

Development of a Sustainable Delivery Model for Nature Recovery in Wales

Final Report

May 2023



Disclaimer

This confidential document (the “Report”), which details current and future business programmes and operation (the “Information”), has been prepared by Finance Earth solely for information purposes. Finance Earth is under no obligation to update, keep current, correct the information contained in this Report or to provide any additional information, and any opinions expressed are subject to change without notice.

By accepting this, the recipient acknowledges and agrees that (i) the recipient will not distribute or reproduce the Report in whole or in part and will use this Report solely for the purpose of evaluating the recipient's interest in the Information; (ii) in the event that the recipient has no further interest in relation to the information or if at any time Finance Earth so requests, this Report, together with all other material relating to the Information which the recipient may have received, will be returned or destroyed at the earliest opportunity; (iii) the recipient will not disclose to any third party that this Report has been provided or that any of the parties named in the Report are seeking investment. and (iv) any proposed actions by the recipient which are not consistent in any manner with the foregoing agreement will require the prior written consent of Finance Earth.

This Report does not constitute, or form part of, any offer or invitation to sell or issue, or any solicitation of any offer to purchase or subscribe for, any shares or any other securities. In addition, it is not intended to form the basis of or act as an inducement to enter into any contract or investment activity and should not be considered a recommendation by Finance Earth or its respective directors or affiliates in relation to the Information. No prospectus will be produced for the purposes of the EU Prospectus Directive, as amended by the Amending Directive.

Finance Earth is a trading name of Environmental Finance Limited, a private company registered in England and Wales (08195029) whose registered office is at W106 Vox Studios, 1-45 Durham Street, London, England, SE11 5JH. Environmental Finance Limited is authorised and regulated by the Financial Conduct Authority under registration number 831569.

Acknowledgements

The learnings and outputs of this report are the result of consultation with a wide range of stakeholders. The Project Partners would like to give thanks to all those who generously contributed, including:

- Bannau Brycheiniog National Park;
- Butterfly Conservation;
- Câr-y-Môr;
- Cardiff University;
- Confor;
- Crown Estate;
- Denbighshire County Council;
- Dŵr Cymru Welsh Water;
- Esmée Fairbairn Foundation;
- Farmer's Union of Wales (FUW);
- Home Builders Federation;
- Isle of Anglesey County Council;
- John Muir Trust;
- National Farmers Union Cymru (NFU);
- Natural Resources Wales (NRW);
- Nature Friending Farming Network Wales;
- University of Wales Trinity St David;
- Pembrokeshire Coast National Park;
- Pembrokeshire Coastal Forum;
- Pembrokeshire Nature Partnership;
- Radnorshire Wildlife Trust
- Snowdonia National Park;
- Swansea Council;
- Tenants Farmers Association (TFA);
- The Pumlumon Project team;
- Torfaen County Borough Council;
- Welsh Government;
- Welsh Local Government Association;
- Wildlife Trusts Wales;
- Woodland Trust;
- World Wide Fund for Nature (WWF).

Executive Summary

Project context

Wales is known for its rich natural resources and unique ecosystems, which provide a range of valuable services to both the environment and local communities. However, biodiversity and natural capital loss in Wales is well recognised, with the majority of habitat types in Wales have seen a reduction in diversity, with the rate increasing over the past 50 years.¹ Recent reports have highlighted that farmland bird, mammal, amphibian, insect and invertebrate populations have all halved in Wales over the same period.²

The need for immediate action to address this loss is recognised in the Welsh Government's Nature Recovery Action Plan, which sets out actions to reverse the decline of biodiversity while stressing the need to explore mechanisms to increase private investment. Nature recovery in Wales has largely been funded by public expenditure and philanthropy. A recent report concluded that Wales faces a £5-7billion finance gap for nature-related targets over the next 10 years.³ Increasing investment, likely to be predominantly private sector support, is essential to help fill this gap and achieve Ministerial ambitions for the environment.

The UN Environment Programme (UNEP) identifies 'Nature-based solutions' (NbS) as critical to reversing the devastating effects of climate change, the extinction crisis and land degradation globally.⁴ NbS support the creation of natural-capital based revenue streams from the sale of ecosystem services and related products such as carbon, nutrient and biodiversity credits. A key route to mobilising private investment to support nature recovery in Wales is the development of ecosystem service markets, however, these markets remain largely underdeveloped across Wales.

