

## Written evidence submitted by Green Alliance

### About Green Alliance

Green Alliance is an independent think tank and charity focused on ambitious leadership for the environment. Since 1979, we have been working with the most influential leaders in business, NGOs and politics to accelerate political action and create transformative policy for a green and prosperous UK.

### Summary

1. ELM is the main programme within Defra to achieve agricultural and land decarbonisation, the government's 30x30 nature protection goal, and its proposed species abundance target for 2030. Achieving these three goals in less than a decade will require a rapid scale-up of Local Nature Recovery and Landscape Recovery alongside the Sustainable Farming Incentive, with a clear and public articulation of the framework that will enable the goals to be met. Analysis from the National Food Strategy shows that a three-compartment model for land use should inform the full roll-out of ELM, with at least 5-8% of land being supported to transition to nature and carbon removal by 2035, and the majority of the remaining agricultural land (which will still occupy two-thirds of the country's land area) being supported to transition to lower input, more nature friendly farming, depending on how the country's diet shifts.
2. In order to demonstrate value for money, ELM should pay for positive environmental and carbon-saving outcomes, not just prescribed activities. Defra should develop standardised approaches for measuring outcomes and progress towards achieving overall objectives, and make sure they are adequately monitored to prevent potential environmental damage due to mistakes in execution. Doing so early will enable Defra to demonstrate value for money in future budget negotiations.
3. ELM will not work without the support of farmers and land managers who will ultimately need to implement the land use and land management changes required. Robust evidence shows that incentivisation alone is insufficient. Defra should target incentives and provide impartial advice to support farmers. The three-compartment-model outlined in the National Food Strategy can provide a framework to help guide farmers in choosing how best to deliver the environmental public goods in their unique context.

## Detailed comments:

- 1. Defra should bring forward the roll-out of all three components of ELM, and articulate how each component will deliver against its headline protected areas, species abundance, and carbon budget goals by 2030.**

ELM is the main programme within Defra to achieve agricultural and land decarbonisation, the government's 30x30 nature protection goal, and its proposed species abundance target for 2030. ELM is the main policy governing UK land, and accounts for around half of Defra's budget, with flood risk mitigation accounting for a further quarter. Beyond ELM, there are no large programmes that can meaningfully support land use change or major improvements to farming practice. However, the scheme is not currently able to show:

- how it will contribute to achieving the 4th, 5th, and 6th carbon budget;
- how it will raise the effectively protected-for-nature area of the UK from 3-5% to 30%<sup>1</sup>; and
- how it will reverse the continuous, 50-year decline in UK priority species by 2030<sup>2</sup>.

Achieving these goals will require a step change in farming and land management. Agricultural emissions have not fallen at all in the 13 years since the Climate Change Act was passed<sup>3</sup> and past agri-environment schemes have neither proved effective at reversing species loss nor in restoring the condition of already protected areas.

Net zero cannot be achieved without changing existing land use patterns<sup>4</sup>. Therefore, rolling out the SFI pilot alone will not be sufficient as both changes in agricultural practices and land use are needed in order to get to net zero. The same is true for nature: lower yielding, more nature friendly farms have greater species abundance when surrounded by contiguous areas of natural or semi-natural land.<sup>5</sup> SFI alone does not appear to be designed to support the creation of 'mosaic' habitats with a mixture of wildlife-friendly farming and areas of semi-natural land.

Evidence from the National Food Strategy<sup>6</sup> further shows that a three-compartment model for land use would most benefit UK wildlife. This would mean dedicating a share of land to high-intensity agriculture, reducing intensity in another share, and dedicating

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<sup>1</sup> A range of estimates exist for the area of the UK that is effectively protected for nature: a recent academic review suggests that 5% is effective (<https://www.sciencedirect.com/science/article/pii/S235198942100295X>) while Wildlife and Countryside Link's assessment is that 3% of land is effectively protected for nature ([https://www.wcl.org.uk/docs/WCL\\_Achieving\\_30x30\\_Land\\_and\\_Sea\\_Report.pdf](https://www.wcl.org.uk/docs/WCL_Achieving_30x30_Land_and_Sea_Report.pdf))

<sup>2</sup> For further information on this decline, see [National Food Strategy: Evidence Pack](#)

<sup>3</sup> Defra (2020) [ASCC report](#) (p.14)

<sup>4</sup> [National Food Strategy: Evidence Pack](#) (p. 34)

<sup>5</sup> See <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.12284>

<sup>6</sup> [National Food Strategy: Recommendations](#) (Appendix 9)

a third share to semi-natural areas. The NFS suggests that the share for semi-natural areas would need to rise to a minimum of 5-8% of agricultural land by 2035, while the shares of low-intensity and high-intensity agriculture depend on the total amount of meat production and consumption within the UK – simply put, higher levels of meat production require more land to be farmed intensively, while – ironically – lower levels of meat consumption enable a greater share of UK land to be extensive livestock and mixed farms that integrate animals into arable rotations.

While agricultural practices will need to change in order to reduce water pollution, soil erosion, decrease emissions of carbon, methane and ammonia, the UK will not be able to achieve its net zero goals without significant sequestration of carbon from land – overall, land needs to be carbon negative by 2050. Even if emissions from farming are halved, a significant amount will still need to be sequestered through forest and peat restoration, plus growing of extra biomass to further offset residual emissions from heavy industry, aviation, farming and fishing. While biomass growing is not a public good and should therefore be rewarded by the market, peat restoration and biodiverse woodland creation and maintenance are and should be supported by ELM payments – most likely Landscape Restoration or Local Nature Recovery.

