

Policy Briefing: Paying for Public Goods from environmental land management in England – an introduction

Summary

The National Trust, RSPB, and The Wildlife Trusts have commissioned an independent assessment to provide further evidence to help answer the question, ‘How much will it cost and how might we pay farmers and land managers to help to deliver the UK’s existing environmental land management priorities?’ This research refines and expands upon a previous study published by the same organisations in 2017.

This overarching briefing sets the rationale and context for the research and provides a summary of the key findings.

Summary Findings

Land management costs	England	UK
Environmental land management costs	£ 1.520 billion	£ 2.538 billion
Additional elements		
Environmental land management advice	£34 million	£62 million
Securing public goods from high nature value farming	£112 million	£247 million
Business advice to vulnerable HNV farms	£3 million	£5 million
Securing long term changes in land use	£6 million	£12 million
Total	£ 1.674 billion	£ 2.864 billion

Introduction

Agriculture, operating within the framework set by the European Union’s Common Agricultural Policy, has had the single greatest impact on wildlife and the environment compared to any other driver of change¹. Redirecting current agricultural spend is essential to help tackle the biodiversity and climate crises, secure better value for the taxpayer and nurture a thriving farming sector and rural economy.

In 2017, The National Trust, RSPB, and The Wildlife Trusts, commissioned an independent assessment of the costs of meeting environmental land management priorities in the UK. The objectives of this project were to estimate the financial needs associated with environmental land management² and develop a model that could be used to refine and update these costs. Since our original research was published in 2017, there have been significant policy developments.

In **England**, an Environment Bill and an Agriculture Bill have been laid before Parliament, with a new ‘Environmental Land Management System’ (ELMS) being proposed as the ‘cornerstone’ of future agriculture policy, based on a system of paying farmers for the public goods they deliver. The 25 Year

¹ Burns, F. et al (2016) Agricultural Management and Climatic Change Are the Major Drivers of Biodiversity Change in the UK, 11(3)

² We understand environmental land management to be activities undertaken by farmers and land managers to address existing environmental commitments as currently recognised in national datasets

Plan for the Environment³ sets out the Westminster Government's ambition to become the first to leave the environment in a better state than they found it in, with ELMS a key delivery mechanism for their ambition.

Whilst these developments go some way to signalling a direction of travel, there is still much detail to iron out and many questions to answer, which led our three organisations to commission this research, 'Paying for public goods from land management: How much will it cost and how might we pay?'. Our project seeks to provide further evidence to help answer this critical question, with a consideration of several additional policy questions not covered in the first piece of work:

1. How much will it cost to meet the **UK's current environmental land management priorities?**
2. How much will land management **advice** cost in a future environmental land management system?
3. How much will it cost to deliver public goods in **high nature value farming systems?**
4. How much will it cost to lock-in the public goods associated with **long term land use change?**
5. How should farmers and land managers be paid for delivering public goods – by **activities or by results** – and what **role should natural capital play?**

Limitations of the research

- The work does not estimate the total budget needed for future farming policies across the UK.
- The model does not cost supporting investments such as monitoring and evaluation, transaction costs or wider funding associated with agriculture or rural development. Yet investment in these aspects will need to be significant.
- It does not set out a vision of what the environment needs, as the policy choices in the model are derived from existing policy commitments and obligations (from 2017). The level of ambition needed to leave the environment in a better state for the next generation is likely to be much greater, and we can use the model to update cost estimates as ambition is raised, or the cost drivers change.
- With a focus on environmental land management, it does not include all practices carried out by all actors to address all environmental aims, nor account for the range of investments currently funded by domestic and EU funding mechanisms such as LIFE, the Heritage Lottery Fund and INTERREG. Continued funding for interventions such as targeted species recovery, cross-border cooperation and public engagement will all be necessary in the future, as will investment from the private sector.
- Therefore, the expenditure required to both restore our natural environment and support an innovative, profitable, and sustainable farming sector will be more than the number that this research puts forward.

How much will it cost to meet the UK's current land management priorities?

In 2017, the overall annual cost of meeting UK environmental land management priorities was estimated at £2.2bn ("current costs") to £2.3bn ("adjusted costs")⁴. These figures were arrived at by estimating the land management actions required to meet a range of defined environmental priorities (e.g. biodiversity, soil, water, landscape, and the historic environment), then estimating the costs of delivering these actions using appropriate unit cost estimates. Two cost estimates were

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

⁴ Rayment M (2017) Assessing the costs of Environmental Land Management in the UK. Final Report for the RSPB, the National Trust and The Wildlife Trusts. <https://nt.global.ssl.fastly.net/documents/assessing-the-costs-of-environmental-land-management-in-the-uk-final-report-dec-2017.pdf>

made – the first (termed “current costs”) applied current agri-environment and woodland grant payment rates in the four countries of the UK, while the second (termed “adjusted costs”) re-estimated these costs based on drivers of costs and income foregone (farm output prices and input costs) from the 2017 edition of the John Nix Farm Management Pocketbook⁵.

