Bridging the Gap:

What drives the private sector to invest in Nature Recovery in Wales?

A report by Bannau Brycheiniog National Park Authority (BBNPA) and Nature Positive

May 2026

nature positive

Contents

This research was led by Bannau Brycheiniog National Park Authority (BBNPA) "the Park" and RSK Nature Positive and funded by support from the Welsh Government (WG). As the Park continue to invest in pioneering new approaches, we invite contributions to this research. Please email: natural.capital@beacons-npa.gov.uk for any queries and reflections.

Executive summary

The scale of the challenge

Globally, biodiversity is in sharp decline, and the climate emergency is accelerating, with devastating consequences for communities and the natural environment. Business responsibility to act is not only a moral imperative but crucial for operational survival - natural capital is increasingly being recognised as critical infrastructure (ISEP) upon which business and society thrive. More than half of global GDP depends on nature (WEF), yet investment in its protection and restoration remains far below what is required (UNEP). Inaction globally and domestically has severe consequences, with global ecosystem degradation and collapse becoming major threats to UK national security and prosperity[1].

The Global Biodiversity Framework (GBF) sets targets on public and private bodies to integrate biodiversity into decision making, disclose and reduce biodiversity risks and dependencies and mobilise £150bn per year for biodiversity globally. However, the UK nature-finance gap stands at £56 billion annually with £5-7bn needed in Wales beyond existing public commitments[2]. These figures require further verification and validation but points to a significant gap, nonetheless.

At the same time, businesses are already experiencing increasing climate and nature-related risks, from flooding to supply chain disruption. Whilst there is growing ambition around nature finance in the UK, investment from the private sector is falling dramatically short of needs[3]. Current global trends remain deeply misaligned: for every dollar invested in protecting nature, $30 is spent destroying it (UNEP). Without deliberate intervention, this imbalance will persist.

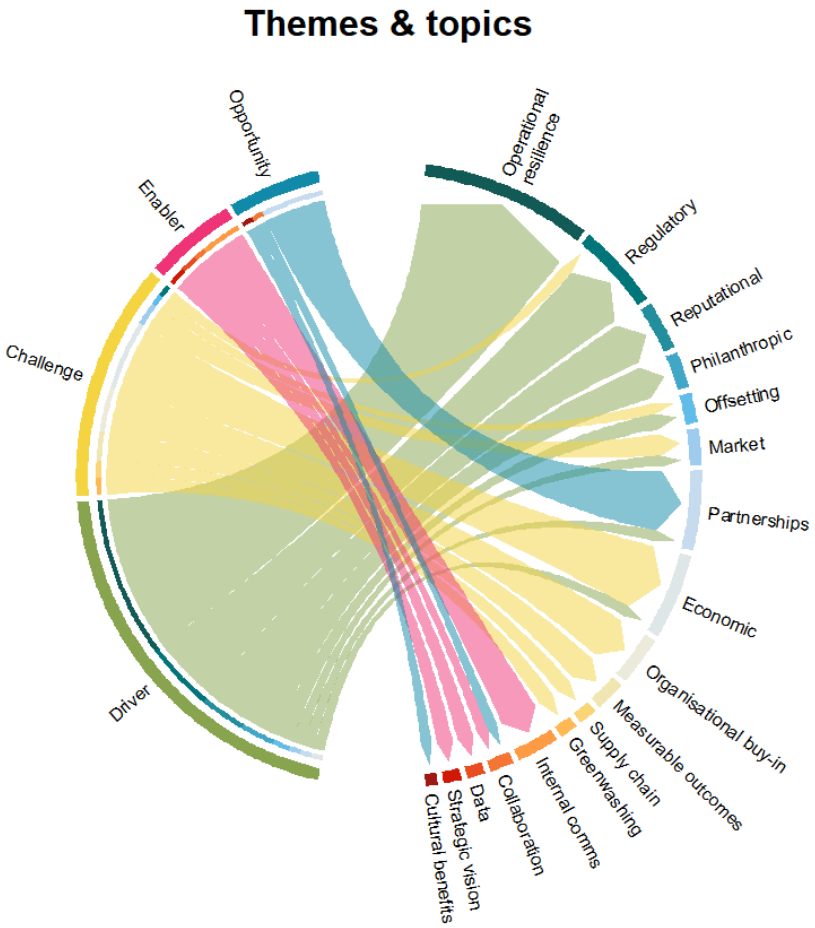
"Wales' natural environment is not just part of our heritage - it is the foundation of our future. The choices we make today will determine whether future generations inherit thriving ecosystems and resilient communities or face escalating crises that we could have prevented"

State of Natural Resources Report, Natural Resources Wales 2025

This report examines what drivers, barriers and enablers shape private sector investment in nature recovery in Wales. Focusing on Bannau Brycheiniog National Park as a place-based case study, it draws on analysis of 100 companies and in-depth interviews from a representative sample of 10 businesses across key sectors.

[1] https://www.gov.uk/government/publications/nature-security-assessment-on-global-biodiversity-loss-ecosystem-collapse-and-national-security
[2] https://legacy.greenfinanceinstitute.com/wp-content/uploads/2021/10/The-Finance-Gap-for-UK-Nature-13102021.pdf
[3] https://ecosystemsknowledge.net/resources/insights/nature-finance-uk-review-2025-published/

Key themes and topics from representative sample of 10 companies interviewed:



Key insights

Investment follows risk and value. Private sector investment in nature is not primarily driven by philanthropy. Instead, it is strongest where businesses can:

- **Reduce operational and supply chain risk** (especially flooding, drought and resource scarcity)
- **Protect long-term business resilience**
- **Demonstrate measurable value or returns** – financial or non-financial

Where these links are weak or unclear, investment is limited.

- **Operational resilience is the dominant driver**
  Businesses invest where nature-based solutions protect assets, reduce disruption, or strengthen supply chains.
- **Nature risk is less mature than climate risk**
  Climate is widely understood across SMEs; nature-related risks are still emerging and largely confined to larger companies.

- **Regulation is not yet a strong driver**
  Mandatory reporting is often seen as compliance rather than a catalyst for investment. Voluntary frameworks (e.g. science-based targets) are more influential in shaping ambition.
- **Reputation matters for market leaders but remains insufficient alone**
  Established sustainability leaders invest to maintain brand and stakeholder trust. For most firms, reputational returns alone are insufficient.
- **Investment is constrained by finance and capacity**
  High upfront costs, competing priorities, and limited internal expertise – particularly in SMEs – significantly limit action.
- **Data gaps weaken the business case**
  A lack of consistent, comparable metrics for nature impacts makes it difficult to justify and scale investment.

What will unlock investment?

To scale private finance into nature recovery in Wales, five priorities emerge:

1. **Stronger business cases**
   Linking nature investment directly to risk reduction, resilience and cost savings.
2. **Better data and measurement**
   Clear, trusted metrics for nature outcomes and business value.
3. **Enabling frameworks and incentives**
   Including blended finance, standards, and potential future compliance markets.
4. **Place-based collaboration**
   Partnerships between businesses, land managers and public bodies at landscape scale.

A critical moment for Wales

Wales has a unique opportunity to support land managers to transition to nature-positive land use, grounded in its devolved powers and through strengthening place-based institutions. Delivering this transition will require a fundamental shift in how economic systems value nature—prioritising long-term resilience, social equity, and environmental sustainability. This is not a marginal adjustment but a systemic change, demanding coordinated investment, policy alignment, and cross-sector collaboration

However, private sector investment in nature will not scale on ambition alone. It will require clearer value propositions, a strengthening of the role of the public sector, and consistent national and regional coordination. A just transition must therefore go beyond mobilising private capital. It must be rooted in strong public sector leadership, community involvement, and shared prosperity. Without this, there is a risk of reinforcing inequality and undermining trust and long-term outcomes.

The case for action is no longer optional. Nature recovery is now fundamental to economic resilience. Increasing climate and environmental risks—from flooding and drought to ecosystem degradation—are already affecting businesses, infrastructure, and communities across Wales. Nature-based solutions offer a credible and scalable pathway to address these risks while delivering wider social and environmental benefits.

Unlocking this opportunity will require a coordinated nature finance system that works with and across sectors, recognising that achieving nature recovery will provide multiple benefits beyond economic resilience to the health and wellbeing. Securing resources needs national and regional nature finance strategies. This will need project readiness funds, blended structures with public bank support, nature market governance (including standards), new compliance markets, stimulation of voluntary markets, public education, and support for intermediary organisations.

For businesses, investors and policymakers, this means embedding nature and climate risk into core decision-making—from strategy and operations to financial planning. Investment in resilient infrastructure, supply chains, and natural assets will become increasingly essential to safeguard long-term viability

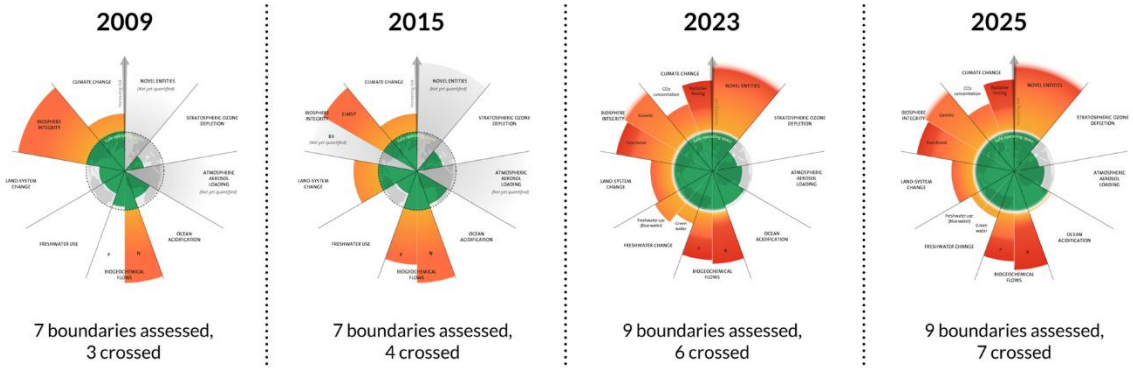
Protected landscapes will play a central role in this transition. In Wales, National Parks and National Landscapes—working collectively through Tirweddau Cymru—offer the scale, partnerships and expertise required to deliver place-based, landscape-scale solutions. These institutions provide a critical bridge between policy, investment and community action.

Bridging the nature finance gap remains far from realised. Wales now faces a clear choice: to shape a nature-positive economy that strengthens resilience and shared prosperity, or risk falling short of both environmental and economic goals.

1. Biodiversity, nature related risks and nature finance globally

In all regions of the world, biodiversity is declining, ecosystems are degrading, and the environmental pressures resulting from climate change are exacerbating, and the thresholds at which natural systems can effectively regulate themselves and maintain a healthy world are increasingly being approached and breached[4].

