

Briefing

Nature capital: how £1 billion per year in capital spending can decarbonise land use and restore nature

January 2024

Summary

Capital investment of £1 billion per year until 2030 could support land managers to create nature-rich habitats on 10 per cent of UK farmland. This would deliver all of agriculture's expected contribution to the UK's 2030 Nationally Determined Contribution (NDC) under the Paris Agreement, as well as boosting incomes for the least wealthy farmers and reversing nature declines. This land use change would only result in a one per cent loss of food production.

Why does land use need to change?

Currently [68 per cent of land in England is farmed](#). To meet carbon reduction targets and restore nature, we will need to make significant changes in how we use land in the UK. We propose that 10 per cent of the least productive farmland is shifted from largely loss making food production to a business model that is focused primarily on profit making woodland, wetland, and other semi natural habitat creation and management.

Our modelling suggests that for farmers on the least productive land, a switch from current practices to focusing mainly on nature restoration and carbon removal would raise farm incomes. The take home income of upland grazing farms could near treble if woodland creation was pursued across the whole farm. Alternatively, using half of the farm for agricultural production and creating woodland on the other half could maintain their 2019 income, before the post-Brexit farming transition began.

How much do farmers currently earn?

Many farmers in the UK struggle to make a decent living. The [latest farm income data](#) shows lowland grazing livestock farms made an income of just £21,600 last year, despite receiving basic payments from government worth

£13,800. This is a system of payments which works for neither farmers nor taxpayers.

Some farmers do already make significant profits. These are cereal and general cropping farms, whose businesses are profitable from food production alone. 2023 data shows that, on average, their income is over £125,000.

What is the investment need?

To support farmers to change their farming practice, capital investment of £5 billion between 2025 and 2030 is needed to cover the capital costs of creating woodlands, wetlands and other semi natural habitats on the least productive 10 per cent of farmland in the UK. As this is targeted at the least productive land, this would result in loss of less than one per cent of the food produced across the country.

However, capital investment only supports upfront costs. Continued financial support is needed to pay farmers to maintain these habitats once created.

This maintenance funding could come from the existing £3.7 billion annual UK rural payments budget. Much of that budget is being freed up by the phase out of the Basic Payment Scheme in England, Wales and Northern Ireland (Scotland have not committed to phase it out). The exact budget needed for maintaining these habitats involves some political judgement. To get farmers interested in the scheme, at this scale, we assume the scheme would need to be more profitable than other options and increase the very low incomes of the worst off farms.

Therefore, we have based our calculations on payments of £500 to £600 per hectare per year, which leaves farms with about £300 per hectare profit after paying their fixed costs (such as rent for tenant farmers, and any machinery or materials costs of managing the habitat).

How would this funding boost farm incomes?

With the payment of £500 to £600 per hectare, the average 68 hectare grazing livestock farm in the south west of England could make an annual income of £20,400, if they used their whole farm as woodland. This is a threefold increase on the £7,000 income they made in 2019/20.

At these payment rates farmers could also continue managing loss making livestock on some of the farm, whilst using the rest of the farm for habitat creation. The average grazing farm in Yorkshire could continue to farm half

of their 93 hectare farm, whilst creating habitat on the other half, and still increase their 2019/20 income by 50 per cent to £18,678.

In this way, this policy would give a substantial boost to farm incomes, with the greatest gains in the areas where it is most difficult to make a living producing food.

How many farms will this help?

By 2030, when 10 per cent of UK farmland is under this scheme, at least 20,000 farms across the UK would experience these income boosts from the maintenance payments for habitat creation.

In total, maintenance is expected to cost £800 million per year across the UK. About half of this habitat creation is expected to take place in England, meaning this scheme would benefit approximately 10,000 of England’s 100,000 farms with payments for habitat maintenance worth £400m per year. This is, at most, 21 per cent of the budget that is being freed up by the phase out of the Basic Payment Scheme between 2021 and 2027, and 37 per cent of the money expected to be freed up between 2025 and 2027. The current government is not expected to commit to how the budget freed up between 2025 and 2027 will be spent.

