Briefing

The implications of rolling back ambition on agri-environment schemes in England

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Summary

Nature in the UK is in serious decline. Without action to restore and create new habitats, this trend will continue, and the land sector will not become the massive carbon sink needed to meet net zero.

The new Local Nature Recovery Scheme is one of the three arms of the forthcoming Environmental Land Management (ELM) Scheme. The Local Nature Recovery Scheme was anticipated to replace and improve the Countryside Stewardship Scheme which currently pays farmers in England for a range of actions designed to reduce food yield but benefit the environment.

Given that the Countryside Stewardship Scheme has been insufficient to reverse nature declines, it is essential that Local Nature Recovery is more ambitious to meet the UK's target of ending nature decline by 2030.

However, there are suggestions that Local Nature Recovery could be even less ambitious than the Countryside Stewardship Scheme, whilst the Retained EU Law (Revocation and Reform) Bill (REUL) is adding further uncertainty to the future of habitats currently protected by European legislation.

Our analysis reveals that failing to improve the Countryside Stewardship Scheme would see populations of bird species decline by seven per cent to 2050, with six species losing half their population size (corn bunting, grey partridge, linnet, quail, tree sparrow and turtle dove).

In addition, loss of 273,000 hectares of woodland and 492,000 hectares of wet grassland, currently supported by the Countryside Stewardship Scheme, would exacerbate declines. Our analysis suggests this loss would see birds decline by a further two per cent, with Cetti's warbler also expected to lose half of its population size.

If the new scheme does not improve on the Countryside Stewardship Scheme, and if the existing wetland and woodland habitats funded by it are lost, we found that there will be 2.5 million fewer birds in the UK by 2050.

In addition, we found that Countryside Stewardship Scheme payments cover a woodland carbon store of 18MtCO_2e. Loss of this would cancel out all the carbon sequestration planned under the government's ambitious woodland creation targets over the next decade.

Furthermore, a portion of Countryside Stewardship Scheme payments that cover 492,000 hectares of wet grassland are on peat soils. Any degradation of this land would increase UK greenhouse gas emissions significantly and be a clear contradiction of the government's ambitious target to restore 35,000 hectares of peatland by 2025 and 280,000 hectares of peatland by 2050. This target would deliver 15 per cent of the avoided emissions needed from the agriculture and land use sector under the Government's *Net Zero Strategy*.

In summary, without Local Nature Recovery that preserves existing, and creates further, wildlife habitats, the government will fail to reverse nature decline in the UK and reach net zero.35

Background

Presently, £300 million is paid to farmers in England through agri-environment schemes.[1] Payments are intended to compensate them for changing their practices to benefit the environment.

Currently, relative to the spending on agri-environment schemes, a much larger sum is spent on direct payments to farmers simply based on the area of land they farm.

The forthcoming ELM Scheme promised to spend much more of the budget paying farmers to deliver public goods, such as biodiversity and carbon sequestration.[2]

Of the three schemes proposed under ELM, Local Nature Recovery was initially expected to replace, improve and expand the existing Countryside Stewardship Scheme.[3] This is the main agri-environment scheme currently operating in England which has failed to reverse ongoing wildlife declines.[4]

Local Nature Recovery was expected to go further to deliver the government target of halting wildlife declines by 2030. However, suggestions that it will be watered down, combined with future uncertainty for habitats protected by retained EU legislation, threaten to accelerate wildlife decline.

The loss of existing habitats would put at risk substantial carbon stocks at a time when the Government's *Net Zero Strategy* plans to expand carbon stocks drastically and rapidly.

This briefing explores the biodiversity implications of not improving and expanding agri-environment schemes. Then it considers the biodiversity implications of losing woodland and wetland habitats protected by the Countryside Stewardship Scheme. These are a small part of the scheme, receiving approximately eight per cent of its budget.[5] These habitats also provide a carbon sink, so, finally, we consider the climate consequences of losing, or not expanding them.

Methods and results

The biodiversity implications of scrapping Local Nature Recovery

The UK is already one of the most nature depleted countries in the world. Without any action, by 2050 populations of wild bird species are expected to be seven per cent smaller than today, on average.[6]

Across all species, there would be 2.27 million fewer birds, with six species expected to lose at least half their population: corn bunting, grey partridge, linnet, quail, tree sparrow and turtle dove.

In addition, our analysis suggests that the loss of the woodland and wet grassland habitats, protected under the Countryside Stewardship Scheme, would exacerbate these declines, such that populations fall on average by a further two per cent.[7] This course of action would also see Cetti's warbler lose more than half its population.

Across all species, our analysis suggests that lack of action to address declines, combined with the loss of Countryside Stewardship Scheme supported habitats, would lead to the UK having 2.5 million fewer birds in 2050, compared to today.