Planetary Boundaries[5] are being overstepped



This loss of climate stability, biodiversity and ecosystem function directly impacts the availability of water, food security, and resilience against the physical effects of climate change, including flooding, drought, heat stress, and the spread of novel disease. This is a dual crisis of climate and nature, and whilst the significance of climate change have been long recognised in global policy - primarily through the Paris Agreement goals to limit global warming to 1.5°C – only recently has the importance of nature as a whole been formally embedded into global policy which are broadly outlined in the Kunming-Montreal Global Biodiversity Framework (GBF).

Natural finance: investments, or allocation of capital which contributes to the global nature positive goal of halting and reversing nature loss and supporting the implementation of the Global Biodiversity Framework (3)**.**

[4] https://www.stockholmresilience.org/research/planetary-boundaries.html
[5] Azote for Stockholm Resilience Centre, Stockholm University. Based on Sakschewski and Caesar et al. 2025, Richardson et al. 2023, Steffen et al. 2015, and Rockström et al. 2009

Box 1: GBF 2030 Targets for corporates and finance

Target 14: Integrate biodiversity in decision-making at every level. Integrate biodiversity in decision-making frameworks across governments and private sectors, with particular focus on sectors with the greatest impacts on biodiversity.

Target 15: Businesses assess disclose and reduce biodiversity related risks and negative impacts. Ensure that legal, administrative and policy measures are in place encourage and enable businesses to assess, monitor, report and disclose on their negative impacts and risks, whilst also disclosing how they will be avoided and mitigated.

Target 18: Reduce harmful incentives and scale up positive incentives for biodiversity. Reduce incentives which harm biodiversity in a fair and equitable way, whilst scaling up incentives for conservation and sustainable use of biodiversity including natural resources.

Target 19: Mobilise £150 billion per year for biodiversity from all sources, globally. Increase financial resources from all sources including public, private and blended finance; and mechanisms including payment for ecosystem services, green bonds, credit markets, and direct investment.

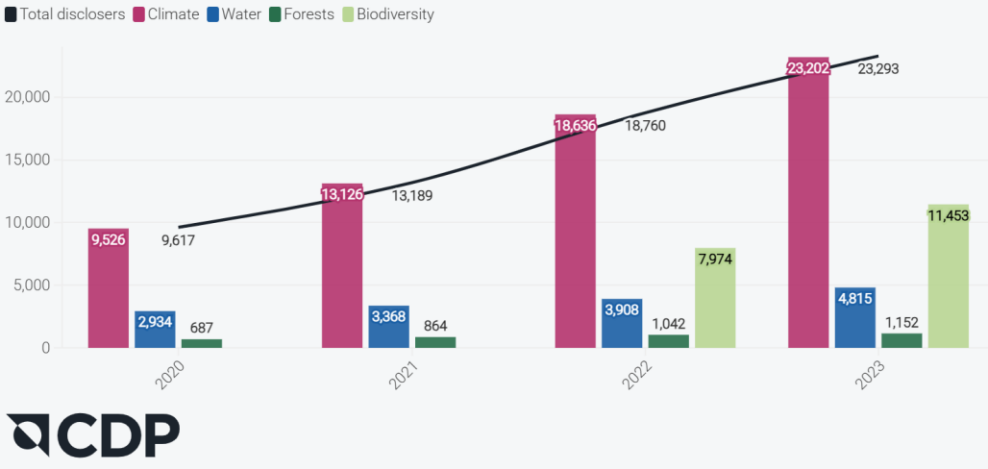
The Global Biodiversity Framework was adopted by 196 countries at COP15 in 2022. The GBF outlines 23 targets for 2030 and four overarching long-term goals for 2050 including the increased integrity, connectivity and resilience of ecosystems; sustainable use and management of ecosystem services; equitable sharing of natural resources; and investment to close the estimated £525bn annual financing gap into nature, including capacity building, technological development, and scaling of project investment. Targets[6] call on private sector organisations to monitor and transparently report on their impacts, dependencies, and risks relating to nature; and to progressively reduce those whilst increasing positive impacts (Box 1).

Companies are beginning to understand how, and where nature loss and climate change affect the long-term resilience of their business models

Simultaneously, momentum from market-led initiatives and regulators has increased the visibility of biodiversity and ecosystems within the corporate landscape. Voluntary frameworks such as the Taskforce on Nature-related Financial Disclosures (TNFD), CDP (formerly the Carbon Disclosure Project), the Global Reporting Initiative (GRI) 101 Biodiversity Standards, ISO:17298 for biodiversity in strategy and organisations; as well as mandatory reporting frameworks including the EU Corporate Sustainability Reporting Directive (CSRD) and anticipated inclusion of nature into International Sustainability Standards Board (ISSB) standards are reinforcing the nature-related risks and opportunities[7].

[6] https://www.cbd.int/gbf/targets/14
[7] https://www.weforum.org/publications/global-risks-report-2025/

By 2025 620 organisations across 50+ countries have publicly committed to evaluating and reporting their nature-related impacts and risks[8]. In 2023 more than 11,000 companies had started to report disclosures on nature via CDP[9]. UK Sustainability Reporting Standards are also coming down the track, with mandatory requirements for considering biodiversity where material for large companies[10].



Early action in Wales

Companies in Wales have started to respond to these market and policy drivers. The insurer Admiral, headquartered in Cardiff has partnered with the National Trust in Wales to help prevent flooding via funding NBS around river ecosystems[11]. Bluestone holiday park has won awards for putting net zero, nature, circular economy and community at the heart of their business model[12]. Through a local enterprise network (LENs), Puffin Produce and Dwr Cymru have been funding programmes to improve soil health and water quality across dairy and potato farms in West Wales[13]. Dwr Cymru also support an innovative farm cluster – the Beacons Water Group[14] – as well as fund peatland action across the Park.

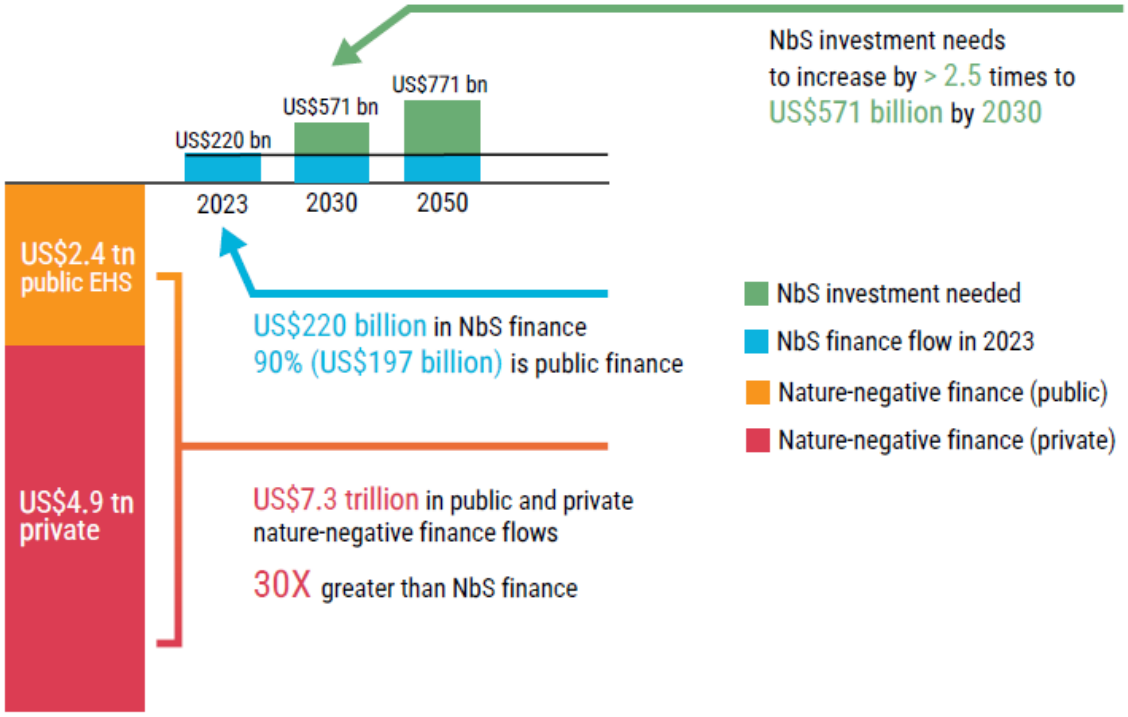
Nature based solutions (Nbs) are actions addressing key societal challenges through the protection, sustainable management and restoration of both natural and modified ecosystems, benefiting both biodiversity and human well-being. NbS have significant, but currently underutilised potential to help address global challenges such as climate change, human health, food and water security, natural disasters and biodiversity loss. (IUCN)

1.1. The global context

A recent United Nations Environment Programme (UNEP) report highlighted the stark imbalance in financing nature; **for every $1 invested in protecting nature, $30 is spent**

[8] https://tnfd.global/tnfd-2025-status-report/
[9] https://www.cdp.net/en/insights/biodiversity-targets
[10] https://www.gov.uk/guidance/uk-sustainability-reporting-standards
[11] https://www.admiral.com/floodforce
[12] https://www.bluestonewales.com/sustainability
[13] https://landscapeenterprisenetworks.com/lens-locations/wales/
[14] https://corporate.dwrcymru.com/en/community/environment/our-projects/watersource/bannau-brycheiniog-mega-catchment/introduction-to-beacons-water-group

on activities that degrade it[15]. Increased action is needed to avoid and reduce the extent of negative impacts on the natural environment if any progress is to be made in protection and restoration.