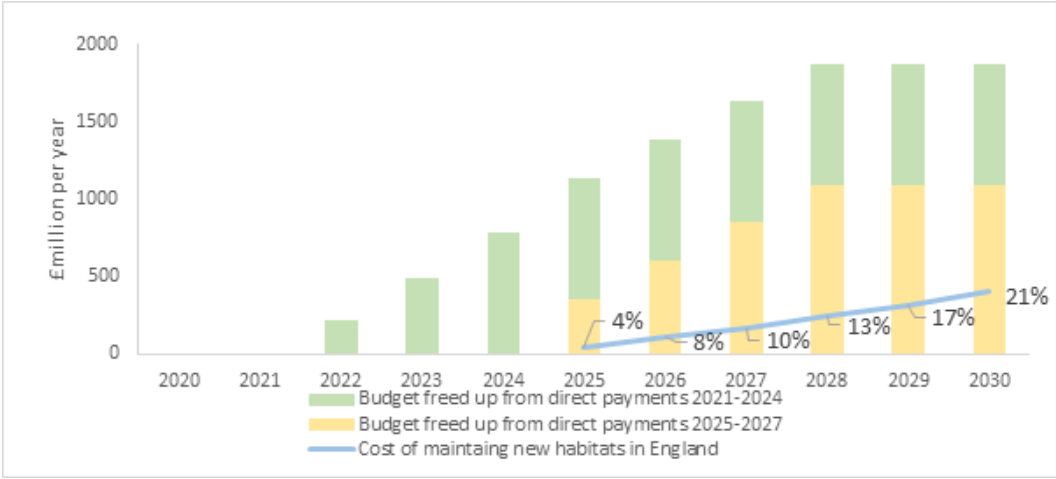


Figure 1: Budget freed up from the phase out of direct payments in England mapped against the cost of maintaining new habitats created in England through £5bn capital investment.

Across the UK, without any additional injection of capital, the rural payments budget alone is unlikely to deliver this pace of change because a new government will inherit a budget already partially committed to funding existing agreements. The combined capital and maintenance costs of this restoration would require up to half of the total UK farming policy budget in a single year (and a third of the budget on average across 2025 to 2030).

Habitat creation is far cheaper for meeting carbon reduction targets than many other options and has the benefit of boosting farm incomes and making progress on nature restoration targets. Delaying habitat creation would slow nature's recovery and vastly reduce the contribution of this activity to climate targets, since the rate of sequestration by woodland accelerates in the two decades following creation. This forgone sequestration would need to be made up with other forms of greenhouse gas removal – most likely bioenergy with carbon capture and storage, which would increase taxpayer costs by more than a third and would bring potentially negative outcomes for nature.

Is there demand from farmers for this?

There are signs of demand amongst farms for more ambitious farming payment schemes. Landscape Recovery – the most ambitious of the current Environmental Land Management schemes – was again oversubscribed this year, with about half of applications rejected. Whilst we don't know how much land was involved in the rejected applications, we know that an estimated 35,000 hectares of peat will be restored and 7,000 hectares of woodland created through the accepted applicants. This is approximately half the habitat creation we propose for England in 2025.

A properly funded habitat creation scheme, as we have proposed, should be more attractive than Landscape Recovery, which has only committed to funding the initial costs, not maintenance. This means we may expect higher interest in our proposed habitat creation scheme.

The Defra commissioned [independent review of protected site management in Dartmoor](#) suggests capital investment is necessary to ensure that protected sites – like SSSIs, National Parks and National Landscapes – managed by farmers are brought into favourable condition (many are currently not). This report also notes that Dartmoor's farmers do not yet know how they will make up for the loss of direct payments – our proposal would provide alternative income. In fact, the report suggests that traditional farming practises can be combined with “carrying out conservation grazing and stewarding Dartmoor to a high, professional, standard”.

How will this impact existing nature areas?

Protected areas would be the primary recipients of this investment, since they tend to cover the least profitable farmland (see overlap between protected sites and least productive farmland on maps below). This is important because many of these sites are protected in name only, without delivering the nature benefit they should. Therefore, this capital spend would help to

make these genuine “protected areas” and deliver progress against the government’s target to protect 30 per cent of land for nature by 2030.

By 2050, populations of wild bird species could grow by an average 48 per cent as a result of this investment in habitat creation.

