takes time to build. But once trust is built, money can be deployed quickly and to the right place and at the right time”.</p> <p>In addition to being stable and regular, sustainable finance must also be spatially relevant to achieve effective implementation. Interviewee 3 emphasised that any private finance must be mobilised to support place-based, holistic and contextually sensitive infrastructure and farming practices to enact the required systemic change in Ireland. Funding that covers running costs for conveners or administration of on-the-ground initiatives is fundamental to achieving sustained change. However, this is harder to attract and retain over the long term. Essentially, according to interviewee 3 we need visionary funders to support initiatives to grow and be sustained over the long term. While there are some institutional and philanthropic funders who are prepared to work in this way, we need a broader paradigm shift in how private money is invested in public goods and to provide “process” money towards financing structures to support locally relevant initiatives.</p>

Interviewee no. and role	Summary of key insights and quotes
4. Academic (sustainable finance)	<p>Moreover, the connection between projects, farmers and communities and investors and finance must extend beyond transactional relationships. To help achieve this, interviewee 3 suggested that banks or corporates should be encouraged to put money into a local “pot” to co-finance projects, as this approach would share the risks and the rewards across all stakeholders, and recognises that projects are often entangled, enmeshed or interdependent across landscapes. Fundamentally, we cannot have a situation “where everyone else takes the risks and private money takes the reward”, according to interviewee 3.</p> <p>The scale of funding required can often represent a key challenge for private finance schemes for nature. Investors are often looking for projects that require very large sums of money and will not consider smaller projects, which often renders many worthwhile initiatives ineligible. Moreover, the inverse can also occur, whereby a project is offered a significantly smaller amount of investment than is required. This can lead to multiple direct funding relationships with a range of different investors, which can quickly render transactions too complicated and burdensome to effectively deliver.</p> <p>We often expect farmers to provide public goods for free after the funding timeline of a finance scheme has elapsed (e.g. 20–30 years after they have been incentivised to plant a forest). Further consideration is required in order to gain a deeper understanding of how this “public good” can continue to be maintained and “incentivised” for landowners. Conversely, interviewee 4 stressed that if the ecosystem service ceases to be provided, then a landowner’s funding should be cut.</p> <p>The private sector should leverage its inherent agility and greater appetite for risk for private finance schemes. This is especially true of “philanthropic” funding, as it can take risks that the government cannot. Interviewee 4 also highlighted how unstable and irregular funding sources could be supplemented or “guaranteed” by private financing, increasing both engagement from and the trust of farmers. In addition, interviewee 4 suggested that we need more “PPPs” (public–private partnerships) to generate impact; however, the finance needs to be annual and indefinite.</p> <p>Private finance needs a centralised measurement and verification methodology. There are some significant and noteworthy initiatives coming to the fore in Ireland in terms of credit-based systems (e.g. Bionua and Dunsany Estate are working with Coffee Angel to invest in nature). However, credits are challenging and merit a centralised verifiable system. Interviewee 4 emphasised that companies require verifiability when investing in nature finance schemes and suggested that this would require government oversight. There is a significant opportunity for the state to create a centralised carbon and nature market for Ireland.</p> <p>The government should also consider how innovations in other jurisdictions in nature finance can be applied to the Irish context. For example, Irish citizens could be offered “green pensions” at work, or a national nature bond could be created. Moreover, there is an opportunity to extend private finance to smaller investors via crowdsourcing schemes such as citizen green bonds. As highlighted by interviewee 4, citizen green bond schemes present an opportunity for the general public to gain a sense of agency over nature loss while deepening the private sector’s engagement with local communities.</p>
5. Financial services professional	<p>The biodiversity financing gap is significant, with the issue being both underfunded and undervalued. The gap cannot be filled by public bodies alone, making private finance essential. In Ireland, the NBAP has weak private finance integration, despite high expectations. There is a need to address concerns about commodifying nature and avoid carbon market pitfalls. Ireland has the potential to lead in nature finance with its diverse habitats, semi-state engagement and strong tech presence, but policymakers are lagging.</p> <p>Promising finance models exist for impactful land use outcomes. Interviewee 5 suggested that with the right rules, Ireland could become the “Costa Rica of Europe” – referring to the success the country has had in financing nature. However, policymakers lag, and siloes between science and finance need addressing. Results-based payment mechanisms and blended finance are considered to have potential, but challenges exist, while biodiversity credits and nature-based bonds need further development.</p> <p>The connection between climate and biodiversity is clearer than ever, and people are increasingly interested in investing in NbS. According to interviewee, 5 “We are at the start of a sea change – it’s as significant as the industrial revolution, because there is now a better understanding of the symbiotic relationship between business activity and impacts and opportunities on the environment. And there is better understanding of the intrinsic link between climate change and nature”. The Citizens’ Assembly on Biodiversity Loss in Ireland has demonstrated that citizens care about nature and that public and private institutions need to remember that when it comes to investing.</p> <p>Irish policymakers need to set mandatory targets and create a unified state strategy to provide policy certainty and close loopholes. They should lead by example, making sustainability cheaper by pricing in environmental costs and offering incentives such as government bonds and community projects. An intermediary agency, similar to the National Asset Management Agency, could help unlock private finance for sustainable initiatives. Banks can also play a role in structuring nature credits and acting as a broker.</p>