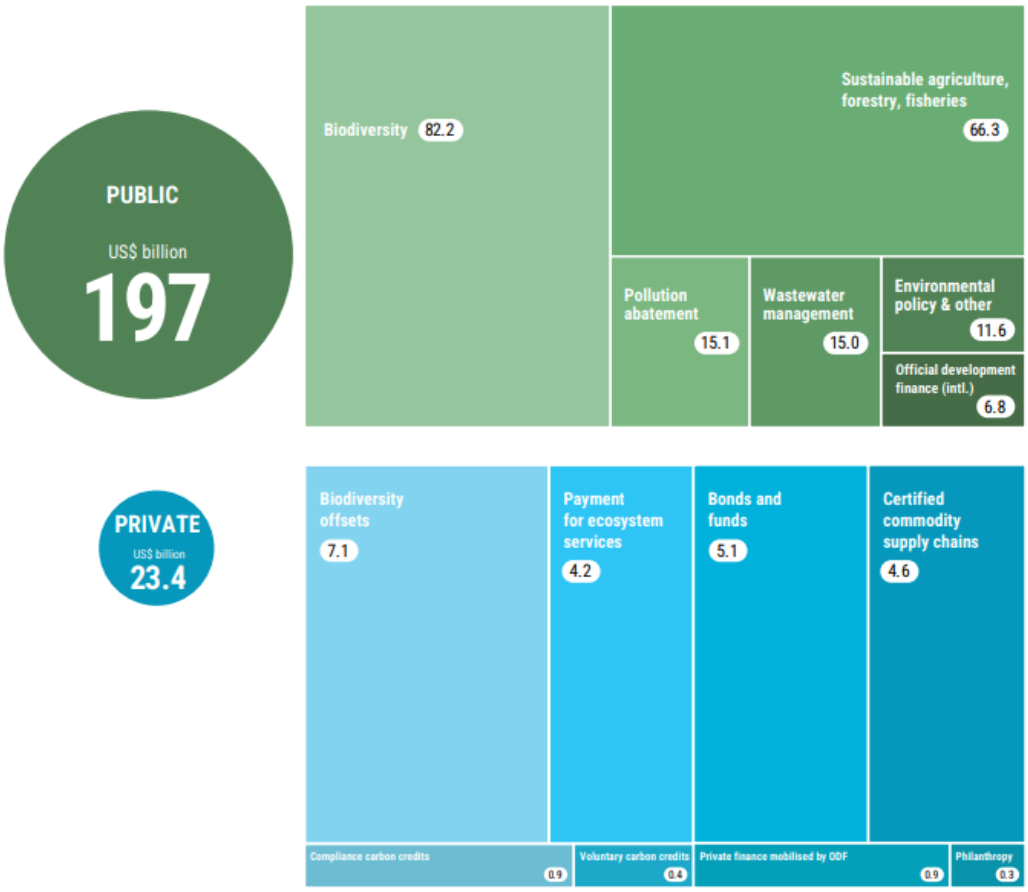


(Graphic adapted from UNEP State of Finance for Nature, 2026[16]*)*

Nature finance focuses largely on mobilising additional funding to protect nature and can deliver a range of benefits which also serve as financially material opportunities for impact and risk mitigation for businesses. Benefits include the increased production yields, increased supply chain resilience, protection against natural disasters, and reduced insurance premiums; as well as non-market benefits such as improved food security, increased human health, temperature and rainfall stability.

Natural capital includes certain stocks of the elements of nature that have value to society (DEFRA). This includes forests, soils, water, air, and biodiversity; and together, these form functioning ecosystems and provide ecosystem services which deliver a flow of tangible and intangible benefits and goods and services essential to society and the economy.

[15] https://www.unep.org/resources/state-finance-nature-2026



(Graphic adapted from UNEP State of Finance for Nature, 2026[17])

However, current funding for nature remains publicly driven, particularly in agriculture, fisheries and forestry. Investment in broader landscape-scale restoration remains comparatively limited (Figure above). There is also a misalignment between public and private finance. While public funding often targets long-term ecosystem outcomes, private finance is typically directed towards offsetting impacts or addressing externalities, rather than driving systemic change.

The UK context and investment gap

This pattern is reflected in the UK, where public funding—primarily through agri-environment schemes—accounts for around 54% of annual investment in ecosystem conservation and restoration[18]. However, public transparency gaps in understanding nature finance flows remain across the UK and devolved nations, undermining efforts to understand impact and progress. What is clear, is the need for increased mobilisation of private action. Private investment to close the nature-finance gap is not a given, and the factors that drive investment will be nuanced depending on scale, sector and regulatory regime to which businesses are subjected. Understanding what drives private sector

[17] https://www.unep.org/resources/state-finance-nature-2026
[18] https://ecoevorxiv.org/repository/view/11703/

investment, and how those drivers can be strengthened, is therefore essential to scaling finance for nature recovery.

1.2. UK and Welsh Context

In February 2025, the UK government reaffirmed its commitment to the implementation of the Global Biodiversity Framework[19] by publishing its National Biodiversity Strategy and Action plan (NBSAP)[20]. While this sets UK-wide goals, responsibility for delivery is largely devolved. Wales therefore has primary responsibility for translating these commitments into tangible outcomes for nature recovery.

In Wales, the Minister for Climate Change led a Biodiversity Deep Dive to accelerate progress towards the 30 by 30 target—protecting at least 30% of land and sea by 2030. A key recommendation[21] was to unlock the potential of Designated Landscapes (National Parks and National Landscapes) to deliver more for nature. A dedicated Designated Landscapes Working Group has since been established to support and prioritise this work.

Key next steps for Wales include the forthcoming bill on Environmental principles, governance and biodiversity targets[22], accelerating the implementation of the Sustainable Farming Scheme, developing collective action approaches to achieve 30 by 30, leveraging the potential of designated landscapes[23] and reforming land and marine management. The recently launched Ffermio Bro funding scheme[24], provides targeted support to farming in designated landscapes and offers a practical opportunity to build momentum around additional financing for nature friendly farming.

Structural challenges and land use

Despite this progress, significant barriers remain to increasing the scale and pace of nature recovery. Over 90% of land in Wales is used for agriculture[25], meaning that achieving nature recovery depends heavily on land use change and sustainable farming systems. Farmers are central to this transition. Delivering long-term outcomes will require aligning environmental objectives with food production, rural economic resilience and land management practices. This could be underpinned by a multi-functional land use framework and further work to support communities to co-produce land use in the future.

Wales' land structure adds further complexity. It is a nation of relatively small holdings—over half of farms are under 20 hectares (Stats Wales) —with diverse and often overlapping tenure arrangements, including common grazing rights and upland systems. These characteristics can make it more difficult for nature finance models, which often favour

[19] https://www.financeforbiodiversity.org/wp-content/uploads/Finance-for-Nature-Positive_FfB-Foundation-and-UNEP-FI_Discussion-Paper.pdf
[20] https://www.gov.uk/government/news/uk-sets-out-biodiversity-commitments-to-protect-nature
[21] https://www.gov.wales/biodiversity-deep-dive-recommendations-html#105982
[22] https://business.senedd.wales/mgIssueHistoryHome.aspx?IId=46004
[23] See recent landscapes Wales report for recommendations for designated landscapes: https://landscapeswales.org.uk/wp-content/uploads/2025/10/BES-Designated-Landscapes-in-Wales_ENGLISH.pdf
[24] https://www.gov.wales/ffermio-bro-farming-designated-landscapes-stage-1-rules-booklet-html
[25] https://stateofnature.org.uk/countries/wales/

scale and simplicity, to operate effectively. At the same time, Wales has strong enabling institutions. Corporate Joint Committees (CJCs), Designated Landscapes and regional partnerships provide an important foundation for landscape-scale collaboration. However, further regional coordination and enabling mechanisms will be required to fully realise this potential[26].

Accelerating climate and nature risks

Climate and nature-related risks are already material in Wales. According to Natural Resources Wales, approximately 275,000 properties—around one in seven—are at risk of flooding from rivers, the sea and surface water. This includes homes, businesses, and critical infrastructure, exposing multiple sectors to disruption.[27]

"Wales is one of the most nature depleted countries in the world, with almost 1 out of 5 species at risk of extinction. .. Only 40% of water bodies achieve good overall status. These pressures cascade from rivers, lakes and groundwaters into estuarine and marine environments, threatening biodiversity and coastal resilience"

State of Natural Resources Report, Natural Resources Wales 2025

Extreme weather events show how quickly climate stress translates into economic disruption. In February 2020, storms (including Storm Dennis and Storm Ciara) caused 3,130 properties to flood in Wales[28.] Thes events trigger widespread flood damage, overwhelming flood warning services and stretch response capacity. The flooding, along with transport and infrastructure disruption (roads, rail, access), have knock on effects on businesses dependent on logistics or customer access, as well as residential and commercial property damages.

Beyond floods, climate change increases risks from heat stress, drought, water scarcity, soil and ecosystem degradation. The UK-wide UK Climate Change Risk Assessment 2022 (CCRA3) identifies risks to crops, livestock and commercial trees from increased flooding and drought, risks to soil health, and risks to supply of food, goods and vital services due to climate related collapse of supply chains and distribution networks. The assessment recognises that agriculture, among other sectors, must adapt to more volatile weather and water availability[29.]

These multiple hazards - flooding, drought, heat, ecosystem degradation - impose a combination of asset damage, business interruption, rising costs, and supply chain risk across sectors. For many firms, climate and nature risks are now a present operational and financial concern, not a distant future issue. As future projections of nature and climatic events intensify, citizens, businesses and public services remain vulnerable.

Yet resources for nature recovery in Wales is not keeping pace

[26] https://heyzine.com/flip-book/NFReview2025#page/32
[27] Natural Resources Wales. *Flood Risk Management Annual Report 2024–25*. 2025
[28] Natural Resources Wales. *February 2020 Floods in Wales: Flood Event Data Summary*. 2020
[29] Audit Wales. Statement on increased urgency for flood risk management following the 2020 storms. 2022

Despite growing policy ambition, resources for nature recovery in Wales are not keeping pace with need. Estimates suggest a funding gap of £5–7 billion[30], with substantial additional annual investment required to deliver nature recovery actions[31].

Whilst these figures have received critique[3233], there is broad consensus that public funding alone will be insufficient and greater mobilisation from the private sector to act responsibility to both reduce its impacts on nature in its operations, and invest into nature recovery, is needed. Understanding and strengthening the drivers of private sector investment is therefore critical to closing the nature finance gap and delivering nature recovery at scale.

[30] https://legacy.greenfinanceinstitute.com/wp-content/uploads/2021/10/The-Finance-Gap-for-UK-Nature-13102021.pdf
[31] https://waleslink.org/wp-content/uploads/2024/09/Pathways-Full-Report.pdf
[32] https://www.futureeconomy.scot/posts/44-is-the-finance-gap-for-nature-really-20bn
[33] https://www.ucl.ac.uk/bartlett/publications/2024/oct/bridging-gap-biodiversity-financing

2. Nature recovery in Bannau Brycheiniog National Park

Protected landscapes are central to the UK's ambition to achieve 30by30, combining ecological significance with the scale, partnerships, connection to local communities and delivery capacity needed for nature recovery. Collectively covering around a quarter of the UK's land area, they are a critical platform for large-scale restoration and sustainable land management. In Wales, Government policy recognises an enhanced role for Designated Landscapes in delivering national biodiversity and climate objectives[34].

Under the Convention on Biological Diversity, protected areas are the cornerstone of global conservation efforts. In Wales, National Parks and National Landscapes together form a network of Designated Landscapes, classified by the International Union for Conservation of Nature (IUCN) as Category V protected areas. These are not wilderness areas, but cultural and living landscapes, shaped over centuries by the interaction of people and nature. Most land is privately owned, with management dependent on a complex mix of farming, tenancy, and shared (common) land rights.

Bannau Brycheiniog National Park is one of three National Parks in Wales and one of fifteen across Britain. Established in 1957, it covers 520 square miles and is home to approximately 33,000 residents, the most populated of the three National Parks in Wales. The National Park Authority plays a dual role as both planning authority and strategic partner in delivering Wales' climate, water and nature recovery goals.

The Park's Management Plan[35] sets out five interconnected missions: to achieve net zero by 2035, restore river systems, and become nature positive by 2030, anchored in place and with communities.

A working landscape

Bannau Brycheiniog is a living landscape, with over 1,000 working farms—predominantly mixed livestock enterprises. Land ownership is diverse, including owner-managed farms, tenancies, common grazing, estates and charitable trusts. The Authority itself manages around 13.5% of the land, making it the largest National Park landowner in the UK

The Park also plays a significant economic role. It receives 3.8 million visitors annually, generating around £434 million in economic value (2024). Recreation, agriculture and ecosystem services are tightly interconnected.