In this 2019 study, the model was updated to reflect the latest available data on output prices and input costs, including crop and livestock prices and yields, and the costs of labour, machinery, seeds, fertilisers and sprays. The data were taken from the latest (2019) edition of the John Nix Farm Management Pocketbook⁶. This increases the total annual ‘adjusted costs’ estimate (based on income foregone plus costs) to around **£2.5bn (or £1.5bn in England)**, reflecting changes in market conditions in the intervening period (Table 1). The figures presented in table 1 do not include the additional elements which have been costed in the model including the cost of advice, delivering public goods in high nature value farming systems and long-term land use change.

Table 1: Estimated overall costs of meeting environmental land management priorities in the UK (£m per annum over 10 years)

Land management costs	England (in £ millions)	UK (in £ millions)
Priority habitats	518	1,061
Boundary features	261	437
Historic environment	50	102
Arable land	486	556
Grassland	187	356
Organic	17	26
Total land management	1,520	2,538

How much will land management advice cost in a future environmental land management system?

Numerous studies and evaluations have found that provision of quality and trusted advice helps to integrate environmental delivery in to a farm or land management business, improves the quality of environmental delivery and can support long-term behaviour change. Defra’s *Health and Harmony* consultation on the future of agriculture⁷, and their emerging policy thinking on the design of the new environmental land management system (ELMS) also gives the advisor a critical role.

A simple advisory module, which was developed to estimate the costs of providing advice to support delivery of environmental land management priorities as part of this research. The model assumes that advice is provided to groups of farmers at a local level, working at a landscape scale to address common environmental land management priorities; and that advice is delivered through a combination of group workshops and one to one advice.

This study assumes that **all** the environmental land management activities identified in the national costings model is supported by advice, and as such the area of land requiring advisory support amounts to **7,759,405 million hectares in England**. Based on the estimate of advisory costs of **£4.35**

⁵ Redman G (2016) John Nix Pocketbook for Farm Management – for 2017. 47th edition. Agro Business Consultants Ltd, Melton Mowbray, Leicestershire.

⁶ Redman G (2018) John Nix Pocketbook for Farm Management – for 2019. 49th edition. Agro Business Consultants Ltd, Melton Mowbray, Leicestershire.

⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684003/future-farming-environment-consult-document.pdf

per hectare⁸ per year, this gives an estimated **total cost of £34 million annually in England and £62 million across the UK.**

How much will it cost to deliver public goods in high nature value farming systems such as parts of the uplands?

The assessment considered the costs associated with economically marginal – specifically high nature value farming systems (HNVF) that deliver a range of public goods – including carbon storage, flood risk mitigation and biodiversity. HN VF relies upon sympathetic management of important habitats associated with farming, including grazing with appropriate stocking rates, the traditional mowing of hay meadows, and cutting rush. Consequently, many of these farms are vital to maintain some of our most important habitats and species, including upland hay meadows and breeding curlew, as well as some iconic landscapes, such as the North Pennine Dales. In many cases however, these systems are economically marginal, with very low levels of income from agricultural production.

The commissioning organisations support the Government’s proposal to remove direct payments, and to focus on paying farmers and land managers for the public goods that they deliver for society (i.e. ‘public money for public goods’). Due to the low levels of profitability, payments under conventional agri-environment schemes can be extremely low for HN VF systems, calling in to question the appropriateness of payment rates calculated using income foregone plus costs incurred. The assessment looks at options for addressing this and adopts a broader definition of costs to include not just the costs associated with a specific management intervention (as with the current approach to all agri environment scheme payments), but the wider ‘system’ costs of the underpinning farming operation. Importantly, this support would be contingent on the delivery of public goods or appropriate management.

A simple modelling approach was developed to enable these additional systematic costs to be factored into the cost assessment. It is estimated that maintaining the delivery of environmental public goods may incur additional costs over an area of **666,500 hectares**, especially in priority habitats in upland areas of England. The additional costs of sustaining the systems required to deliver these environmental public goods is estimated at **£112 million** annually in England. These costs are based on current farm structures and practices. However, there is scope for farms to enhance their profitability through cost reductions (particularly by lowering stocking rates and input costs), potentially reducing future support needs.

Farm business advice could play a significant role in enhancing profitability, by focusing on boosting margins rather than volumes, as well as identifying opportunities to add value to produce and enhance income through diversification. The assessment models the potential cost of this advice for HN V farms, calculating a figure of **£3 million per year** for a period of 10 years in England.

How much will it cost to lock-in the public goods associated with long term land use change?

Some environmental land management priorities require long term changes in land use and management, such as through the creation and restoration of habitats such as peatlands, wetlands and woodlands. Typical five or ten-year agri-environment agreements present potential problems in this respect, providing limited certainty to taxpayers about the security of public benefits in the longer term, particularly since investments in creating or restoring habitats may take many years to deliver their potential benefits.