Interviewee no. and role	Summary of key insights and quotes
6. Practitioner (land use)	<p>Financial services need to come together, and there are increasing opportunities for collaboration. The financial centres that collaborate the best are the ones that are going to make good decisions around frameworks and regulation. There is an opportunity to form a banking working group on nature that spurs on collective development. While some banks are slightly ahead of others in terms of their understanding of nature and best practice, collaboration is still key. There are also opportunities to examine and implement best practice internationally. For example, the introduction of BNG in England has the potential to be a “game changer” for nature and biodiversity and infrastructure and developments in Ireland.</p> <p>The fragmentation of governance regarding private finance for nature can be overcome only with robust, centralised oversight. There is not a shortage of private finance right now to deploy in Ireland, but if a corporate wanted to spend significant amounts of money on nature or land they would struggle to deploy it, as the frameworks and governance are not in place and the number of investment-ready projects available is just not there. Interviewee 6 stressed that the necessary oversight should come from a dedicated government department or agency, which could provide the project management, monitoring evaluation and technical expertise that is missing from the current system.</p> <p>Building trust with landowners and farmers takes time, but it is absolutely critical. An intermediary function could play a significant role in building this trust between financiers and farmers and landowners. Interviewee 6 suggested that farmers/landowners should not interface directly with the corporate or financial institution that is funding their work. A financier or funder could say they are investing in a landscape or region, but they would not be able to say exactly where or who they are investing in. This reinforces the shared risk and shared reward element that an intermediary can bring. An evolution of this is the creation of a “landscape fund” that companies can buy into.</p> <p>Interviewee 6 strongly emphasised that they believe there is significant interest from global technology firms, and data centre providers based in Ireland are very keen to finance landscape-scale nature projects in Ireland. Many of these companies are cash-rich, are looking to meet ambitious environmental targets and are also aware of the reputational issues. However, significant challenges remain in terms of practically connecting money to projects.</p> <p>Investors are generally seeking to lower their exposure to risk when engaging with on-the-ground projects, and this extends to minimising reputational damage. Furthermore, the tone and extent of external communications has proven an important consideration for investors, as high-profile schemes have often been subject to allegations of greenwashing, which has dampened demand among investors.</p> <p>Interviewee 6 reported that multiple models are being tested in Ireland. According to interviewee 6, credit-based mechanisms can work in Ireland if they are long term, permanent and verifiable, while bonds can be more suited to singular, generally larger landowners. In terms of PES schemes, private finance can be very useful to supplement results-based payments schemes that have the trust and confidence of local communities.</p>
7. Financial services professional	<p>Bridging the nature finance gap will involve bringing together two different worlds and creating both a shared understanding and a common goal. There is a clear role for an intermediary function in private finance schemes; however, there are notable challenges. For example, interviewee 7 reported that it is vital that an intermediary entity has already earned the trust of local landowners, that it can be a formal legal party to any transactions that are made and that it has its own credit rating.</p> <p>Nature finance and finance for sustainable land use cannot be left to market forces alone. Corporates and financial services need to be incentivised or forced to act. According to interviewee 7, “Leaving it to the market won’t work – the most successful gains in this space have come from regulation and policies forcing action”.</p> <p>Regardless of their size and budget, all investors are risk-averse when it comes to nature and land use projects, and the return on investment must be proportionate to the risk. This must be accounted for when developing a private finance scheme offering. There is a misunderstanding that there is a “big pot of money out there with no strings” attached. Investors want project developers to have a lot of parameters and checks and balances in place, and a financial return that is commensurate with the risk they are expecting the investor to take. There is often misalignment in terms of project size and investment size (e.g. a big technology company may have US\$100 million in funding, but will not consider a US\$100,000 project). Moreover, interviewee 7 reported that, in their experience, the more institutional an investor is the weaker their appetite for risk is. Moreover, they reported that schemes that have some safeguards in terms of investment guarantees tend to be more appealing. From their perspective, public money needs to be taking on a minimum of 40–50% of total project costs in many cases.</p> <p>Nature finance is asset class agnostic. No one private finance model works for nature and land use finance universally – there is no single mechanism that works in every context. Instead, finance mechanisms must closely align with a region’s geography, socioeconomics and regulatory frameworks. Nature credits will play a role, but the market demand is extremely low and only pioneer institutions are buying them.</p>