[34] https://www.gov.wales/30by30-framework-wales-html
[35] https://future.bannau.wales/

Natural assets of national importance

The Park is home to a wide range of habitats and species of high conservation value, alongside critical natural assets including:

- Over 20 major river catchments, supplying more than 50% of Wales' drinking water and 90% of Cardiff's
- Extensive peatlands (c. 15,900 hectares), providing significant carbon storage and water regulation
- 8 National Nature Reserves, 64 Sites of Special Scientific Interest (SSSI), and 11 Special Areas of Conservation (SAC)
- Globally recognised designations and special landscapes, including an International Dark Sky Reserve and a UNESCO Global Geopark
- a diverse range of historic sites, including former ironworks, lime quarries and traditional rural settlements.

These assets underpin both ecological resilience and economic activity across Wales.

Declining condition and increasing risk

Despite its ecological importance, the condition of natural capital within the Park is deteriorating. Habitat extent and quality are declining, with only 10% of SSSIs in favourable management condition and over half classed as unfavourable (NRAP[36]). Key pressures include:

- Nutrient pollution impacting river systems, including the Usk
- Degraded peatlands at risk of further erosion and deterioration
- Land-use pressures from grazing and recreation
- Increasing climate-related risks, including flooding, drought, heatwaves and wildfires

These pressures are not only environmental but economic, with impacts extending beyond the Park to downstream communities, infrastructure and businesses.

Sector dependencies on natural capital

A wide range of sectors depend directly or indirectly on the Park's natural capital:

[36] https://beacons-npa.gov.uk/environment/nature-recovery-action-plan/

i. **Agriculture, food and farming:** with over 1,000 predominantly livestock and cattle farms, soil health, river health and biodiversity impact upon the reliability and prices of food products that are produced in the National Park and sold into abattoirs and onto supermarkets and other retailers.
ii. **Visitor economy:** attracting over 3.8m visitors per year, generating £434m of economic impact (2024) and maintaining Rights of Way and access benefits the tourism and retail sectors inside and outside of the park boundary across accommodation, food and retail businesses.
iii. **Insurers and financial services:** increasing risks to homes, infrastructure and the general economy from flood risk and drought are borne out by private financial services firms and/or the public sector.
iv. **Utilities**: water, gas and electric providers operate across the park, and are dependent on abstraction (water), maintenance of land (gas, electric)
v. **Health and wellbeing:** as a major tourist destination supporting outdoor activity and access to the natural environment, the park supports wellbeing and health of visitors, many of whom come from the day from major cities like Cardiff and Bristol.

These dependencies illustrate the extent to which natural capital functions as critical infrastructure for the Welsh economy.

Scaling nature recovery through partnerships and funding

To deliver its Management Plan, the Park and its partners are developing new approaches to nature finance, combining public funding, private investment and partnership models. Nature finance is defined here as funding (grants) and finance (investments), delivering benefits for both nature and communities.

"Our National Park will be a place of inspiration, driving action for a vibrant and sustainable future."
(BBNPA Management Plan)

Examples of natural capital programmes underway in across the park:

Programmes	***Natural capital benefits***	***Return on investment (Social and economic, £)***
Catchment / river health – Usk Catchment	*Water quality, recreation benefits, carbon sequestration, natural flood management, biodiversity of farm businesses*	*2:1 to 5:1 depending on action*
Upper Usk South 8,000 ha restoration	*Large scale nature recovery programme in a strategically important part of the Usk Catchment*	Carbon, biodiversity, water quality and quantity.
Peatland restoration	*Carbon sequestration, water retention to reduce flood risk, biodiversity*	*4.6:1*[37]

[37] https://www.camecon.com/hubfs/145725293/The-economic-costs-benefits-of-nature-based-solutions_final-report_FINAL_V3.pdf

Programmes	Natural capital benefits	Return on investment (Social and economic, £)
Species conservation (Curlews)	*Biodiversity, soil carbon sequestration*	*Not available*
Resilient Rivers	*Flood risk reduction led by the Wye and Usk Foundation*	*TBC*

Scaling nature recovery through partnerships and funding

Bannau Brycheiniog demonstrates the potential of protected landscapes as delivery platforms for nature recovery and investment. With established partnerships, local knowledge, and the ability to operate at landscape scale, Designated Landscapes provide a bridge between policy ambition and on-the-ground action. Realising this potential will require scaling finance, strengthening partnerships, and aligning investment with long-term environmental and community outcomes.

3. Identifying private sector dependencies on Bannau's natural capital

The aim of this study was to understand what drives private sector investment in the stewardship of natural capital in Wales. This was achieved through a combination of desk-based research, materiality assessment, and targeted stakeholder interviews. A long list of 100 companies was compiled using the Parks' engagement records and business databases. These organisations were selected based on their operational presence in Wales and their connection to the Park's natural capital, including direct engagement, geographic proximity, or supply chain dependencies.

To ensure a representative cross-section, companies were characterised by sector, size, ownership type and maturity of climate and nature strategies. The ENCORE[38] database was used to assess potential nature-related impacts and dependencies across sectors. This enabled identification of businesses with the strongest relationships to ecosystem services within the Park (see Tables 1 and 2).

This structured mapping informed the selection of a smaller sample of companies for in-depth analysis. The objective was to explore drivers, barriers, enablers, and decision-making processes related to investment in natural capital.

Across the initial sample of 100 companies:

34% of businesses' operations have moderate or high dependencies on BBNP's ecosystem services

55% had public strategies which addressed net zero ambitions, nature impacts, sustainable investments, offsetting, or insetting

31% had a clear philanthropic strategy including funding nature and climate initiatives

From this group, 10 companies were selected for semi-structured interviews (60 minutes each). Interviews explored sustainability and Environmental, Social and Governance (ESG) approaches; business actions on nature, climate and water; and investment decisions and constraints related to natural capital. This approach provided a targeted but diverse evidence base, reflecting the range of ways in which businesses interact with, depend on, and invest in natural capital in Wales.

[38] Exploring Natural Capital, Opportunities, Risks and Exposure: https://encorenature.org/en

Table 1: Overview of impacts on nature for key sectors.

	Climate change	**Invasive species**	**Land-water-sea use and change**			**Pollution**					**Resource use**
Sector	GHG Emissions	Invasive species introductions	Area of freshwater use	Area of land use	Area of seabed use	Disturbances	Non-GHG air pollutants	Nutrient pollutants	Toxic soil pollutants	Solid waste	Volume of water use
Finance and insurance	L			L		L	VL		L	VL	VL
Food and beverage manufacturing	M	VL		L		M	M	VH	M	M	M
Industrial production	H			L		VH	H		VH	M	M
Retail and wholesale trade	M	VL		L		M	H		H	L	M
Transportation	M	L	M	L	M	VH	L		H	M	L
Utilities	H		M	M		M	M		VH	L	L

Key	Very Low	Low	Medium	High	Very High

Table 2: Overview of key dependencies relevant for key sectors

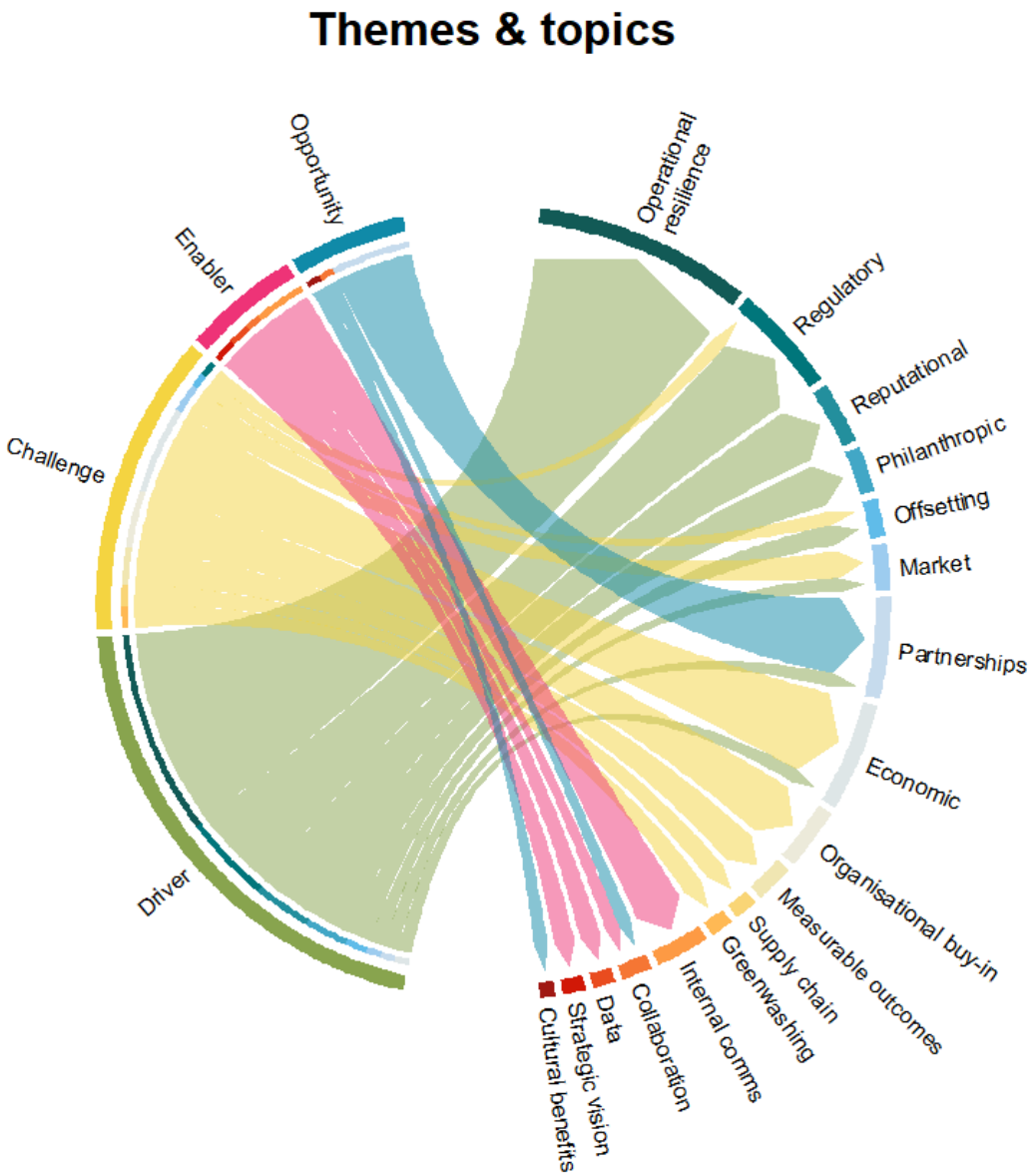
	Direct physical input		Enables production processes				Mitigates impact	Protection from disruption		
SECTOR	Biomass provision	Water supply	Air Filtration	Rainfall pattern regulation	Water flow regulation	Water purification	Solid Waste Remediation	Climate regulation	Soil and sediment retention	Storm and flood protection
Finance and insurance		VL			VL			L	VL	VL
Food and beverage manufacturing	VH	H		M	H	VH	M	L	L	M
Industrial production		H	VL	M	H	M	L	L	L	M
Retail and wholesale trade	VL	M	VL	VL	M	M	M	L	M	M
Transportation		M	VL	VH	M	M	VL	M	H	H
Utilities		VL	VL	M	VL	M	L	L	L	VL

Key	Very Low	Low	Medium	High	Very High

4. Results

This research identified a range of **drivers, challenges, enablers and opportunities** influencing private sector investment in natural capital. Insights are drawn from interviews with ten companies operating across food and beverage, manufacturing, retail, transport and utilities. Financial institutions were excluded, as their investment drivers and mechanisms are materially different.

