

Briefing

What does a good land use framework look like?

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Why is a land use framework needed?

England will not achieve its legally binding commitments to halt nature's decline by 2030 and reach net zero by 2050 without rapidly changing land use.

England must also continue to produce food. Environmental goals can be delivered without offshoring more food production but there are trade-offs: farmed land supports less abundant wildlife than unfarmed land and typically emits, rather than stores, carbon.

While some land will continue to be managed primarily to produce food, most will need to become multifunctional. For example, lower yielding farmland could offer habitat for farmland birds and cultural services, with a modest fall in food production. Peatland and native woodlands will need to provide habitat, carbon storage and recreation.

To meet all these goals, some land must be primarily managed for carbon and nature, rather than food. A land use framework is needed to acknowledge these trade-offs, and best mitigate them by guiding environmental action to land least well suited to food production.

What land uses should the framework cover?

Given over 70 per cent of the UK's land surface is farmed, the land use framework must mainly focus on farmed land in relation to food, nature and climate mitigation.

Although an ideal framework would cover all conceivable land uses, it should focus on the largest changes first. Per year, [2.5 per cent of rural land](#) needs to be converted to native habitat or agroecologically managed farmland to achieve UK nature and climate goals at the least cost. By contrast, the projected expansion of housing, solar or wind energy will occupy [two per cent](#), [0.3 per cent](#) and [0.2 per cent](#) of land area respectively by 2050.

Biomass is a large potential land use. The [Net Zero Strategy](#) puts energy crops on 3.4 per cent of UK land area, in addition to imports from forests overseas covering an area equivalent of 17 per cent of the UK. However, [our analysis](#) suggests that land does not need to be dedicated to energy crops to meet the net zero target.

What should the land use framework do?

The framework and related policy should do five things.

First, it should outline how the government expects land use and management to change to meet food production, nature restoration and net zero goals. This should:

- a. Map food production in England, showing where farmland is more or less productive.
- b. Map the potential for land in England to store carbon and support nature through habitat creation, such as woodlands and wetlands, as well as agroecology. Compare this to the food production map to explore where land use change would avoid the worst trade-offs.
- c. Set out the scale of land use change needed between now and 2050, including types and locations (e.g. at National Character Area scale) of land best suited to delivering environmental goals.
- d. In setting the desired land use pathway, the government should estimate the cost of delivering it ([as we have for five different pathways](#)). This exploratory work should be published to provide justification for the recommended pathway.

The three compartment approach

Our evidence suggests a three compartment approach would deliver positive outcomes at the least cost to taxpayers, while most farm incomes would increase and the current level of self-sufficiency would be maintained:

1. The most productive areas should continue to be managed primarily for food production. These farms do not need public money to make a profit on food production.
2. Some farms produce little food and would increase their income with financial support to deliver nature and climate goals, rather than food production.
3. Moderately productive farms could support nature and climate goals by producing some food alongside nature using low input agroecological farming, although this farming typically continues to emit carbon.

Second, to connect the framework to the main policy that influences rural land use, government should specify in a quantitative way how its

Environmental Land Management (ELM) schemes and other policy and regulatory levers will add up to achieve the recommended pathway.

Only a quarter of farms are profitable from food production: rural payments are the main reason land is used as it is today. Farmers and land managers need long term signals of what the market will pay for, to allow them to plan how to maximise their income. The framework should set out how much will be invested into the three ELM schemes and how they will support farmers and land managers to deliver desired changes:

- Our *Shaping UK land use* report suggested that, by 2030, the Landscape Recovery and Countryside Stewardship schemes should support the management of around ten per cent of currently farmed land in England for carbon sequestration and nature recovery rather than food production. This change can happen at the small to medium scale within existing farms, with habitat creation on patches of 50 hectares or above.
- Some of Countryside Stewardship and most of the Sustainable Farm Incentive payments should support moderately profitable businesses to adopt low input, agroecological farming to increase its share from four per cent to nine per cent of farmed land by 2030.
- Farms focused primarily on food production do not need direct support through ELM (though farmers may still choose to sign up): the average large cereal farm would still earn £100,000 after the withdrawal of the £115,300 it receives currently in direct payments (which will be phased out by 2027). However, these farms need support to decarbonise by lowering inputs without losing yield through R&D investment, and with an enforced regulatory baseline with rising ambition over time.

Third, the government should combine private finance with public ELM funding to bring down taxpayer costs. Government funding will need to play a larger role in the first large scale nature recovery projects since investors currently lack confidence. *Key barriers* include the lack of: (1) standards, (2) risk sharing/reduction mechanisms, (3) coordination between private financiers and public instruments and (4) skills/knowledge to structure partnerships. But private funding can play a larger role in future if the government provides accredited facilitation, funding for monitoring and reporting outcomes, and de-risks private investments with match funding. A new Office for Carbon Removal would help to grow the private market for carbon sequestration by setting frameworks for which businesses should pay for carbon removals and providing confidence in the quality of carbon credits and the claims made about them.

Fourth, the framework should set out the necessary pace and scale of land use change on lowland and upland peat and the incentives needed to make restoration a profitable business. The case for rewetting peat is strong: per

hectare, lowland arable peat emits four times what can be sequestered by woodland. Furthermore, peat will become increasingly expensive to crop in the face of climate change: winter weather extremes will increase the costs of flood avoidance, whilst summer heatwaves necessitate irrigation. [Illegal water abstraction](#) is already occurring during hot spells in the Fens and the water requirements of vegetables will likely increasingly exceed availability without expensive reservoir development.

Finally, the framework should outline how the target agreed at the COP15 UN biodiversity conference, to protect 30 per cent of land for nature by 2030, will be met. It should:

- Establish what will be considered to count towards this goal. It should not include any protections which are not specifically aimed at nature and should commit to including only sites in good condition.
- Commit to the recommendations of the Glover Review to reform National Parks for nature.

What would a poor land use framework look like?

There are four risks to avoid in creating an effective land use framework that meets the government's commitment to support farmers and land managers in delivering nature, climate, and food goals. These are:

1. Failing to acknowledge trade-offs

Focusing some land on food production, some on balancing nature and food production, and dedicating land elsewhere to nature and climate mitigation would reduce taxpayer costs by [40 per cent](#) compared to a scenario which retains food production on all land. This is because land primarily managed for producing food tends to release, rather than sequester carbon, whilst land mainly managed for nature supports [more wildlife](#) and sequesters carbon.

2. Providing no support for land use change on the least productive land

The framework must not endorse taxpayer funded food production as the primary output of the least productive 20 per cent of land, which produces just [three per cent of UK calories](#). Without land use change, these farm businesses require direct payments to be economically viable. Rather than considering continued direct payments, the framework should give these farmers the opportunity to increase their income by storing carbon and creating nature rich habitats on part or all of their farms. [Our modelling](#) suggests farm incomes from the least productive land could rise by 20 per cent if they were to dedicate a large part of the farm to these activities.

3. Not aligning to net zero

The framework must clarify how ELM schemes will deliver the required scale of change to make land carbon negative. Without change in land use, imported biomass will be needed to deliver negative emissions via BECCS. This would add £100 billion to taxpayer costs of delivering net zero.

4. Framing environmental action as a threat to food security

Unabated biodiversity loss and climate change threaten food security. To this end, not changing the farm industry is a greater threat to food security than the modest land use change required to create the carbon and nature rich habitats that will mitigate climate change and biodiversity loss, thereby safeguarding the productivity of land elsewhere. Recent fruit and vegetable shortages are not related, as some have suggested, to the move away from EU Common Agricultural Policy support as horticulture businesses did not typically receive CAP payments.

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