Finance Earth, Eunomia and RSPB Cymru were commissioned by the Welsh Government to identify and analyse the specific barriers to ecosystem service market development and propose potential policy solutions by exploring models and interventions that could help scale high integrity investment into nature recovery, as detailed though this report. An extensive stakeholder engagement process involving 30 organisations was conducted by Eunomia and Finance Earth to gather key insights from actors across the public, private and third sectors. A number of 'deep-dives' were also organised with RSPB Cymru to discuss findings from the stakeholder engagement process and gather additional insight based on their wide experience delivering nature restoration and protection on the ground.

The key ecosystem services and associated markets identified as a priority for nature recovery in Wales are:

- **Carbon dioxide (CO₂) emissions reduction and removal**, from woodland creation and peatland restoration, based on the sale of carbon credits in the UK voluntary market;
- **Farm-based ecosystem services**, based on the sale of environmental outcomes generated from more regenerative and nature-friendly farming practices, such as soil and hedgerow carbon sequestration;
- **Natural flood management**, based on the sale of flood risk reduction outcomes arising from Nature-based Solutions (NbS) such as managed realignment schemes and other wetlands;
- **Water quality**, based on the sale of nutrient credits;
- **Biodiversity¹**, based on the sale of biodiversity units or credits generated from habitat creation and restoration projects both on-land and in the marine environment; and

¹ Biodiversity tends not to be considered to be an ecosystem service itself, as ecosystem services are the goods and services that biodiversity provides. However, for the purposes of this report, we are considering markets in biodiversity credits/units to be an ecosystem service market.

- **Recreation**, based on income generated from nature-based activities and tourism.

Summary of barriers

The extensive stakeholder engagement process, deep dives and wider research identified a number of barriers to nature recovery. Six broad categories of barriers are outlined below, and further detailed throughout this report.

There are gaps in the capacity, skills and resources required to develop ecosystem service markets. Barriers identified relate to capacity constraints within NbS supply-chains, ranging from insufficient knowledge about markets, related codes and conservation finance opportunities, to practical on-the-ground capacity to deliver nature recovery projects. A community of developers across environmental non-governmental organisation (eNGO), Local Nature Partnerships and private sectors, able to create and deliver high impact projects whilst engaging with local communities to explore how they can benefit from ecosystem service projects, is particularly lacking.

Ecosystem service market infrastructure is lacking across Wales. The tools and supportive frameworks such as ecosystem service calculators, registries, codes and trading platforms, necessary to support the operation and further development of ecosystem service markets are currently lacking.

Compliance and voluntary demand drivers necessary to support market development are lacking. There are limited incentives to drive demand for the ecosystem services necessary to support market development. For instance, there is no current or expected obligation for developers to compensate for the biodiversity lost as part construction. Without an expected demand for environmental services, landowners lack the secure revenue stream to raise investment to undertake nature recovery projects.

There is a lack of confidence in revenue streams that can be generated by ecosystem services. Due to a combination of a lack of supportive policy and in some cases insufficient public funding for ecosystem service provision, stakeholders within Wales are not confident in generating revenues, or sufficient revenues to cover costs. In ecosystem service markets which are still in their nascency (e.g. many marine ecosystem service markets) without established codes or standards to guide measurement, there is even less confidence.

Investor interest in ecosystem service markets is being constrained by the lack of maturity of these markets. Due to the early stage of maturity of many ecosystem service markets in Wales, there tends to be a lack of well-evidenced and predictable cashflows and awareness around the potential the investment returns that ecosystem service projects can generate, in order to attract investors. Furthermore, the size of projects resulting from dispersion of land ownership in Wales, with limited farming clusters or aggregators operating in the market means that opportunities tend to be too small-scale to meet the risk-return appetite of investors or adequately cover transaction costs.

There are ongoing concerns relating ecosystem service market integrity. There are fundamental concerns around to the risk of greenwashing, potential impacts on food security, protecting local traditional jobs and heritage as well as access to land and housing, as ecosystem service markets expand.

Business models to support nature recovery

Where there is a willingness to pay for ecosystem services, a market is created. Engagement in those ecosystem service markets can occur through a range of business models as further detailed in this report, that can be grouped as follows:

1. **Outcome-based models** – payments for specific outcomes, which could include ecosystem services-related credits or units generated following an established code or a set of agreed performance indicators;

2. **Supply chain models** – payments or levies associated with products within a supply chains by supply chain actors to fund sustainability linked activities such as regenerative practices, scientific monitoring and reporting; and
3. **Tax- or tariff-based models** – applying taxes, fines or levies on products, services or activities, such as local business rates or tourism site entry fees, to help fund nature recovery.