From the ten companies interviewed, several consistent themes emerged shaping decisions to invest in natural capital (read left to right)



4.1. Taxonomy of investment drivers in Wales natural capital

The rationale for private sector investment in natural capital is widely documented[39,40,4142,43,11], typically spanning regulatory, economic, operational and reputational drivers. This study confirms those findings and refines them into a practical taxonomy relevant to Wales.

Companies are typically influenced by multiple drivers simultaneously. For example, supply chain decarbonisation by supermarkets may be driven by both regulatory pressures and the need to increase resilience in their supply chains to climate shocks.

Taxonomy of drivers for business investments into BBNPA's natural capital

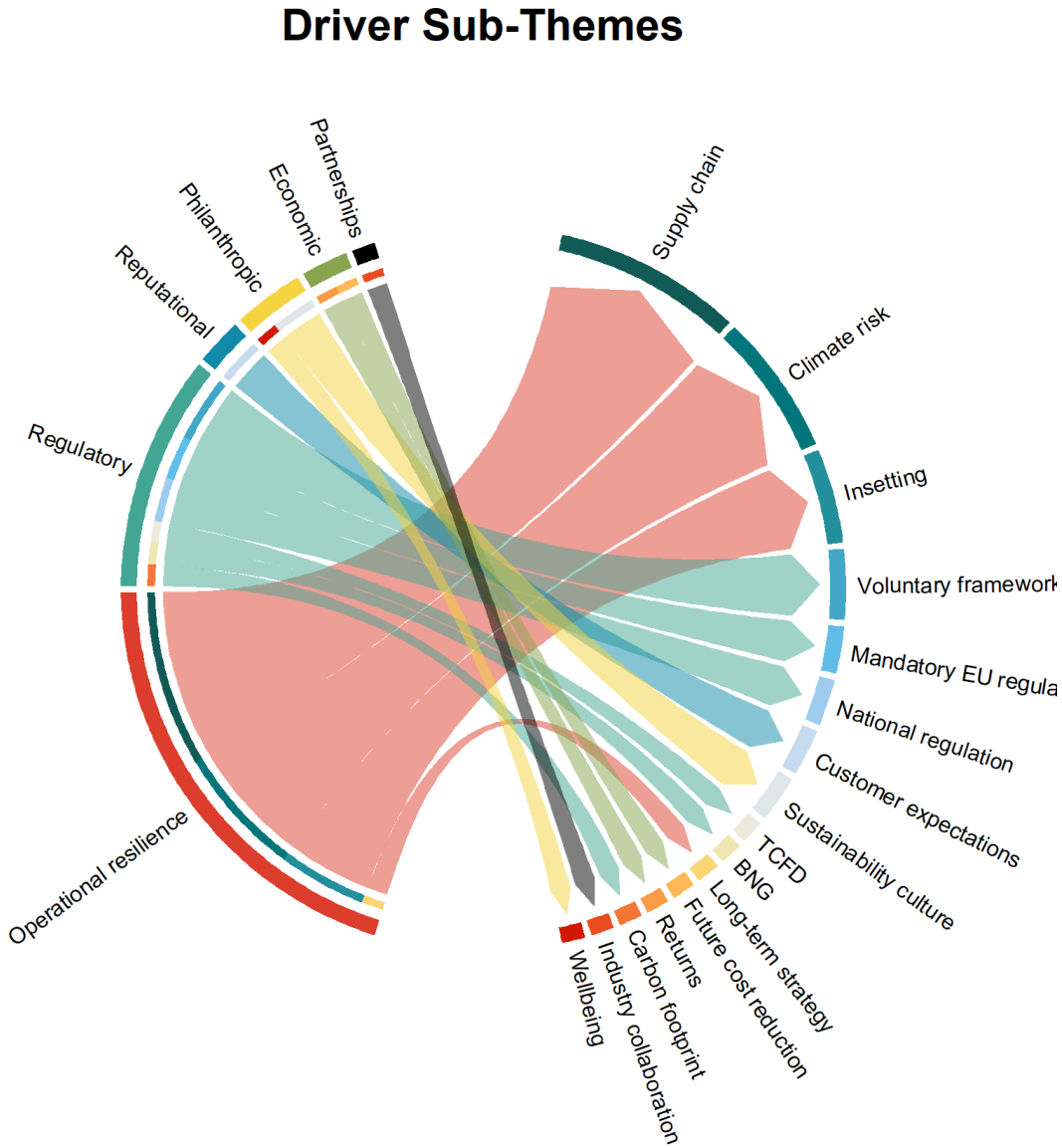
Category	Description	Includes
Operational resilience	Natural capital investments which directly address operational resilience, either within owned and controlled operations, or the supply chain	CapEx or OpEx for Nature-based Solutions, alternative agricultural or circular production methods which mitigate risks and impacts, ensure operational resilience or deliver positive environmental impacts. This can also reduce insurance costs and secure additional income for businesses. This also includes supply chain in setting where companies seek to reduce nature impacts in their supply chain
Regulatory & voluntary standards	Mandatory and voluntary reporting; compliance markets or legal requirements to mitigate/reduce or offset impacts.	Mandatory markets in England such as Nutrient Neutrality or BNG or global and domestic carbon markets. Reporting standards and frameworks such as., TCFD, TNFD, CDP, CSRD in Europe[44].
Reputational, philanthropic, and partnership	Positive reputational benefits in the eyes of internal and external stakeholders linked to the organisation, fund, product, or project.	Grants from foundations, businesses, trusts or individuals or direct partnerships. Often a co-benefit of other drivers, reputational benefits can derive from partnerships and actions across the value chain.

[39] https://www.nature.com/articles/s41559-023-02037-5?fromPaywallRec=false
[40] https://www.sciencedirect.com/science/article/pii/S0006320725004999
[41] https://www.sciencedirect.com/science/article/pii/S1470160X23004508
[42] https://www.cisl.cam.ac.uk/files/cisl_atrack_scaling_finance_for_nature.pdf
[43] https://www.cisl.cam.ac.uk/system/files/documents/cambridge-natural-capital_0.pdf
[44] Taskforce on Climate-related Financial Disclosures (TCFD), Taskforce on Nature-related Financial Disclosures (TCND), Carbon Disclosure Project (CDP), Corporate Sustainability Reporting Directive (CSRD)

Financial return	Tangible returns on investment as a direct result of investments into natural capital.	Access to transition or sustainability loans, insurance premium benefits, reduced long-term operational expenditure or offer profitable business activities

4.2. Drivers of business investment into nature and climate

The identified drivers of investment into nature were complex and interconnected. Operational resilience and safeguarding against long-term risks relating to nature loss and climate change emerged as the top consideration for businesses with close ties to the natural capital of the park.



Companies are more likely to invest in climate and nature if there are clear links to strengthening their supply chains

Key points:

- **Companies are more likely to invest in nature and climate projects if these reduce risk in their supply chains or operations.**
- **Resilience against floods and droughts especially in South Wales are a key concern.**
- **Due to increasing and evolving climate and nature risks, it is strategically beneficial for companies to prioritise risk identification and mitigation.**

Resilience and business continuity are the primary motivations for investing in natural capital. Climate and ecosystem resilience risks, such as floods and droughts, were most frequently cited given the prevalence of these events occurring in Wales, and their direct impacts on both company operations and supply chains of local businesses.

A consistent theme was that nature investment is justified when it protects assets, stabilises supply chains, or reduces disruption. When companies can identify a clear commercial benefit derived from the lands and water sources they depend on, they cited a greater incentive to work with external partners (e.g. local authorities) on initiatives that benefit both local business and society.

Risk is increasing, but visibility is uneven

The growing frequency and severity of climate and nature risks has made risk management a strategic priority. However, many organisations state that they lack the tools and data to fully assess exposure.

- Risks across supply chains are often poorly understood or unquantified
- Smaller organisations which cannot prepare or adapt are more vulnerable to cascading impacts.
- Disruptions (e.g. crop failure, transport access) can have immediate revenue impacts

Nature-based solutions were recognised as offering systemic risk resilience in areas such as water availability, soil health and pollination

Voluntary frameworks shape behaviours but do not drive investment

Key points:

- **Mandatory climate-reporting is perceived as a tick-box requirement, but not as major drivers for investment.**
- **Voluntary initiatives like science-based targets (SBT's), however are considered to be greater drivers for shaping ambitions, with tangible and practical actions and benefits associated.**

Regulatory drivers emerged as an important reason for engaging in broader sustainability initiatives. However, reporting requirements do not appear to directly translate into a driver of nature or climate related investment. In some cases, compliance with sustainability regulation was viewed as a *"box-ticking exercise"*, while others framed it simply as a legislative obligation rather than a strategic driver. While respondents agreed that *"pushes…come from regulation,"* they positioned this influence as secondary to industry collaboration and voluntary initiatives.

Given that mandated nature reporting regulations are less common than climate regulation, there were not many case studies referenced during interviews. English biodiversity net gain (BNG) was discussed in the context of possible spillover effects on organisations that operate in both England and Wales. BNG is not a legally binding regulation in Wales, however examples were given where expectations of companies showing some level of voluntary compliance with this regulation occurred on certain projects. In these instances, regulation was described as a challenge that created additional work and cost for companies rather than incentivising additional investment into nature or natural capital.

There was growing interest in local and high-quality carbon markets, drive by reputational risk concerns around low integrity or low impact offsets. Yet, respondents discussed a lack of economically viable offsetting opportunities in Britain. Views on offsets were mixed across sectors. Whilst many perceived them as a necessary last resort, there is also interest in 'insetting' approaches which can deliver benefits directly within company's own value chains compared to traditional offsets which provide balance sheet offsets, but no tangible value chain impact, echoing the earlier theme of business continuity and operational resilience.

