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Creating an on-farm assessment and analysis methodology for Landscape Recovery that helps farmers become investment ready.

Helping local authorities to deliver county-wide (and national) objectives, including baselining and monitoring progress towards the 25-Year Environment Plan

Executive Summary

The trial, conducted by FWAG SouthWest in partnership with the Sustainable Food Trust and supported by five technical partners, is the third phase of a series of trials to answer policy questions relating to DEFRA's Environmental Land Management Schemes. This phase builds on previous trials to further investigate and provide solutions to the complexities faced by farmers and stakeholders in managing landscapes. Specifically, this third phase investigated three policy questions about what a landscape plan might look like, the most effective blended finance mechanisms and what barriers exist to blended finance.

Overarching Approach and Methodology

The overarching approach of this trial involved a collaborative methodology, integrating data from earth observation, on-the-ground farmer input, and the expertise of trusted advisors and local stakeholders. The methodology emphasises the value of both technological advancements in data collection and the irreplaceable insights provided by farmers and local advisors.

Developing a Landscape Plan

In terms of what a landscape plan could look like, it should be:

- Informed by earth observation, designed and finalised by farmers and their trusted advisors alongside relevant local stakeholders like the local authority, which has environmental and socio-economic statutory duties within a landscape.
- The collective and agreed vision for the landscape that all local stakeholders are working towards, including farmers and communities.
- The foundational plan that catchment and county-wide blended finance opportunities are developed from.

To create a landscape plan as above, the trial discovered four necessary features of the plan:

1. A data and evidence pathway
2. Value given to the social and human relationships within the landscape
3. The capacity for national and local government to plan, predict and monitor change
4. The development of a Green Investment Portfolio

Leveraging Existing Structures and Data Pathways

A significant finding in this trial is that the Local Nature Recovery Strategy (LNRS) map (which all local authorities have a statutory duty to produce) could fulfil the required data and evidence pathway but this would need standardisation at a national level. The LNRS map could be the foundational landscape plan that county-wide blended finance opportunities are developed from.

Farmer Contribution and Data Sharing

This trial has demonstrated how farmers can contribute, update and enrich the LNRS with spatial and non-spatial data (referred to as the HiEx methodology in the report - **H**igher and **E**xpanded Resolution LNRS Map). Using the existing mechanisms of the Public Services Geospatial Agreement (PSGA), UK Habitat Classification, Unique Property Reference Number (UPRN) and Global Farm Metric (GFM) framework, farmers - with the support of advisors - may do this using GIS mapping software and data governance/agreements.

The HiEx methodology and pathway enables the LNRS to become a landscape plan that reflects environmental, economic and social opportunities/risks across farmed land. The process can be used with a farmer group or scaled to the whole county to create a county-wide landscape plan.

The significance of farmers being able to share their data along this pathway via an annual submission is fourfold:

- If advisors were provided, verified habitat and sustainability information could be obtained for 70% of the land in the UK.¹
- An annual submission of a Land Management Plan (LMP) & relating sustainability data from farmers enables the tracking of progress from a baseline for a farmer group or county.
- This submission would allow farmers to contribute toward the local authority's 25-Year Environment Plan (25-YEP) goals via their LMP actions and sustainability performance.
- Data submission would update national data sets with higher resolution real-time data, enabling more accurate national modelling, remote sensing and reduced cost of the methodology over time.

Key Findings on Data and Evidence Pathways

The trial uncovered three key additional findings relating to data and evidence pathways for landscape plans:

1. There are multiple data sources available when creating a landscape plan: secondary data from sentinel satellites; topographic layers and remote sensing layers; and primary farm data. This trial has taken a significant step forward in identifying the most cost effective and accurate protocol to do this via research completed by Centre for Energy and Hydrology (CEH) & Rothamsted. This work includes the groundbreaking research on attribution of ecosystem services to the management of land (from both modelling and primary farm UK Habitat data). This sets a pathway for payment mechanisms that rewards farmers for delivering multiple ecosystem services from the landscape. Investment in this data is essential and, though not accessible to all or free at the point of use, creates an opportunity to create a cost beneficial baseline for blended finance.
2. There is currently no opensource data available to the market that identifies the concrete opportunities a farmer or landowner wants to pursue on their land. Our inclusion of a digitised LMP and a GFM-based survey in the trial methodology addresses this vital piece of missing information. Mapping the opportunities that farmers have identified, and aspects of their own experience of the site is key to making accurate, relevant local plans and data models.
3. This trial confirmed that, although advances in technology are assisting data collection, the importance of collecting primary on-farm data cannot be underestimated and must be supported by the UK Government through the funding of advisors/verifiers. This primary data, including opportunities farmers have identified, is critical to verify the integrity of project opportunities, to improve remote sensing and to improve ecosystem recovery or sustainability data models being used.