Interviewee no. and role	Summary of key insights and quotes
<p>8. Practitioner (land use)</p>	<p>There is an urgent need for a recognised standard at either the national or regional level, and a consolidation of approaches and monitoring and verification frameworks. According to interviewee 7, BNG in England looks like it will have encouraging results and should be explored in Ireland.</p> <p>Interviewee 7 stressed that investor motivations vary significantly, often depending on their size. Large institutional investors are driven by regulation and commitments such as the SBTN initiative, as they know they need to diversify their asset base. Private offices are motivated by doing something good and largely philanthropic in their approach, while corporates primarily aim to secure their supply chain (make it more resilient) and comply with regulations.</p> <p>The role of private finance in capital-intensive projects such as peatland rehabilitation and afforestation is crucial due to the high costs involved. These costs can reach up to €15,000 per hectare for native woodland afforestation. While funding sources can be either public or private, the increasing costs make way for potential private investment. Interviewee 8 noted that blended finance shows potential but requires clear definitions and rules to avoid complexities and setbacks. Public funding should ideally come first, as these projects create public goods, with private sector involvement needing more developed thinking and clearer guard rails. Trust and transparency are essential for success, ensuring all components are well understood and defined.</p> <p>There is an increased interest in nature credits. These can act as tradeable assets or something that can be held. The future of credits covering both climate and nature in Ireland looks encouraging, in particular credits that can act as tradeable assets or something that can be held on the balance sheet. According to interviewee 8, it will be necessary to create a standardised and verifiable approach, such as an official Irish credit standard. Proper governance of land purchases was also mentioned as crucial to ensuring investors get real value and do not drive up land prices.</p> <p>Blended finance will be key in Ireland. According to interviewee 8, "Having the state involved provides legitimacy to private investors. Equally, the state can take reassurance when it sees private investors are interested and are making commitments in Ireland. That being said, when you blend anything, it can get messy."</p> <p>Public money should lead in de-risking projects to build confidence, with a balanced approach to state and private funding. Land acquisition needs to be managed carefully to avoid overheating the market and driving up prices. Interviewee 8 said that clear policy direction by 2030 is needed, with a focus on streamlined regulations and planning consent a priority to avoid the current patchwork of schemes. Similarly, local authorities need to be competent in managing natural capital projects, and a central authority should organise and standardise grassroots programmes for credits.</p> <p>A structured approach to intermediaries is needed to manage short-term interests effectively. A cooperative-led model could balance philosophical and practical considerations, giving power to landowners and aggregating them for a stronger collective impact. Interviewee 8 suggested that this approach offers significant potential for future projects, particularly with a landscape-scale strategy involving a number of keystone protected areas.</p>