While mandatory requirements did not emerge as the main source of momentum, several respondents expressed interest in aligning with voluntary 'gold standard' frameworks, such as the Science Based Targets initiative, suggesting that the governance and guidance provided by voluntary frameworks may play a more significant role in shaping and supporting future corporate ambition in the nature space. For nature finance, this may indicate that voluntary frameworks could play a role in informing how financial institutions interpret corporate approaches to nature-related risk and transition planning, rather than a strict reliance on mandatory disclosures. However, without clear regulatory signals, businesses are unlikely to move at scale without additional incentives, yet financial

institutions can accelerate this shift by embedding such expectations into preferential financing terms and other market-based levers.

Reputation is a strong motivator for mature companies

Key points:

- **Established businesses with existing climate and nature projects see reputation as a key driver - these efforts are integral to brand and identity.**
- **Customer expectations make it easier to build a business case for investment. However there is often a gap between what customers say, and their behaviours**

Businesses more mature in their understanding of climate and nature within the context of their value chain considered reputational risk and opportunity a more prominent driver. Mature businesses framed their efforts as part of an established culture where integrating climate and biodiversity considerations is seen as core to their identity. In some cases, this commitment has been embedded for decades, making nascent nature-related risk and reporting initiatives feel like a natural extension of existing practices, rather than a new obligation.

"…we call [sustainability] plan A because there is no plan B."

The embedding of company identity with climate and nature action was often linked to customer expectations, with businesses noting that consumer interest in issues such as biodiversity loss makes the business case for investment easier to justify. However, a disconnect between consumer sentiment and actual purchasing behaviour means that the business case is not always straightforward. Younger consumers were reported as being increasingly attentive to sourcing and environmental impact, however, actual purchasing decisions are more likely driven by economic factors such as price and brand, rather than sustainability credentials.

Reputational drivers are strongest for businesses that have already positioned themselves as sustainability leaders, they perceive maintaining credibility and meeting existing stakeholder expectations reinforces their competitive advantage. For companies not already in that position, a lack of clear return on investment stemming from enhanced reputation with consumers makes a less compelling investment case.

Philanthropic action is less likely to drive nature and climate projects than quantifiable returns

Key points:

- **Few companies invest in nature or climate purely for charitable reasons. When it does happen, its often linked to personal commitments from senior leadership.**
- **Even when framed as CSR, companies have an expectation of some sort of return, even if non-financial.**
- **Philanthropy tends to complement commercial and strategic considerations rather than acting as a standalone driver.**

Philanthropic motivations for investing in nature or climate were less common among respondents and were typically linked to the personal interests or values of the company's leadership. Effective sustainability ambitions can be driven for example by a CEO's commitment to embedding environmental considerations into corporate culture and values, rather than ground-up business case building from sustainability teams.

Philanthropy also appeared through a Corporate Social Responsibility (CSR) lens, with some companies incorporating environmental benefits into broader wellbeing objectives. However, interviews suggested that even where philanthropic or CSR partnerships exist, investment in natural capital is not treated as purely charitable. Instead, companies view these investments through a commercial lens, expecting non-financial returns in the form of employee wellbeing or reduced exposure to climate and nature-related risks. This indicates that while philanthropy can influence action, it is generally intertwined with strategic considerations rather than standing alone as a driver.

4.3. Barriers to business investment into nature and climate

Three consistent categories of barriers emerged, each limiting the scale and pace of investment. Even where companies understand climate risk and are motivated to respond there are very real direct (e.g. operational) and indirect (e.g. data availability) constraints which prevent them from doing so. The extent of these constraints varies according to the maturity of companies' existing climate and nature knowledge and programmes, which in turn has a material influence over their capacity to overcome them.

Limited investment is the biggest barrier to corporate nature and climate action

Key points:

- **Financial constraints are a major barrier to nature and climate projects, especially for less mature companies**
- **High capital costs and rising operational expenses limit investment although the desire to invest in sustainability projects is present**
- **Proposals must demonstrate a strong business cases to secure funding**

Financial limitations are a major barrier for companies which are less advanced in their climate and nature strategies and action, particularly where sustainability was not embedded in customer expectations or corporate culture. For these businesses, investment in nature-based solutions of any kind (either within own operations or insetting with the supply chain) emerged as one of the biggest challenges. High upfront costs of climate projects are considered "capital-intensive".

As operational costs rise due to broader socioeconomic and geopolitical challenges, investment cases for nature become more challenging. Concurrently, calls for businesses to shift from reactive spending towards preventative investment in long-term resilience. Organisations such as the Future Generations Commissioner for Wales have emphasised the advantages of preventative action in relation to several topics, including climate change, arguing that delaying investment ultimately increases both financial and societal costs[45].

Combined nature-related risk and financial constraints are already impacting Welsh Small and Medium Enterprises (SME)

For the SMEs interviewed, lack of investment is one of the biggest issues they face. The capital-intensive nature of nature and climate projects makes them difficult to implement easily or readily, and these pressures are further compounded by rising operational costs linked to climate impacts.

One company reported that they have faced a sobering **75% increase in the cost of their main supply chain crop over the last 10 years** due to changing weather conditions affecting both the volume and quality of UK-sourced yields.

Compliance requirements and global market uncertainties compound financial constraints, further reducing available budgets for sustainability projects and suggesting that without strong stakeholder pressure or clear returns, financial barriers will remain a significant obstacle to scaling nature-related action.

Organisational capacity and buy in

Key points:

- **Organisational buy-in is often limited, with sustainability projects and learning driven by a few individuals**
- **Teams with legacy mindsets and rigid processes can create resistance to innovative approaches**
- **Knowledge gaps across non-sustainability functions mean that nature risks are not widely understood internally**
- **Impact of support from leadership varies based on maturity of both climate/ nature understanding and physical capacity to implement initiatives**

A lack of organisational buy-in substantially limits progress on nature and climate initiatives. Where corporate sustainability efforts are championed by just a few individuals, progress is slow or stalls. Without broader and more senior support within organisations, commitments are hard to implement, sustainability initiatives lack visibility at board level, and opportunities may be missed due to a lack of understanding amongst decision makers.

[45] https://futuregenerations.wales/news/protect-funding-for-prevention-in-welsh-government-budgets-says-future-generations-commissioner/

There can also be increased resistance to sustainability projects and budget allocation among long-tenured employees if these are seen to challenge legacy company processes. In safety-critical industries, for example, some teams view nature-based solutions as inherently less reliable, less controllable, or less aligned with existing operational health and safety protocols than traditional 'grey' infrastructure or solutions. This perception, whether accurate or not, can reinforce the belief that nature-based approaches introduce unnecessary risk or add complexity without clear operational benefit. As a result, a culture can develop that is closed to ideas perceived as unconventional, making it difficult for new concepts to progress even to the stage of discussion or evaluation, as they are often dismissed in their earliest phases.

"It's extremely difficult as the lone voice in the organisation to implement what we said would be delivered."

Knowledge and capacity gaps reinforce these challenges. For many companies, nature and climate risks were still considered "young and new," and the link to supply and operational resilience is not considered to be widely understood outside of sustainability teams. Together, these factors serve to limit internal understandings of non-financial risks, leaving sustainability teams isolated in their efforts, and ultimately slowing organisational progress in the nature and climate spaces.

Data and evidence gaps: Non-financial returns need to be measurable and comparable to create a strong business case for investment into nature

Key points:

1. **Companies want clear, attributable, and quantified results to support future action, but the lack of reliable nature data makes it difficult to measure progress and justify investment**
2. **Better quality global and local nature data will help companies to quantify their nature risks and have a reference point for what 'good progress' looks like when defining project goals and desired outcomes**

Companies consistently expressed a preference for attributing support to tangible, quantified outcomes in climate and nature projects. This was perceived as a challenge for natural capital projects due to the potentially wide range of different metrics and methods required to assess improvements across different facets of nature. Respondents highlighted concerns about the lack of quantifiable information on the long-term from nature projects making it difficult to provide measurable evidence of progress. For example, companies may want to invest in wetland restoration for natural flood management services, but struggle to define what success looks like from a monetary perspective. Proving a direct link between restored wetlands and reduced flood damage costs or improved operational continuity during extreme weather events is perceived to be complex, making it harder to justify the investment internally.

"It's very hard for us to gather evidence and know that it's reliable."

This challenge is compounded by the fact that corporate understanding of nature-related risk and opportunity is not well developed for many businesses. This means it is difficult for businesses to define exactly what type of natural capital investment is most relevant. Without robust data, including a reliable baseline for nature-related impacts, dependencies and risks and clear accessible financial modelling for nature investment-derived benefits, securing investment becomes significantly harder. Several respondents stated that securing senior-level funding is difficult without data-backed justification, particularly when nature initiatives compete with other priorities that have more established performance metrics.

Collectively, this suggests that the increase of nature investments will depend on greater corporate understanding of nature within the boundaries of their value chain; access to reliable nature datasets and; robust comparable metrics against which companies can monitor, report, and validate their ecological and value chain impacts.

5. Enablers and actions to advance the agenda in Wales

This initial research highlights an evolving landscape for private sector engagement in nature recovery in Wales. Companies sit across a spectrum of maturity in terms of their understanding of, and capacity to respond to, climate and nature-related impacts, risks and opportunities.

There are clear drivers for action—particularly where investment supports operational and supply chain resilience, or where a company's reputation is bolstered by being a sustainability leader. However, these drivers are unevenly distributed. While larger firms have greater capacity to act, they also have greater flexibility to diversify supply chains geographically, in some cases reducing their exposure to place-based risks rather than investing locally in nature recovery. This reinforces a central point: investment in nature recovery is not only a business decision, but a societal one. Local investment strengthens long-term resilience for communities, economies, and ecosystems, whereas disinvestment or relocation can exacerbate regional inequalities.

Overall, climate-related risks are better understood and more systematically embedded into corporate decision-making, compared to nature related risks. Among more advanced organisations – those with established sustainability programmes and internal capacity – a set of common enabling factors emerges.[46]:

- Establishing nature as a long-term operational focus, therefore embedding it as a part of company's strategic vision and direction.
- Engaging and upskilling the executive board on the opportunities of investing into nature recovery[47].
- Installing nature guardians on boards and investment committees as trialled by the National Infrastructure Commission for Wales and the Usk Catchment Partnership[48].
- Strengthening internal communication and training on climate and nature to improve understanding across all levels of the company.
- Engaging with suppliers to address nature-related impacts, risks and opportunities. For example: identifying alternative uses for waste products which can create circular economies and reduce virgin resource use; sharing lessons learned related to climate risk with farmers in upstream supply chain to help them climate-proof their operations and protect their yields.
- Integrating sustainable practices into operations. For example: practical interventions at farm level like the use of sustainable fertilisers and cover cropping to reduce chemical use and improve soil health.
- Overcoming data barriers by working with value chain partners including supplier procurement and operational team to identify data gaps and develop

[46] This report stops short of making detailed recommendations to business as these are well documented by others. For example, the recent IPBES Global report on Business and Biodiversity Assessment (Media Release: IPBES Business and Biodiversity Assessment | IPBES secretariat)

[47] See Delivering Sustainable Data Centres for and example of available guidance in this area.

[48] https://uskcatchmentpartnership.wales/

measurement and monitoring protocols. This can help companies to better understand impacts, dependencies, risks and opportunities, and build the business case.