Many projects may have a combination of these business models, for example, by establishing a combination of levies or taxes with payments for environmental outcomes. Deploying these models will involve a range of roles and stakeholders, including buyers, sellers, intermediaries, private investors, verifiers, regulators and policymakers. Whilst some stakeholders have the potential to play multiple roles, each role plays a critical part in the rollout and success of ecosystem service projects.

Governments and policymakers have important roles to play in supporting the delivery of business models and the development and implementation of high integrity ecosystem service markets. Some of the key roles of governments and policymakers include:

Creating enabling conditions to support both demand for ecosystem service projects and the supply of high integrity projects. This would include on the demand side, establishing regulatory requirements and incentives for ecosystem services (with a focus on key sectors like property development, water and energy); and on the supply side establishing criteria and targets to guide the more sustainable use of natural resources, with effective monitoring and enforcement mechanisms.

Providing financial support for market infrastructure. This could include codes and standards development as well as funding to scale project delivery and demonstrate outcomes to encourage greater participation in ecosystem service markets on both the supply and demand side.

Supporting research and knowledge-sharing to improve the understanding of ecosystem service markets and project delivery opportunities, benefits and limitations. Support should be targeted to areas where specific gaps and market barriers have been identified. This can include developing and rolling out targeted ecosystem research strategies, funding research projects, creating knowledge-sharing platforms, and supporting capacity-building initiatives for stakeholders involved in ecosystem service projects.

Policy considerations and proposed interventions for the Welsh Government

Reflecting on the learnings from the stakeholder engagement process and wider project partner experience, a range of policy considerations and key interventions were identified to address the barriers to ecosystem service market development. These proposed considerations and interventions that could facilitate and accelerate the development of large-scale, high integrity ecosystem service markets in Wales are further detailed within this report, with the priority interventions for the Welsh Government are highlighted below:

Establish revenue guarantee mechanisms to attract private investment. This mechanism could provide certainty over future revenue streams, protecting against downside ecosystem service market price risk whilst allowing the benefits from upward prices above the floor to be reaped.

Develop regional or catchment-based ecosystem service credit or unit trading platforms to facilitate connections between ecosystem service buyers, sellers and investors. Such platforms would allow ecosystem service outcomes to be bought or sold at a regional or catchment-based level. This would support landowners to generate revenue from delivering ecosystem service projects and buyers to more easily identify ecosystem service outcomes that meet their environmental objectives.

Establish a net benefit tool for mitigation of environmental impacts of new developments, and an obligation to use the tool within planning policy. This intervention would create demand for compensation and additional net benefit units which is the fundamental basis for biodiversity related ecosystem service markets to develop.

Establish a Welsh ‘Best-In-Class’ Framework that could go above existing and emerging voluntary standards. The framework would enable the independent verification of the delivery of wider social and environmental benefits from projects, to ensure the quality and integrity of Welsh ecosystem service markets.

Introduce a natural capital-based Outcome Delivery Incentive to encourage water companies to generate public benefits beyond water supply. The incentive would enable NbS interventions to be more widely considered alongside traditional grey infrastructure solutions when making investment decisions.

Pilot opportunities to support nature recovery

Many of the business models and interventions outlined in this report are still nascent in their application to support nature recovery. Piloting these approaches could be a valuable means to determine how to prove technical and financial cases for investment, identify and address additional challenges, build capacity, build an evidence base and engage key stakeholders.

Aligned to the barriers identified, the assessment of which business models may be most effective in Wales and priority government interventions to support high-integrity projects, a long-list of pilot opportunities was developed and assessed. This resulted in a shortlist of recommended pilot opportunities as outlined below:

- Trialling nature friendly farming payments for ecosystem services and product off-taking models;
- Testing a Welsh ‘Best-in-Class’ set of principles for ecosystem service market engagement to encourage high-integrity participation by both buyers and sellers, with a focus on woodland and peatland carbon markets;
- Exploring paludiculture and wet farming as a means to incentivise the rewetting and restoration of damaged peat;
- Seeding or scaling catchment-based nutrient trading platforms;
- Introducing flood risk reduction payments for Natural Flood Management solutions;
- Testing habitat banking or net benefit model for offshore renewables sites focusing on marine biodiversity;
- Testing and scaling payments for ecosystem service and product off-taking models within regenerative mariculture (e.g. farming of oysters, mussels, seaweed); and
- Testing Tourism Business Improvement Districts models and local rate relief incentives to raise financing for nature restoration in key tourism areas such as Snowdonia National Park.