¹ 70% of the Land in the UK is designated as agricultural land

Incorporating Human and Social Capital

Landscape plans must include the human and social capital of expertise held by local farmers, specialist advisors and rural facilitators.

Using an approach like Integrated Local Delivery (ILD, used in this trial and demonstrated in previous research to Defra)² advisors and facilitators use their local knowledge and expertise to analyse multiple data streams, contextualise the farm within the landscape and can scope the social, economic, and environmental opportunities on *any* farm. ILD enables them to align these opportunities to relevant to local, national, and international priorities and public, private and third sector funding sources. This is a critical service in the implementation of a landscape plan and development of blended finance approach.

Effective Blended Finance Mechanisms

Effective mechanisms for blended finance deliver cross-cutting projects aligned to the delivery of local plans and statutory duties for nature, people, and the economy. To do this, blended finance mechanisms might include the following elements:

1. Robust, well governed, high integrity data to underpin opportunity development, ongoing model development and remote sensing improvement, supported by organisations such as the CEH and Rothamsted Research.
2. A pathway to share on farm UK Hab and sustainability data that evidences the material impact of investments. Data might be available to all relevant stakeholders, including farmers through the delivery of the Local Nature Recovery Strategies and the Environmental Improvement Plan.
3. A project design and delivery methodology that values the existing social and human capital of farmer and local community knowledge.
4. Ways to leverage the trusted relationships held between farmers and advisors/facilitators who play a significant role in leadership, guidance and co-ordination of data, relationships, and projects in the farmed landscape.
5. An ambition that the British Standards Institute develops harmonised frameworks that are adopted at national level, to assess, design and monitor land use change as a result of investment opportunities.

This capacity to plan, predict and monitor land use change is critical to the integrity of landscape plans and any blended finance opportunities that are developed from it. To release the value of farmland as a multifunctional deliverer of Public Goods, *both* landscape plans and blended finance mechanisms must include an advisor-supported holistic approach or framework (such as the GFM) to assess, identify and monitor impacts on farmed land.

² Integrated local delivery [Integrated Local Delivery | Farming & Wildlife Advisory Group SW \(fwagsw.org.uk\)](https://fwagsw.org.uk)

Using frameworks like this, the potential to identify and stack multiple benefits from single investment is improved because it:

- Helps farmers to review on-farm opportunities and risks across environmental and socio-economic agendas.
- Identifies opportunities that are not registered by remote sensing and can demonstrate what farmers want to do on their land.
- Helps farmers to plan scenarios and consider the wider repercussions of any proposed changes in their farm system (as a result of an investment or planned project).

Addressing Barriers to Blended Finance

When it comes to blending private finance with public funding at either a local or landscape scale, the issue of data accessibility, stewardship and licensing are significant barriers.

Collective, joined up action at a regional level can be hindered by the costs of commercially licensed data and proprietary solutions that farmers or local authorities must pay for. These costs can be prohibitive and could be avoided if farmers are included within the free data licencing provided by the PSGA as contributors to the LNRS. Agreement terms such as land covenants are significant barriers seen as risky and inflexible by some farmers. The data collection processes that are necessary to design and monitor projects are still onerous and can be barriers to some. The failure of the market to provide interoperable systems for safe and transparent data exchange between blended finance partners is another significant barrier.

Potential of the HiEx LNRS Methodology

Current systems, frameworks and data protocols create a fragmented landscape, and these puzzle pieces must be digitally drawn together and applied consistently (via a county-wide or nationally endorsed methodology like the one demonstrated in this trial) to have a complete picture of the landscape and a vision for its future.

The HiEx LNRS methodology tested in this trial shows how, along with existing structures that most counties have - LNRS, PSGA and advisor-led farmer networks or partnerships – farmers could support local authorities to create high integrity foundational landscape plans and a relevant portfolio of projects that can be developed for blended green investment.