- Developing partnerships between corporates, government and local organisations that benefit both business and community to drive public-private-third sector collaboration and knowledge sharing on climate and nature.

SMEs face their own challenges, with comparatively less financial resources and people to address climate and nature risks within their value chains. Enabling this segment will require more supportive resources.

Taken together, these enabling factors can be seen as building blocks for a more mature approach to nature-related investment. However, sequencing matters. Embedding nature within strategic decision-making and securing organisational buy-in are foundational steps. Without these, subsequent actions—such as data development, partnership building, and supply chain engagement—are unlikely to be sustained or scaled.

To begin understanding impacts and dependencies, consider the following:

1. What is the company's impact on climate and nature, and how can these be measured and/or addressed?
2. What dependencies does the company have on climate and nature? Are these embedded in existing risk and asset mapping?
3. What investments does the company make to mitigate risk related to its dependencies, or to recover nature?

Long way from bridging the nature-finance gap

Across Wales, a range of initiatives are already emerging to mobilise private investment into nature recovery but we remain far from realising 30by30 commitments. While nature markets remain at an early stage, there is potential for a more coordinated and place-based approach. A key requirement will be the ability to connect private capital with land managers and project developers in a way that is both credible and scalable. This includes supporting intermediary organisations, strengthening governance, and ensuring that investment delivers tangible outcomes for both nature and communities.

Wales is well positioned to lead in this area. Its legislative framework, institutional landscape, and strong tradition of community engagement provide a foundation for a more integrated approach. However, realising this opportunity will depend on meaningful collaboration between the public sector, businesses, and local communities. Only through this collective approach will it be possible to bridge the nature finance gap at the scale required, while ensuring that nature recovery contributes to long-term resilience, equity, and shared prosperity.

6. Appendices

6.1. Glossary of terms

Term	Definition	Source
Biodiversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.	Convention on Biological Diversity
Carbon credits	A carbon credit represents a reduction of 1 metric ton in greenhouse gas emissions to compensate for 1 metric ton of emissions made somewhere else. A credit can be bought, sold or traded before it is "retired," meaning it cannot be traded again, assuring that only the buyer can claim emissions cuts associated with that credit.	Conservation International
Dependency	Dependencies are aspects of environmental assets and ecosystem services that a person or an organization relies on to function	ENCORE
Ecosystem service	Ecosystem services were classified according to the UN System of Environmental-Economic Accounting Ecosystem Accounting, which comprises three categories of ecosystem service: provisioning services (i.e., those related to the supply of food, fibre, fuel and water); regulating and maintenance services (i.e., those related to activities of filtration, purification, regulation and maintenance of air, water, soil, habitat and climate); and cultural services (i.e., the experiential and non-material services related to the perceived or realized qualities of ecosystems whose existence and functioning enables a range of cultural benefits to be derived by individuals).	ENCORE
Impact	A change in the state of nature caused by a business activity with a direct causal link	ENCORE
ISSB	The International Sustainability Standards Board. The sustainability arm of the IFRS tasked with developing standards that will result in a global baseline of	International Financial Reporting

	sustainability disclosures focused on the needs of investors and the financial markets.	Standards (IFRS) website
IPBES	The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. An independent intergovernmental body established by States to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.	IPBES website
Material topic	A risk or opportunity that is significant enough to influence the decisions of stakeholders.	International Sustainability Standards Board
Natural capital	includes certain stocks of the elements of nature that have value to society. This includes forests, soils, water, air, and biodiversity; and together, these form functioning ecosystems and provide ecosystem services which deliver a flow of tangible and intangible benefits and goods and services essential to society and the economy	DEFRA
Nature-based solutions	Actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature.	International Union for Conservation of Nature
Nature credits	Nature credits represent an investment into nature-positive actions by a company, a financial institution, a public entity or a citizen, which in return can benefit from cleaner ecosystems, risk reduction, improved reputation and higher social acceptability for its projects.	European Commission
Nature finance	The part of green finance that specifically finances or invests in improvements to the natural environment.	Ecosystems Knowledge Network
Nature-related opportunity	Activities that create positive outcomes for organisations and nature by avoiding or reducing impact on nature or contributing to its restoration. Nature-related opportunities can occur: i) when organisations mitigate the risk of natural capital and ecosystem services loss; and ii) through strategic transformation of business models, products,	TNFD Nature-related Risk & Opportunity Management and Disclosure Framework

	services and investments that actively work to halt or reverse the loss of nature.	
Nature-related risk	Potential threats posed to an organisation linked to its and other organisations' dependencies on nature and nature impacts. These can derive from physical, transition and systemic risks.	TNFD Nature-related Risk & Opportunity Management and Disclosure Framework
Sustainability	The balance between environment, equity and economy that allows society to meet the needs of the present without compromising the ability of future generations to meet their own needs.	United Nations
TNFD	The Taskforce on Nature-related Financial Disclosures. A set of disclosure recommendations and guidance that encourage and enable business and finance to assess, report, and act on their nature-related dependencies, impacts, risks, and opportunities	TNFD website

6.2. ENCORE impact and dependency pathways

Pathway name	Definition
Pathway Type: Impact/Pressure	
Area of freshwater use	Freshwater area is used for the activity. Examples of metrics include area of wetland, ponds, lakes, streams, rivers or peatland necessary to provide ecosystem services such as water purification, fish spawning, areas of infrastructure necessary to use rivers and lakes such as bridges, dams, and flood barriers, etc. Impacts include hydrological changes, freshwater geomorphology and fluvial processes.
Area of land use	Activity uses land area. Example metrics include area of agriculture by type, area of forest plantation by type, area of open cast mine by type, etc.
Area of seabed use	Seabed area is used for the activity. Examples of metrics include area of aquaculture by type, area of seabed mining by type, etc. Impacts include hydrological changes, freshwater geomorphology and fluvial processes.
Disturbances	Activity produces noise or light pollution that has potential to harm organisms. Examples of metrics include decibels and duration of noise, lumens and duration of light, at site of impact.
Emissions of GHG	Activity emits GHG. Examples include volume of carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), Sulphur hexafluoride (SF6), Hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs), etc.
Emissions of non-GHG air pollutants	Activity emits non GHG air pollutants. Examples include volume of fine particulate matter (PM2.5) and coarse particulate matter (PM10), Volatile Organic Compounds (VOCs), mono-nitrogen oxides (NO and NO2, commonly referred to as NOx), Sulphur dioxide (SO2), Carbon monoxide (CO), etc.
Emissions of nutrient pollutants to water and soil	Activity emits nutrient pollutants that can lead to eutrophication. Example metrics include volume discharged to receiving water body of nutrients (e.g., nitrates and phosphates).
Emissions of toxic pollutants to water and soil	Activity emits toxic pollutants that can directly harm organisms and the environment. Examples include volume discharged to receiving water body of toxic substances (e.g., heavy metals and chemicals).
Generation and release of solid waste	Activity generates and releases solid waste. Example metrics include volume of waste by classification (i.e., non-hazardous, hazardous, and radioactive), by specific material constituents (e.g., lead, plastic), or by disposal method (e.g., landfill, incineration, recycling, specialist processing).
Introduction of invasive species	Activity directly introduces non-native invasive species into areas of operation.
Other abiotic resource extraction	Activity extracts abiotic resources. Examples include volume of mineral extracted.
Other biotic resource extraction	Activity extracts biotic resources including fish and timber. Examples of metrics include volume of wild-caught fish by species, number of wild-caught mammals by species, volume of timber by species, etc.

Pathway name	Definition
Volume of water use	Water is used for the activity. Example metrics include volume of groundwater consumed, volume of surface water consumed, etc.
Pathway Type: Dependency / Ecosystem Service	
Air filtration	Air filtration services are the ecosystem contributions to the filtering of air-borne pollutants through the deposition, uptake, fixing and storage of pollutants by ecosystem components, particularly plants, that mitigates the harmful effects of the pollutants.
Biological control	Pest control services are the ecosystem contributions to the reduction in the incidence of species that may prevent or reduce the effects of pests on biomass production processes or other economic and human activity. This may be recorded as a final or intermediate service. Disease control services are the ecosystem contributions to the reduction in the incidence of species that may prevent or reduce the effects of species on human health.
Biomass provisioning	Biomass provisioning services include the ecosystem contributions to the growth of the following: cultivated plants that are harvested by economic units for various uses including food and fibre production, fodder and energy; grazed biomass that is an input to the growth of cultivated livestock; cultivated livestock and livestock products (e.g., meat, milk, eggs, wool, leather); animals and plants (e.g. fish, shellfish, seaweed) in aquaculture facilities that are harvested for various uses; trees and other woody biomass in both cultivated (plantation) and uncultivated production contexts that are harvested for various uses including timber production and energy; fish and other aquatic biomass that are captured in uncultivated production contexts for various uses; wild animals, plants and other biomass that are captured and harvested in uncultivated production contexts for various uses.
Education, scientific and research	Education, scientific and research services are the ecosystem contributions, in particular through the biophysical characteristics and qualities of ecosystems, that enable people to use the environment through intellectual interactions with the environment.
Flood mitigation	Coastal protection services are the ecosystem contributions of linear elements in the seascape, for instance coral reefs, sand banks, dunes or mangrove ecosystems along the shore, in protecting the shore and thus mitigating the impacts of tidal surges or storms on local communities. This is a final ecosystem service. River flood mitigation services are the ecosystem contributions of riparian vegetation which provides structure and a physical barrier to high water levels and thus mitigates the impacts of floods on local communities. River flood mitigation services will be supplied together with peak flow mitigation services in providing the benefit of flood protection.
Genetic material	Genetic material services are the ecosystem contributions from all biota (including seed, spore or gamete production) that are

Pathway name	Definition
	used by economic units, for example (i) to develop new animal and plant breeds; (ii) in gene synthesis; or (iii) in product development directly using genetic material.
Global climate regulation	Global climate regulation services are the ecosystem contributions to the regulation of the chemical composition of the atmosphere and oceans that affect global climate through the accumulation and retention of carbon and other GHG (e.g., methane) in ecosystems and the ability of ecosystems to remove (sequester) carbon from the atmosphere.
Local (micro and meso) climate regulation	Local climate regulation services are the ecosystem contributions to the regulation of ambient atmospheric conditions (including micro and mesoscale climates) through the presence of vegetation that improves the living conditions for people and supports economic production. Examples include the evaporative cooling provided by urban trees ('green space'), the role of urban water bodies ('blue space') and the contribution of trees in providing shade for humans and livestock.
Noise attenuation	Noise attenuation services are the ecosystem contributions to the reduction in the impact of noise on people that mitigates its harmful or stressful effects.
Nursery population and habitat maintenance	Nursery population and habitat maintenance services are the ecosystem contributions necessary for sustaining populations of species that economic units ultimately use or enjoy either through the maintenance of habitats (e.g., for nurseries or migration) or the protection of natural gene pools. This service is an intermediate service and may input to a number of different final ecosystem services including biomass provision and recreation-related services.
Other provisioning services – animal-based energy	Physical labour is provided by domesticated or commercial species, including oxen, horses, donkeys, goats and elephants. These can be grouped as draught animals, pack animals and mounts.
Other regulating and maintenance services - Dilution by atmosphere and ecosystem	Water, both fresh and saline, and the atmosphere can dilute the gases, fluids and solid waste produced by human activity.
Other regulating and maintenance services - Mediation of sensory impacts (other than noise)	Vegetation is the main (natural) barrier used to reduce light pollution and other sensory impacts, limiting the impact it can have on human health and the environment.
Pollination	Pollination services are the ecosystem contributions by wild pollinators to the fertilization of crops that maintains or increases the abundance and/or diversity of other species that economic units use or enjoy.
Rainfall pattern regulation	Rainfall pattern regulation services are the ecosystem contributions of vegetation, in particular forests, in maintaining rainfall patterns through evapotranspiration at the sub-continental scale. Forests and other vegetation recycle moisture back to the atmosphere where it is available for the generation