How will this impact food security?

This habitat creation is not in conflict with food security, as it focuses on creating habitat on the least productive farmland. Just one per cent of calorie production in England occurs on the least productive 10 per cent of farmland.

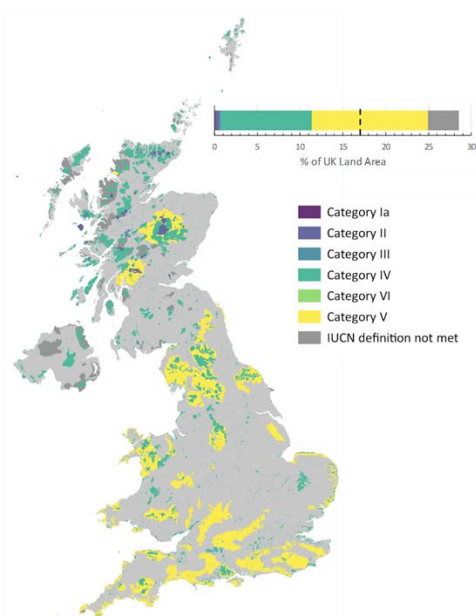


Figure 2: This map shows protected areas in the UK

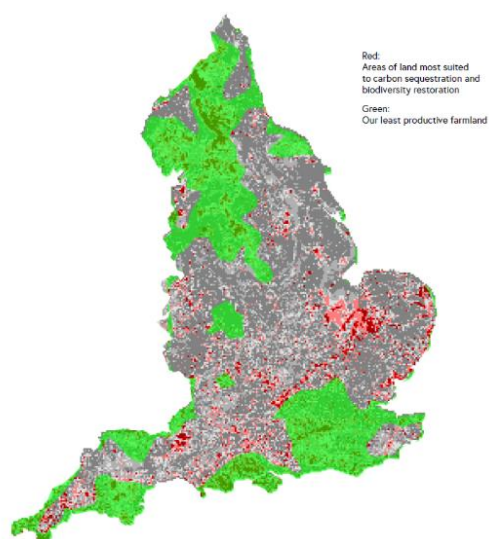


Figure 3: This maps our least productive farmland (shaded green) against areas most suited to habitat creation (shaded red)

How does this help us deliver planned carbon reductions?

Earlier this year, the government downgraded the farming and land use sector’s contribution to net zero. Under the new Carbon Budget Delivery Plan, emissions from the sector must fall by 16 per cent by 2030. At present farmers are not receiving the support they need to cut emissions, but this habitat creation on 10 per cent of land could deliver all of that goal.

Under the previous Net Zero Strategy, an upper and lower band strategy were presented, both more ambitious than the Carbon Budget Delivery Plan. Under that plan, this habitat creation would deliver 85 per cent of the sector’s

decarbonisation needed by 2030 under the lower band, and half under the upper band. These habitats will continue to sequester carbon through to 2050, provided £800 million is invested in their maintenance each year (22 per cent of the [annual budget](#)), delivering, through good management, about a third of the land sector's decarbonisation target for 2050.

How can communities be empowered to lead this change?

Habitat creation of this scale will have a big impact on some communities. Whilst this is a positive change, we must ensure it is a change which local people are part of, not a change which happens to them. Providing funding for local facilitators to bring people together to develop projects that respond to local and national priorities would be a cost effective way to boost delivery. Coupling this with match funding for community led land projects, such as community woodland creation, could help [deliver around a third of the yearly tree planting targets](#) in England.

Change can be difficult, so there must be genuine opportunities for communities to be part of the planning and design of projects, with mandatory government guidelines for community involvement where public funding is involved. There is also a need for greater links between local democratic processes, such as Local Nature Recovery Strategies, and delivery of national policy and funding that will actually create change on the ground, such as the Environmental Land Management schemes.

Can this increase access to nature?

In England, much of the least productive land is near urban areas. Provided payments to farmers support them to allow public access, this restoration could bring nature closer to people living in London, Brighton, Portsmouth, Southampton, Bournemouth, Weymouth, Plymouth, St Austell, Bristol, Birmingham, Nottingham, Sheffield, Manchester, Liverpool, Leeds, Sunderland and Newcastle.

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