⁸ This figure varies by farm size and geography

Locking-in long term benefits could be achieved by long term (e.g. 100 year) contracts, incentives for long term management, results-based payments, and/or legal mechanisms such as covenants. These measures are likely to require increased incentives to obtain long term commitments from land managers. The costs of these measures depend on the mechanism and level of incentive employed. A simple illustrative modelling exercise was used to propose the value of costs over 100 years of expanding and restoring priority habitats and planting hedgerows. This suggests that the **net present value of costs over 100 years** of expanding and restoring priority habitats and planting hedgerows could increase by up to **42%** to secure these long-term commitments. This would require an additional **£6 million** per year in England.

How should farmers and land managers be paid for delivering public goods – by activities or by results – and what role should natural capital play?

The current approach to calculating payments to farmers and land managers of income foregone and costs incurred has some limitations and moving to a different payment basis could help to enhance environmental outcomes by improving the incentive and reward for delivering public goods. Notwithstanding these opportunities, shifting to an alternative payment approach raises significant questions relating to feasibility, value for money and environmental effectiveness – not to mention implications for trade policy.

The assessment analysed the strengths and weaknesses of basing payments on either activities or results and three approaches for calculating payments rates: income foregone, and costs incurred; natural capital valuation; and reverse auctions. The research suggests that the optimum method is likely to draw upon a combination of different approaches. For example, ELM payments may be based on a core, broad-based interpretation of costs and income forgone, but varied to reflect differences in the value of benefits achieved by location and/or performance, or to secure the necessary level of uptake.

Summary of Total Costs

Table 2 summarises the 2019 estimate of direct cost of environmental land management and the additional costs associated with advice, HNV farming systems, and long-term land use change.

Table 2 Estimated overall costs of meeting environmental land management priorities in the UK (£m per annum over 10 years)

Costs	England (in £ millions)	UK (in £ millions)
Environmental land management	1,520	2,538
Additional elements		
Environmental land management advice	34	62
Securing vulnerable high nature value farming	112	247
Business advice to vulnerable HNV farms	3	5
Securing long term changes in land use	6	12
Sub-total: Additional cost elements	154	326
Total	1,674	2,864

Conclusion

How, and how much to pay farmers and land managers for public goods is a complex and contested area. This briefing and report are intended to inform debate, and the spreadsheet models that these costs are based on can be used to interrogate a range of different approaches. What is clear is that significant funding will be required to secure public goods through land management.

Recommendations

This work, and the implications for policy in England lead us to the following recommendations:

- **Significant investment for farming and land management is needed for the foreseeable future to secure a range of public goods** and drive the recovery of our natural environment. Government should maintain existing levels of funding associated with the CAP, at least for an initial 10-year period following the introduction of new policies. This would entail extending the current funding commitment from 2022 to 2035 if current published timescales are met.
- **Any payments to farmers and land managers for public goods will need to consider the full costs associated with the land management needed.** This work looks at advice, HNVF systems and the long-term costs associated with land use change – there are inevitably other factors to consider in this regard.
- **Expert and trusted advice and training are vital to the success of a new environmental land management scheme,** helping to integrate environmental delivery in to a farm or land management business, improving quality of environmental delivery and helping to change behaviours in the long-term. Advice should not be seen as an extra cost but a sound investment.
- **It may be necessary to take a broader definition of costs to reward the delivery of public goods from High Nature Value Farming systems.** Brexit offers the opportunity to restore significant areas of natural and semi-natural habitat, particularly native woodland, and active blanket bog, and whilst maintaining the delivery of public goods from HNVF systems.
- **Long term agreements and investment will be required to achieve some environmental land management priorities that require long term changes in land use and management,** such as through the creation and restoration of habitats such as peatlands, wetlands and woodlands.
- **Further work needs to be done to establish the best way to pay farmers and land managers for the public goods they deliver,** accepting that there is no perfect mechanism. The optimum approach is likely to draw upon a combination of different approaches. For example, ELM payments may be based on a core, broad-based interpretation of costs and income forgone, but varied to reflect differences in the value of benefits achieved by location and/or performance, or to secure the necessary level of uptake.
- **Governments should continue to develop a better understanding of environmental land management needs to deliver the commitment to recover the natural environment for the next generation.** The ‘needs’ identified in this work are based largely on existing government obligations and strategies, and do not necessarily reflect a true picture of what is needed to meet the commitment to improve the environment for the next generation. Further work will be needed to understand this, and our model can be used in turn to then understand the implications that this will have for the total cost.
- **Separately, Government should maintain or increase environmental funding associated with LIFE+, INTERREG and the European Regional Development Fund for example.** Amongst others, these mechanisms and funding streams play a key role in environmental management, and drive actions and interventions not identified within the scope of this work, such as project and staff costs, targeted species recovery, public engagement and cross-border cooperation.

For more information, please contact:

Alice Groom, alice.groom@rspb.org.uk | Ellie Brodie, ebrodie@wildlifetrusts.org |
Marcus Gilleard, marcus.gilleard@nationaltrust.org.uk