Implications for net zero of losing habitat protected by the Countryside Stewardship Scheme

Woodland habitats are a huge carbon store. Indeed, for this reason, the UK government has a tree planting target of 30,000 hectares per year by the end of this parliament, reaching 50,000 hectares per year by 2035.[8]

We found that woodland protected under the Countryside Stewardship Scheme already stores 18MtCO_2e.[9,10] Losing this carbon store would wipe out the additional sequestration expected to be delivered by all the planned woodland creation under the Government's *Net Zero Strategy* between now and 2032.[11]

Wet grassland habitats are often on peat soils.[12] When these are flooded, they are not a major source of emissions. However, draining peatlands for cultivation results in high carbon emissions. Indeed, degraded peatlands are estimated to be responsible for four per cent of the UK's annual emissions.[13]

We cannot estimate how much of the Countryside Stewardship Scheme's wet grassland is on peat soils, but loss of any would take the government further away from its intention to grow the area of wet grassland by 35,000 hectares by 2025, and 280,000 hectares by 2050.

Decisive action is needed now to ensure no existing habitat is lost and to enable Local Nature Recovery to deliver the expansion of wet grassland, given it is the most likely scheme that will pay farmers to restore peat, rather than cultivate it.

The government's target to restore 280,000 hectares of degraded peat soils by 2050 would avoid emissions of up to 4.8MtCo_2e annually. This is equivalent to 15 per cent of the carbon savings needed from the agriculture and land use sector by 2050, according to the Government's *Net Zero Strategy*.[14]

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Endnotes

[1] Defra, 2022, CAP payments search
[2] House of Commons Library, 2020, 'The Agriculture Bill',
[3] Defra, 2022, 'Local Nature Recovery: more information on how the scheme will work', policy paper
[4] Defra, 2021, 'Wild bird populations in England, 1970-2019 – updated for wintering waterbirds'; RSPB, 2019, *State of nature: a summary for England*
[5] Here, we used the updated 2022 payment rates under the Countryside Stewardship Scheme from: Rural Payments Agency, 2022, 'Countryside Stewardship payment rates for options from 1 January 2022'. We estimated total spend based on the areas enrolled in 2019 under both the Countryside Stewardship Scheme and the Environmental Stewardship Scheme (a precursor to Countryside Stewardship Scheme but with some ongoing agreements in 2019) into woodland and wet grassland creation, maintenance and restoration options, based on information granted in Freedom of Information Requests (RFI 5170 and RFI 5206); however, since neither of our requests included the options that support the maintenance (rather than creation) of woodland, we estimated the area enrolled in woodland maintenance based on: Natural England, 2013, 'Monitoring the outcomes of Higher Level Stewardship: results of a 3-year agreement monitoring programme' (NECR114). Since participation in agri-environment schemes has generally increased, using this 2013 figure is likely to underestimate the area of woodland maintained through payments under existing agri-environment schemes.
[6] Data obtained privately from: A Lamb, et al, 2019, 'The consequences of land sparing for birds in the United Kingdom', *Journal of applied ecology*, 56(8), 1870-1881. This data gives the anticipated population size in 2050 as a proportion of the present population size for 94 bird species in the UK. We took the geometric mean across all species to estimate the average change.
[7] The dataset described in [6] gives the density of each of the 94 bird species in a range of habitats based on sampling from the Breeding Bird Survey, the largest survey of birds in the UK. We used this to estimate the change in each species' population size given these densities where 273,000 hectares of woodland and 492,000 hectares of wet grassland habitat is converted to 492,000 hectares of arable land, 136,000 hectares of intensive grassland and 136,000 hectares of extensive grassland (though our analysis is insensitive to what farmland types are assumed to replace the lost natural habitat). We summed the change in bird numbers across all species to find that, by 2050, there would be 2.5 million fewer birds. We found the anticipated 2050 population size of each species, given ongoing declines and habitat change as a proportion of their present population, and took the geometric mean across all species to find that populations are anticipated to decline by nine per cent on average. Finally, we counted the number of species anticipated to decline by at least 50 per cent.
[8]HM Government, 2021, *Net Zero Strategy: Build Back Greener*
[9] See v for how this area was calculated.
[10] This assumes that the woodland protected by these payments, on average, stores the volume of carbon in 30 year old woodlands, as predicted by the sequestration rates in: T Bradfer-Lawrence, et al, 2021, 'The potential contribution of terrestrial nature-based solutions to a national 'net zero' climate target', *Journal of Applied Ecology*, 58(11), pp 2,349-3,460. The woodland storage does vary with the age of the woodland so, as we did not have access to the age of the woodlands under the Countryside Stewardship Scheme, we assumed that, on average, woodlands protected by the Countryside Stewardship Scheme are 30 years old.

[11] Government woodland creation rates taken from HM Government, 2021, see [8]. Assuming sequestration during the first 30 years following planting, as outlined in: T Bradfer-Lawrence, et al, 2021, see [10].
[12] Wildlife Trusts, 2022, 'Wetlands'
[13] HM Government, 2021, see [8]
[14] Here we assume the peatland sequestration rates in: T Bradfer-Lawrence, et al, 2021, see [10], (table S1). In estimating these emission savings as a proportion of the agriculture and land use sector in the Government's *Net Zero Strategy*, we assume the emissions of the agriculture and land use sector to be 21MtCO_2e per year in 2050.