

Investing in ecosystem service markets for landscape-scale environmental regeneration: Opportunities and challenges for Landscape Enterprise Networks

What are Landscape Enterprise Networks (LENs)?

LENs are a model for delivering private investment in ecosystem service provision.

They:

- identify and prioritise landscape challenges
- map landscape assets
- identify corporate actors that depend upon, or benefit from, ecosystem functions in a landscape e.g. water quality, biodiversity, flood risk mitigation, carbon sequestration
- provide a framework for organisations to co-procure landscape outcomes from farmers and land managers (the 'suppliers' of ecosystem services).

What is this research?

The research is part of the larger Resilient Dairy Landscapes project funded by Global Food Security, with support from Biotechnology and Biological Sciences Research Council, Economic and Social Research Council, Natural Environment Research Council and Scottish Government. Case study research was chosen to provide examples of the range of different environmental outcomes that can be sought and delivered via LENSs and illustrate their positive contribution to the emerging UK market for ecosystem services.



The research consisted of:

Two case studies of operational LENSs transactions:

- **Cumbria (Eden Valley):** chosen to represent two parallel trades.
 - **Trade 1)** – funded by a global food manufacturer (Nestle), with members of their dairy supply chain delivering biodiversity outcomes. The aim was to increase the financial resilience of their dairy supply chain and contribute towards the organisation's wider net-zero ambitions.
 - **Trade 2)** – funded by a regional water company (United Utilities). The aim was to deliver phosphate reductions as an alternative to more expensive wastewater treatment.
- **Hampshire Avon:** represents a co-trade between a regional water company (Wessex Water) and Wiltshire County Council. The aim was to deliver phosphate reductions in this catchment, as a means of ensuring that future planning permissions can be granted in areas of Special Area of Conservation (SAC) and Site of Specific Scientific Interest (SSSI), as more permanent biodiversity offsets would be guaranteed.

What are the findings?

- **LENSs create opportunities to deliver immediate regenerative land management, addressing climate change mitigation.** They provide a market-driven framework encouraging co-operative land management across large geographical areas. This avoids the problems associated with complex property ownership and land tenure, and the need to identify and capture multiple ecosystem services in one environmental scheme, with multiple actors.
- **LENSs are designed to be flexible to the needs and requirements of the demand actors driving the trades.** They are non-prescriptive and give investors the freedom to design the trades to align directly with their requirements and engagement motivations.
- **LENSs offer a transparent way of funding the delivery of a broad range of ecosystem service interventions.** They support competitive pricing and price discovery through Dutch auctions and/or price negotiations. They consider a broad range of factors in defining the price for delivery, including the production value of land, delivery expectations and permanence requirements of investors. They allow for multi-year proposition payments to be index linked.
- **LENSs encourage the active engagement of delivery actors (e.g. farmers) and wider stakeholders in the development of schemes.** Active co-development through LENSs ensures that interventions are easy to implement and reflect variations in land types, scale and management practices. They align with variations in levels of participant engagement readiness to guarantee acceptability and high levels of engagement with the schemes.

What are the conclusions?

For LENs to be adopted more broadly, consideration needs to be given to the following conceptual challenges:

- **Political uncertainties result in supplier hesitancy to engage with private investment.** Ongoing uncertainties about the level of public funding available to farmers and landowners through the proposed Environmental Land Management scheme (ELMs), and especially the basis for 'blending' public and private finance in ELMs, is a disincentive for farmers to engage with LENs.
- **LENs require flexibility in how regulatory standards are applied and outcomes are met.** Regulators take a consistent approach to setting national environmental standards. This can make it difficult to adapt regulatory requirements to address specific local environmental problems and support collaborative and alternative management solutions (such as LENs). LENs work most effectively when statutory regulators (e.g. the Environment Agency) focus on how environmental improvements targeted by LENs actions, coupled with regulatory measures, can together deliver the environmental outcomes sought. More imaginative and flexible use of regulatory powers illustrates how LENs can deliver both economic and environmental benefits by adopting catchment measures to meet regulatory requirements, and avoiding the capital investment costs of improving infrastructure to ensure compliance.
- **Precise outcome measurement and quantification approaches are underdeveloped.** Evidence is needed that environmentally-beneficial interventions delivered by a LEN has occurred, and where outcomes are required to meet regulatory standards, that these have been delivered against those predicted. LENs trades therefore require investment in piloting outcomes that are not guaranteed and/or to develop mechanisms to mitigate against failures or fluctuations in supply.
- **Planning agreements and/or the Community Infrastructure Levy can be used to complement and underpin the development and functioning of a LEN.** Planning obligations secured from developers can provide infrastructure integral to the objectives pursued by a LEN, or be used to raise funds to create biodiversity offsets.
- **Additionality should also be considered.** Private investment through LENs actions should not fund activities that would have occurred without funding or that are required to ensure regulatory compliance. But where there is a demonstrable strategic benefit, private investors are willing to fund activities that could increase farm compliance. LENs transactions can also support and enhance the regulatory compliance process by identifying non-compliance and barring participation in LENs actions by individual actors until this can be proven.



What are workable recommendations for the future?

The research indicates the need for LENSs to:

1. Create a robust legal framework to formalise trading relationships.

- The long-term functioning of a LEN with multiple participating demand and supply side actors will need a robust but flexible legal framework; one that defines how the performance of the contractual terms by different actors are evaluated and enforced, how outcomes are secured beyond the duration of the contracts, and how disputes are resolved.
- This must be sensitive to the unique features of LENSs as a collaborative management tool. It will, for example, have to tailor farmers' obligations to using their 'best endeavours' to deliver interventions, and be flexible to account for possible fluctuations in performance due to factors outside farmers' control.
- Formalising the arrangements between demand actors and the basis on which they agree to co-trade is also important.

2. Develop legal mechanisms that support the delivery of permanent environmental improvements.

- Without legal and financial underpinning there is no certainty that the benefits achieved by LENSs interventions will be maintained.

- Legal mechanisms are required to ensure the continuation of LENSs interventions beyond the end of short-term land management agreements. The research highlighted the need to align payments with delivery and maintenance expectations; and particularly where permanent outcomes are required these need to be calculated to include index-linked annual increments to cover ongoing maintenance expenses.
- ## 3. Define the strategic direction and governance structure of LENSs to support delivery at scale.
- Further work is required to define LENSs strategic direction, conceptual boundaries and governance structures.
 - Independent governance is required to formalise established trading networks, provide oversight of transactions, supply transparency regarding money flows, represent the interests of all transactional parties, and to ensure that LENSs interventions are of substantial environmental benefit and do not constitute corporate 'greenwashing'.
 - Enhanced governance is also required to provide oversight of the direction of public and private funding, identify opportunities to 'blend' finance and ensure the accountability to regional development plans.

Find out more:

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