Further, since the publication of the National Food Strategy, Government has indicated that it will sign up to the EU-US agreement to reduce methane emissions by 30% by 2030 from a 2020 baseline. The agriculture sector has not meaningfully reduced methane emissions over the past 12 years<sup>7</sup>, and Defra has not yet approved any methane-suppressing feed supplements for ruminants – despite the opportunity to rapidly reduce methane emissions from dairy cattle via this mechanism<sup>8</sup>. Once approved, SFI could support farmers to integrate methane-reducing additives into animal feed.

Overall, ELM needs to be substantially expanded and accelerated to enable it to support Defra's contribution to carbon budgets, protection of 30% of land for nature by 2030, and to reverse the decline in species abundance.

## **2. ELM should be a system which pays for outcomes, not just activities, to ensure it helps the UK meet its net zero and nature targets.**

In order to incentivise meaningful action, and to ensure that the ELM makes the necessary contributions to England's environmental goals, ELM payments should over time be increasingly based on outcomes, rather than measures. ELM should come up with a system to measure carbon savings, biodiversity gains and reductions of environmental hazards.

Practically speaking, it makes sense to start the ELM transition by supporting practices that are associated with lower carbon and nature-supporting outcomes. But relying on a

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<sup>7</sup> Defra (2020): [Agricultural Statistics and Climate Change](#) (p. 14)

<sup>8</sup> See [National Food Strategy: The Plan](#) (p. 243)

simple association without demonstrating that there is a pathway to paying for environmental outcomes has two major flaws:

First, the principle of public money for public goods rests on the delivery of public goods, not simply undertaking activity that might create public goods. Showing that there is a route to measuring and rewarding nature and carbon outcomes will provide confidence to farmers that public payments are justified by the creation of real goods – just as the market rewards the production of good food, not just practices that are associated with good food. After this parliament, it is likely that the ELM budget will have to compete with other public spending, so demonstrating value for money will become increasingly important.

Second, measuring outcomes rather than specifying management activity supports farmer innovation. Farmers are entrepreneurs, and payment against outcomes – emissions, species abundance, water quality and retention, amongst others – would enable them to trial new ways of delivering public goods.

Finally, as demonstrated in a Defra ‘tests and trials’ project run by Green Alliance, National Trust and 3Keel, a greater focus on delivering outcomes will facilitate integration between public funding through ELM and emerging private markets for environmental services (e.g. for water quality, flood risk management, carbon sequestration and biodiversity net gain).<sup>9</sup> Private funding is expected to play an important role in delivering nature and climate targets, and these new markets will only grow to meaningful scale if it is clear how they interact with ELM.

Currently the UK’s JNCC assesses the state of nature across a range of indicators. Many of these could be adapted to measure farm-level nature outcomes using remote sensing. Similarly, remote sensing and data processing is currently able to identify peatland soils that are emitting the highest amounts of carbon at farm level, enabling precise targeting of ELM payments and ensuring that the payments are made on the basis of emissions reductions.<sup>10</sup>

**3. ELM is both an environmental and a social change, which will require Defra to support upskilling, and targeted support for different types of farming, rather than a one-size-fits-all approach. ELM will need to facilitate knowledge sharing for farmers and supporting farmers in their specific implementation requirements.**

ELM has started by focusing on incentives: these are essential but not sufficient to support change alone. Beyond economics, farmers and land managers have a wide range of motivations affecting the land management choices they make, including

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<sup>9</sup> See [The Eden Model: Policy Briefing](#); [The Eden Model: Demonstration Project](#)

<sup>10</sup> See, for example, the analysis undertaken by TerraMotion, a spin-off company of the University of Nottingham: <https://www.terramotion.co.uk/carbonpotentialmapgp3>

personal interest in particular aspects of the environment, a sense of social responsibility and farming self-image.<sup>11</sup>

Research from the University of Nottingham<sup>12</sup> suggests that at least two ways to improve ELM:

**1. Target measures carefully**

Identifying different types of farmers who are most likely to participate in ELM, e.g. those who live on the least productive land and are most reliant on subsidies may see more value in much lower input systems which focus on carbon removal and species restoration. By contrast, farmers in highly productive landscapes may focus more on 'hedged and edges' to enable some ecosystem connectivity.

**2. Fund and encourage knowledge exchange activities**

Lack of knowledge is one of the main barriers to changing land management practice. Farmers need to become experts in sustainable farming (relevant to their local context), and not just be the "hands on the ground" executing an abstract concept. Previous Green Alliance research has highlighted that ELM has a vital role to play in helping the farming sector gain the knowledge and commercial skills needed in order to deliver environmental services for private beneficiaries.<sup>13</sup>

Defra should ensure that local delivery partners are committed to supporting farmers on the ground and have the information they need. They should serve as a point of contact, provision of knowledge and support in dealing with farmers' concerns and queries, relevant to their local context and with straightforward advice on how any particular farm can benefit from the range of ELM schemes, including LNR and LR.

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<sup>11</sup> See Dwyer et al (2007) [Farmer attitudes to environmental management](#)

<sup>12</sup> See

[https://projectblue.blob.core.windows.net/media/Default/Imported%20Publication%20Docs/FarmersDecisionMaking\\_2018\\_09\\_18.pdf](https://projectblue.blob.core.windows.net/media/Default/Imported%20Publication%20Docs/FarmersDecisionMaking_2018_09_18.pdf)

<sup>13</sup> <https://green->

[alliance.org.uk/resources/Funding\\_natures\\_recovery\\_new\\_public\\_spending\\_unlock\\_private\\_investment.pdf](https://green-alliance.org.uk/resources/Funding_natures_recovery_new_public_spending_unlock_private_investment.pdf)