Abbreviations

ACRES	Agri-Climate Rural Environment Scheme
BIOFIN	Biodiversity Finance Initiative
BIOFIN-EU	Biodiversity Restoration Using Large-Scale Finance EU
BNG	Biodiversity net gain
BRIDE	Biodiversity Regeneration in a Dairying Environment
BWL	Bioregional Weaving Lab
CAP	Common Agricultural Policy
CCAC	Climate Change Advisory Council
CIEEM	Chartered Institute of Ecology and Environmental Management
CORINE	Coordination of Information on the Environment
CSRD	Corporate Sustainability Reporting Directive
DAFM	Department of Agriculture, Food and the Marine
Defra	Department for Environment, Food and Rural Affairs (UK)
EIB	European Investment Bank
EPA	Environmental Protection Agency
ESG	Environmental, social and governance
ESRS	European Sustainability Reporting Standards
GBF	Global Biodiversity Framework
INCASE	Irish Natural Capital Accounting for Sustainable Environments
ISFCOE	International Sustainable Finance Centre of Excellence
LUR	Land Use Review
NBAP	National Biodiversity Action Plan
NbS	Nature-based solutions
NCOFF	Natural Capital Financing Facility
NPF	National Planning Framework
NPWS	National Parks and Wildlife Service
NRP	National restoration plan
PES	Payment for ecosystem services
PFI	Peatland Finance Ireland
SBTN	Science Based Targets Network
TNFD	Taskforce on Nature-related Financial Disclosures
UNEP	United Nations Environment Programme
VCMI	Voluntary Carbon Markets Integrity Initiative
WWF	World Wide Fund for Nature

An Gníomhaireacht Um Chaomhnú Comhshaoil

Tá an GCC freagrach as an gcomhshaoil a chosaint agus a fheabhsú, mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaoil a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialáil: Rialáil agus córais chomhlíonta comhshaoil éifeachtacha a chur i bhfeidhm, chun dea-thorthaí comhshaoil a bhaint amach agus díriú orthu siúd nach mbíonn ag cloí leo.

Eolas: Sonraí, eolas agus measúnú ardchaighdeán, spriocdhírthe agus tráthúil a chur ar fáil i leith an chomhshaoil chun bonn eolais a chur faoin gcinnteoireacht.

Abhcóideacht: Ag obair le daoine eile ar son timpeallachta glaine, táirgiúla agus dea-chosanta agus ar son cleachtas inbhuanaithe i dtaobh an chomhshaoil.

I measc ár gcuid freagrachtaí tá:

Ceadúnú

- > Gníomhaíochtaí tionscail, dramhaíola agus stórála peitрил ar scála mór;
- > Sceitheadh fuíolluisce uirbhig;
- > Úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe;
- > Foinsí radaíochta ianúcháin;
- > Astaíochtaí gás ceaptha teasa ó thionscal agus ón eitlíocht trí Scéim an AE um Thrádáil Astaíochtaí.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- > Iniúchadh agus cigireacht ar shaoráidí a bhfuil ceadúnas acu ón GCC;
- > Cur i bhfeidhm an dea-chleachtais a stiúradh i ngníomhaíochtaí agus i saoráidí rialáilte;
- > Maoirseacht a dhéanamh ar fhreagrachtaí an údaráis áitiúil as cosaint an chomhshaoil;
- > Caighdeán an uisce óil phoiblí a rialáil agus údaruithe um sceitheadh fuíolluisce uirbhig a fhorfheidhmiú
- > Caighdeán an uisce óil phoiblí agus phríobháidigh a mheasúnú agus tuairisciú air;
- > Comhordú a dhéanamh ar líonra d'eagraíochtaí seirbhíse poiblí chun tacú le gníomhú i gcoinne coireachta comhshaoil;
- > An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaoil.

Bainistíocht Dramhaíola agus Ceimiceáin sa Chomhshaoil

- > Rialacháin dramhaíola a chur i bhfeidhm agus a fhorfheidhmiú lena n-áirítear saincheisteanna forfheidhmithe náisiúnta;
- > Staitisticí dramhaíola náisiúnta a ullmhú agus a fhoilsiú chomh maith leis an bPlean Náisiúnta um Bainistíocht Dramhaíola Guaisí;
- > An Clár Náisiúnta um Chosc Dramhaíola a fhorbairt agus a chur i bhfeidhm;
- > Reachtaíocht ar rialú ceimiceán sa timpeallacht a chur i bhfeidhm agus tuairisciú ar an reachtaíocht sin.