Pathway name	Definition
	of rainfall. Rainfall in interior parts of continents fully depends upon this recycling.
Recreation-related services	Recreation-related services are the ecosystem contributions, in particular through the biophysical characteristics and qualities of ecosystems, that enable people to use and enjoy the environment through direct, in-situ, physical and experiential interactions with the environment. This includes services to both locals and non-locals (i.e. visitors, including tourists). Recreation-related services may also be supplied to those undertaking recreational fishing and hunting.
Soil and sediment retention	Soil erosion control services are the ecosystem contributions, particularly the stabilising effects of vegetation, that reduce the loss of soil (and sediment) and support use of the environment (e.g., agricultural activity, water supply). This may be recorded as a final or intermediate service. Landslide mitigation services are the ecosystem contributions, particularly the stabilising effects of vegetation, that mitigates or prevents potential damage to human health and safety and damaging effects to buildings and infrastructure that arise from the mass movement (wasting) of soil, rock and snow.
Soil quality regulation	Soil quality regulation services are the ecosystem contributions to the decomposition of organic and inorganic materials and to the fertility and characteristics of soils, e.g., for input to biomass production.
Solid waste remediation	Solid waste remediation services are the ecosystem contributions to the transformation of organic or inorganic substances, through the action of micro-organisms, algae, plants and animals that mitigates their harmful effects.
Spiritual, artistic and symbolic services	Spiritual artistic and symbolic services are the ecosystem contributions, in particular through the biophysical characteristics and qualities of ecosystems, that are recognised by people for their cultural, historical, aesthetic, sacred or religious significance. These services may underpin people's cultural identity and may inspire people to express themselves through various artistic media.
Storm mitigation	Storm mitigation services are the ecosystem contributions of vegetation including linear elements, in mitigating the impacts of wind, sand and other storms (other than water related events) on local communities.
Visual amenity services	Visual amenity services are the ecosystem contributions to local living conditions, in particular through the biophysical characteristics and qualities of ecosystems that provide sensory benefits, especially visual. This service combines with other ecosystem services, including recreation-related services and noise attenuation services to underpin amenity values.
Water flow regulation	Baseline flow maintenance services are the ecosystem contributions to the regulation of river flows and groundwater and lake water tables. They are derived from the ability of ecosystems to absorb and store water, and gradually release water during dry seasons or periods through evapotranspiration

Pathway name	Definition
	and hence secure a regular flow of water. This may be recorded as a final or intermediate ecosystem service. Peak flow mitigation services are the ecosystem contributions to the regulation of river flows and groundwater and lake water tables. They are derived from the ability of ecosystems to absorb and store water, and hence mitigate the effects of flood and other extreme water-related events. Peak flow mitigation services will be supplied together with river flood mitigation services in providing the benefit of flood protection.
Water purification	Water purification services are the ecosystem contributions to the restoration and maintenance of the chemical condition of surface water and groundwater bodies through the breakdown or removal of nutrients and other pollutants by ecosystem components that mitigate the harmful effects of the pollutants on human use or health.
Water supply	Water supply services reflect the combined ecosystem contributions of water flow regulation, water purification, and other ecosystem services to the supply of water of appropriate quality to users for various uses including household consumption.

6.3. Examples of sector-specific nature-related risks

Sector Type	Key Climate Risks
Food & Drink Producers	Heat stress - Higher temperatures increase demand for refrigeration and cooling, raising energy and water OPEX and creating health and safety risks if temperature controls fail. - Heat stress reduces workforce productivity and increases the risk of heat-related illness, creating potential liability exposure. - Prolonged high temperatures can reduce crop yields and raw material availability, leading to supply shortages, production delays, and higher procurement costs. Cold stress - Extreme cold can freeze pipes and restrict water supply, disrupting production where water is required for ingredients, cleaning, and sanitation. - Variable crop quality caused by cold conditions reduces processing efficiency and can lead to inconsistent product quality, posing reputational risk. - Low temperatures reduce the effectiveness of effluent treatment, increasing the risk of environmental breaches, regulatory penalties, and pollution incidents. Flooding - Flooding can damage substations and electrical infrastructure, causing power outages and unplanned production downtime. - Contaminated floodwaters entering production facilities create environmental pollution risks and expose businesses to liability and financial penalties. - Effluent treatment systems may be overwhelmed by high flows, increasing the likelihood of regulatory non-compliance and reputational damage. Drought - Restrictions on water abstraction disrupt processing activities where water is essential for production, cleaning, and cooling, reducing output and revenue. - Water scarcity can lead to reputational damage and conflict with local communities and regulators.
Agriculture Supply Chain	Insurability

	- Repeated climate losses may lead insurers to withdraw coverage or increase premiums, increasing operating costs and financial vulnerability for producers. - Drought - Reduced water availability impacts crop yields and livestock productivity, leading to shortages and higher prices for agricultural raw materials. Heat stress - Warmer conditions increase the spread of pests and pathogens, raising disease incidence and input costs across terrestrial and marine systems. - Rising ocean temperatures alter marine species distributions, increasing operating costs and disrupting businesses reliant on local seafood sourcing. - High temperatures pose health and safety risks to outdoor workers and reduce labour productivity. Flooding - Flood-exposed crops and pasture may be contaminated and reduced in quality, lowering yields and creating health and safety risks. - Flooded transport routes disrupt supply chains, leading to missed deliveries and potential reputational damage. Wildfire - Smoke damage and direct fire impacts reduce crop and timber yields, lowering revenues. - Smoke exposure creates health and safety risks for outdoor workers and potential liability claims. Sea level rise and ocean acidification - Increased flooding, soil erosion, and salinity intrusion reduce agricultural productivity and usable land area. - Declining carbonate availability threatens shell-forming marine species, reducing supply and increasing shellfish prices.
Hospitality and Leisure	Insurability - Increasing exposure to flooding, storms, and sea level rise may render assets uninsurable or subject to unaffordable premiums, increasing stranded asset risk. Heat stress - Rising temperatures increase cooling and ventilation costs, raising operating expenses. - Heat-related health and safety risks may lead to event cancellations, reduced visitor numbers, and lost revenue. Flooding

	- Flooding poses safety risks to guests and staff, causes cancellations, and damages ground-level equipment, resulting in downtime and CAPEX requirements. Drought - Water scarcity creates reputational risks and conflict with communities and other industries over water allocation. Sea level rise - Coastal erosion, saltwater intrusion, and damage to natural attractions reduce tourism demand and sector revenues. Shifting customer demand - Carbon-intensive travel and leisure activities face reduced demand and reputational pressure. - Businesses not aligned with sustainable tourism trends risk losing market share. Energy transition - Transitioning to renewable energy, electrified transport, and efficient buildings requires upfront CAPEX investment.
Financial Services	Flooding - Repeated flood events reduce property values, increasing mortgage credit risk and potential loan losses. Heat stress - Reduced agricultural yields driven by heat and changing rainfall patterns weaken borrowers' ability to service agricultural loans. Storms - Severe weather events can trigger sudden liquidity demand and increase insurance claims, straining balance sheets. Stranded assets - Exposure to high-carbon assets risks asset devaluation, reduced AuM, and higher transition costs. Changing consumer demand - Shifts away from carbon-intensive products may reduce issuer profitability and increase credit risk.
Construction and Infrastructure	Flooding - Flood damage to equipment, machinery, and materials increases CAPEX requirements and reduces profit margins. - Disrupted transport networks restrict workforce access, lowering productivity and increasing project delays. - Contaminated floodwaters create health, safety, environmental, and regulatory compliance risks. Heat stress

	- Extreme heat damages transport infrastructure and disrupts supply chains, causing delays and revenue loss. - Water scarcity increases operating costs and can interrupt construction activities. - Heat stress reduces outdoor worker productivity and increases accident risk. Storms - High winds disrupt lifting operations and work at height, creating safety risks and business interruption. - Damage to power and water infrastructure requires repair investment and creates liability exposure. Sea level rise - Rising water tables and saltwater intrusion damage sewage and water systems, requiring costly adaptation and repairs. Carbon pricing - Carbon taxes and tighter emissions standards increase costs for carbon-intensive construction materials such as steel and cement.

6.4. Interviewee Selection Criteria

Interview participants were selected using a purposive sampling approach to ensure representation across a diverse range of business types operating within or connected to the Brecon Beacons National Park (BBNP). The intention was not to create a statistically representative sample, but to capture a broad spectrum of perspectives on business dependency on natural capital.

Companies were selected to reflect variation across:

- **Business size,** including small, medium, and large enterprises
- **Sector**, encompassing industries with differing relationships to natural capital
- **Levels of dependency on natural capital**, including:
    - businesses directly dependent on the Park's natural assets (e.g. land, water, landscapes),
    - businesses indirectly dependent through supply chains or ecosystem services,
    - and businesses with a broader reliance on the Welsh ecosystem rather than the Park specifically.

This approach enabled comparison between businesses with high, medium, and low levels of exposure to nature-related risks and dependencies, supporting a more nuanced understanding of how natural capital underpins economic activity within and beyond the Park boundary.

To support this selection process, companies were assessed against a set of analytical criteria, including company size, degree of dependency on natural resources, public climate and nature strategies, philanthropic activity, and ENCORE nature materiality risk levels. These criteria were used to ensure balance and diversity within the interview sample.

CATEGORY	**CRITERIA**
Company size	Large – 250+ employees Medium – 50-249 employees Small - <50 employees
Dependency on park	High – heavy dependency on natural resources in BBNP Medium – some dependency on natural resourced in BBNP Low – little to no dependency on natural resources in BBNP
Public strategies and reporting	High – public reporting, strategy, or commitments around climate and/ or nature Medium – some information available on work in climate and/ or nature space but not strategy Low – no available public strategy on climate or nature topics
Philanthropic work in nature, climate or water	High – clear philanthropic strategy and is funding climate and/ or nature work Medium – has philanthropic activity but not in climate or nature Low – no clear philanthropic activity
ENCORE nature materiality risk level	Very High High Medium Low Very Low