A potential means for funding these pilot projects could be through establishing an investment readiness development funding programme targeted at priority areas for investment for the Welsh Government. The

programme could support technical assistance and capacity building enabling project developers and partners to demonstrate outcomes and create robust business models that have the potential to attract investment.

Summary of key findings

The key findings from an assessment of each of the priority ecosystem service markets, detailed information collected through the stakeholder engagement process, deep-dives and wider desktop research, are summarised below:

Further guidance from the Welsh Government on the role of private investment in nature is needed. The public and philanthropic sectors alone are not sufficiently resourced to deliver on Wales' environmental targets. Alongside efforts to mobilise private capital the government has a critical role to play in shaping and guiding private markets to ensure they deliver across social, cultural and environmental outcomes. Stakeholders expressed concerns that in the absence of control and/or direction from the Welsh Government, multiple independent investment projects and schemes that have been set up on large land holdings have not optimised the benefits for either the environment or local communities.

Voluntary carbon markets are the most mature UK market with the potential to support high quality, multi-benefit projects but are yet to be scaled across Wales. Voluntary carbon markets are the most advanced and fastest-growing ecosystem service markets in the UK and have been established to an extent in Wales with some Woodland Carbon Code and Peatland Code projects being registered in the country. However, there are a range of barriers to the widespread take up and scale of these codes across Wales and concerns around whether projects adequately meet wider Welsh priorities.

Emerging ecosystem service markets present important revenue creation and diversification opportunities for nature-friendly farmers across Wales. There is still limited farmer engagement in the sale of ecosystem service products from nature-friendly farming approaches, despite the growing demand from corporates interested in 'greening' their supply chains. Overall, the level of understanding, awareness and market infrastructure is lacking to support farmers interested in diversifying their revenues through engagement in ecosystem service markets. As a large share of Welsh land is designated as a Less Favoured Area (LFA) for agriculture, there is considerable potential for the adoption of alternative land management practices and land uses to diversify incomes and contribute to nature recovery.

There is a clear need for support for pilot projects to catalyse the development of high integrity ecosystem service markets. Multiple stakeholders from across the eNGO, landowning and private sector confirmed the need to prove and refine ecosystem service-based business models, establish market infrastructure such as verification and trading platforms, develop contract templates and drive improvements in nature recovery best practice via on-the-ground projects, all of which are necessary to accelerate the emerging ecosystem service markets. The Welsh Government could leverage organisations already in existence such as the Development Bank of Wales (DWB) and Natural Resource Wales (NRW) to provide catalytic funding and access to public lands to fund and trial new, innovative approaches, thereby providing exemplar blueprints to help build confidence in ecosystem service markets.

The landowning community is reluctant to engage in ecosystem service markets due to uncertainty over long term commercial implications in relation to regulatory requirements and incentive schemes. A number of stakeholders, particularly landowners, noted the lack of clarity on the Sustainable Farming Scheme and any future requirements for farms to be 'net zero' as a major barrier to making the long-term contractual commitments to land use change necessary to participate in many of these markets, even where it is accepted to be beneficial for nature and communities.

Summary of key recommendations

In light of these key findings, and to help address the barriers to investment and the priority areas for action identified in this report, the following set of set of recommendations has been prepared for the Welsh Government to:

Support investment pathways through the provision of “bottom up” investment readiness support and “top down” first loss/concessionary repayable investment capital. Project developers need financial support to identify and refine ecosystem service business models and build out investable propositions. This includes support for developing technical cases for the generation of ecosystem services from nature-based interventions, support for commercial negotiations with beneficiaries, and support for building the financing models and investor engagement documentation to help secure financing where there is a need for upfront investment.

Establish principles for high integrity ecosystem services market engagement and a ‘Best-In-Class’ code in Wales. The Welsh Government could help to create an enabling environment for high quality private markets by working with the eNGO, farming and fisheries sectors to establish a set of principles that define what high quality looks like in ecosystem service markets across Wales, tailored to the country’s specific needs and social and environmental context. This could help to alleviate stakeholder concerns that ecosystem service markets will result in inappropriate land use change, impacting Wales’ food security and rural livelihoods, especially if guidance could be aligned into a land use framework. Developing a Welsh “Best-in-Class” code that is additional to existing and emerging codes could address concerns that existing codes and standards do not do enough to enhance biodiversity or deliver wider social benefits, nor ensure on-going monitoring and management of projects.