Bainistíocht Uisce

- > Plé le struchtúir náisiúnta agus réigiúnacha rialachais agus oibriúcháin chun an Chreat-treoir Uisce a chur i bhfeidhm;
- > Monatóireacht, measúnú agus tuairisciú a dhéanamh ar chaighdeán aibhneacha, lochanna, uiscí idirchreasa agus cósta, uiscí snámha agus screamhuisce chomh maith le tomhas ar leibhéal uisce agus sreabhadh abhann.

Eolaíocht Aeráide & Athrú Aeráide

- > Fardail agus réamh-mheastacháin a fhoilsiú um astaíochtaí gás ceaptha teasa na hÉireann;
- > Rúnaíocht a chur ar fáil don Chomhairle Chomhairleach ar Athrú Aeráide agus tacaíocht a thabhairt don Idirphlé Náisiúnta ar Gníomhú ar son na hAeráide;

- > Tacú le gníomhaíochtaí forbartha Náisiúnta, AE agus NA um Eolaíocht agus Beartas Aeráide.

Monatóireacht & Measúnú ar an gComhshaoil

- > Córais náisiúnta um monatóireacht an chomhshaoil a cheapadh agus a chur i bhfeidhm: teicneolaíocht, bainistíocht sonraí, anailís agus réamhaisnéisiú;
- > Tuairiscí ar Staid Thimpeallacht na hÉireann agus ar Tháscairí a chur ar fáil;
- > Monatóireacht a dhéanamh ar chaighdeán an aeir agus Treoir an AE i leith Aeir Ghlain don Eoraip a chur i bhfeidhm chomh maith leis an gCoinbhinsiún ar Aerthruailliú Fadraoin Trasteorann, agus an Treoir i leith na Teorann Náisiúnta Astaíochtaí;
- > Maoirseacht a dhéanamh ar chur i bhfeidhm na Treorach i leith Torainn Timpeallachta;
- > Measúnú a dhéanamh ar thionchar pleananna agus clár beartaithe ar chomhshaoil na hÉireann.

Taighde agus Forbairt Comhshaoil

- > Comhordú a dhéanamh ar ghníomhaíochtaí taighde comhshaoil agus iad a mhaoiniú chun brú a aithint, bonn eolais a chur faoin mbeartas agus réitigh a chur ar fáil;
- > Comhoibriú le gníomhaíocht náisiúnta agus AE um thaighde comhshaoil.

Cosaint Raideolaíoch

- > Monatóireacht a dhéanamh ar leibhéal radaíochta agus nochtadh an phobail do radaíocht ianúcháin agus do réimsí leictreamaighnéadacha a mheas;
- > Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as tasmí núicléacha;
- > Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta;
- > Sainseirbhísí um chosaint ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Ardú Feasachta agus Faisnéis Inrochtana

- > Tuairisciú, comhairle agus treoir neamhspleách, fianaise-bhunaithe a chur ar fáil don Rialtas, don tionscal agus don phobal ar ábhair maidir le cosaint comhshaoil agus raideolaíoch;
- > An nasc idir sláinte agus folláine, an geilleagar agus timpeallacht ghlan a chur chun cinn;
- > Feasacht comhshaoil a chur chun cinn lena n-áirítear tacú le hiompraíocht um éifeachtúlacht acmhainní agus aistriú aeráide;
- > Tástáil radóin a chur chun cinn i dtithe agus in ionaid oibre agus feabhsúchán a mholadh áit is gá.

Comhpháirtíocht agus Líonrú

- > Oibriú le gníomhaireachtaí idirnáisiúnta agus náisiúnta, údaráis réigiúnacha agus áitiúla, eagraíochtaí neamhrialtais, comhlachtaí ionadaíochta agus ranna rialtais chun cosaint comhshaoil agus raideolaíoch a chur ar fáil, chomh maith le taighde, comhordú agus cinnteoireacht bunaithe ar an eolaíocht.

Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

Tá an GCC á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóir. Déantar an obair ar fud cúig cinn d'Oifigí:

1. An Oifig um Inbhuanaitheacht i leith Cúrsaí Comhshaoil
2. An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
3. An Oifig um Fhianaise agus Measúnú
4. An Oifig um Chosaint ar Radaíocht agus Monatóireacht Comhshaoil
5. An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tugann coistí comhairleacha cabhair don Gníomhaireacht agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair inní agus le comhairle a chur ar an mBord.

Optimising Land Use Outcomes: The Role of Private Finance

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