Clarify the role of the public sector in supporting private markets through the reform and redesign of environmental subsidy schemes. Structuring subsidies as longer term, outcome-based revenue guarantees would help to crowd in private investment and may enable public schemes to deliver potentially far greater impact for the same level of investment. It would also encourage the market to develop around independently verified outcomes.

About the Project Partners

Finance Earth



Finance Earth is the UK's leading environmental impact investment boutique, providing financial advisory and fund management services across the natural and built environment. Finance Earth helps to create projects – and the investment vehicles to fund them – that balance positive outcomes for nature, communities and investors.

Finance Earth works in partnership with a broad range of clients including NGOs, government, social enterprises, foundations and aligned corporates to create investable environmental and social projects. At the same time, Finance Earth works with a range of investors to structure financial products that can accelerate the protection and restoration of nature. The team currently manages over £50million of blended social and environmental impact funds and has designed over £500 million of impact investment structures.

Finance Earth is a wholly employee-owned social enterprise, with 51% of profits recycled into on-mission activities and investments.

Finance Earth is a trading name of Environmental Finance Limited, which is authorised and regulated by the Financial Conduct Authority (registration number: 831569).

Eunomia



Eunomia Research & Consulting Ltd ('Eunomia') is an independent consultancy focussed on adding value to organisations through the delivery of improved social and environmental outcomes. We combine practical experience with academic excellence, to offer creative, evidence-based solutions to support policymaking and business strategies that have sustainability at their core. Eunomia is an appointed advisor to many types of organisations including central government, local and regional authorities, national utilities, waste management and technology companies, and global financial institutions.

Eunomia employs over 130 consultants, with our head office in Bristol as well as offices in London, Manchester, Athens, Brussels, New York and Auckland, delivering work throughout the UK, EU member states, USA and beyond. Founded as a waste and recycling consultancy in 2001, we now deliver specialist work across topic areas spanning climate change, decarbonisation and circular economy, whilst continuing to deliver high-quality advisory and operational support in the waste and recycling sector.

RSPB Cymru



RSPB Cymru is part of the RSPB.

Our vision is a shared world where wildlife, wild places, and all people thrive. We believe we're all connected by the wonder of nature. The health of the natural world is fundamental to the survival of all species and has the right to flourish. We know that birds, other wildlife and the habitats on which these depend are interconnected. We recognise that the health and resilience of individuals, our society and the economy is dependent on the health and sustainability of the planet's ecosystems. We believe that we have the greatest impact when our strategy is informed both by our understanding of the state of species and ecosystems and our core beliefs.

A nature-based solution pipeline will deliver returns for the environment, for the economy and for local communities. It will provide opportunities for corporate and the finance sector to invest in the natural world and meet climate and nature-based transition targets whilst meeting the needs of society and their shareholders. There is a crucial role for philanthropy, alongside public funding to support the development of innovative finance solutions for nature, bringing vital knowledge, expertise and funding to helping unlock impact investment and overcome barriers to success.

Nature is in crisis and together we can save it.

Mae'r Gymdeithas Frenhinol er Gwarchod Adar (RSPB) yn elusen gofrestredig:
Lloegr a Chymru rhif 207076, yr Alban rhif SC037654

The Royal Society for the Protection of Birds (RSPB) is a registered charity:
England and Wales no. 207076, Scotland no. SC037654.

For further information on the contents of this document, please contact:



Elizabeth Beall
Director of Advisory
E: elizabeth@finance.earth

Rich Fitton
Senior Associate Director
E: rich.fitton@finance.earth

Paveen Ghalay
Associate
E: paveen@finance.earth

Anna Halliday
Senior Analyst
E: anna@finance.earth



Tanzir Choudhury
Principal Environmental
Economist
E:
tanzir.choudhury@eunomia.co.uk

Rob Daniel
Senior Consultant
E: rob.daniel@eunomia.co.uk



Lorna Fox
Project Development Manager –
Wales
E: lorna.fox@rspb.org.uk

¹ Natural Resources Wales. December 2020. [The Second State of Natural Resources Report](#)

² RSPB. August 2022. [The proposed Sustainable Farming Scheme \(SFS\) in Wales is published.](#)

³ Green Finance Institute, eftec and Rayment Consulting. July 2021. [The Finance Gap for UK Nature](#)

⁴ UNEP. December 2022. [Decent Work in Nature-based Solutions.](#)