Work of Defra: Health and Harmony inquiry

A response from the British Ecological Society to the House of Commons Environment, Food and Rural Affairs select committee

26 April 2018

The British Ecological Society: 'A world inspired, informed and influenced by ecology'

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Founded in 1913, we are the world's oldest ecological society, with over 6,400 members worldwide. As the voice of the UK's ecological community, we communicate the value of ecological knowledge to policymakers and promote evidence-informed solutions.

The UK is a world leader in ecological research. It is vital that in making changes to environmental policies following the decision to leave the EU, Government draws on this expertise and evidence base, and that the research community engages with decision-making.

Introduction

1. The BES welcomes the Health and Harmony: the future for food, farming and the environment in a Green Brexit consultation (hereafter referred to as the Health and Harmony consultation) as an opportunity to reshape England's land management policies. The European Union's Common Agricultural Policy over the past forty years has overseen, and in some cases driven, environmental degradation. For example, approximately 2.2 million tonnes of the UK's topsoil is eroded and lost every year[i], over 97% of wildflower meadows have been lost to farmland during 1970 to 2013,[ii] 56% of species in the UK have declined.[iii]

2. A move away from incentives which primarily prioritise provisioning services from the environment, such as food and fibre, towards incentives which also include regulating, supporting, and cultural ecosystem services[1], such as disease and pest regulation and soil

[1] Ecosystems offer provisioning services such as medicines, fresh water, food, fibre, wood, genetic resources, and they offer regulating services such as water purification, air quality maintenance, flood alleviation, pollination, climate regulation, waste management, regulation of human disease, and biological control of agricultural pests and disease. Furthermore, ecosystems offer supporting services such as soil formation, photosynthesis, nutrient cycling, primary production, water cycling, provisioning of habitat. Finally, ecosystems provide cultural services including sense of place, inspiration, educational values, cultural heritage values, aesthetic values, and tourism. (source: Millenium Ecosystem Assessment (2005) Ecosystems and Their Services. https://www.millenniumassessment.org/documents/document.300.aspx.pdf)

formation, will provide a better outcome for both people and wildlife[iv]. Using public money to support the provision of public goods (public money for public goods) is a chance to reward farmers and land owners for restoring and protecting the environment. We are pleased to see the environment have such a central focus in an agriculture consultation and recommend that the ambitions in the paper be supported by legislation for enforcement and compliance.

What will the consequences of the withdrawal of Direct Payments be?

3. Direct payments make up nearly three quarters of all payments under the Common Agricultural Policy (CAP). Payments based on the amount of land owned are not the best value for money. We welcome the Government's suggestion to have public money pay for public goods. The impacts of the removal of direct payments are difficult to measure as we do not know the length of the "transition period" or what the Government will put in place, if anything, to support farmers and landowners during this period. The Government must be clear on when new funding will become available and how it will work to prevent farm businesses from closing during this period of change. In England, the average farm operated at a loss of £5,300 in 2015/2016 and was reliant on direct payments and other payments to make a profit.[v]

4. We welcome new funding programmes which are focused on the environment but we are concerned about what will happen if there is a gap between the end of direct payments and the start of new agri-environment schemes (AES). For example, some AES aim to protect the ecological needs of rare or threatened species through supporting active management of their habitats. It is not known how protected plant and animal communities would respond to the withdrawal of active management in a changing climate.[vi]

5. It can be difficult for farmers and landowners to commit to implementing ecological initiatives without long-term financial security. Most of the practices which need to be implemented to reverse biodiversity decline, create more and better-connected habitats, restore soil health, improve air and water quality, to name a few, are likely to take decades rather than the current AES cycles. These land management practices can also be very costly, particularly at the start. The financial viability of implementing environmental practices should be clearly set out and supported by the Government.

The Government plans to base the new policy on public money being used to pay for public goods. To what extent do you agree with this approach? What public goods should be supported?

6. The Government's policy focus on public money for public goods could contribute to a shift towards maintaining the environment alongside and in support of, the production of food. We welcome the Government's plan to use public money for public goods. It is important

that we take this opportunity to shift the focus of land management policies towards creating more and better-connected habitats, reversing loss of biodiversity, protecting our wildlife, building healthy soils, and protecting and managing clean air and water. The focus on environmental benefits presents the greatest value for money as it secures goods which may not otherwise be delivered. We suggest the identification of public goods should be those that adhere the following definition:

A public good should be defined as non-excludable and non-rivalrous. In the context of the environment, this means that no one should be prevented from accessing it and one person or one nation's access does not prevent access to another nation or person. For example, no person or nation is excluded from accessing air, and clean air for one person or nation does not come at the expense of other people or nations, so it is non-rivalrous. A public good is something which is a benefit to humans and provided by the environment, such as nutrient cycling, pollination, soil formation and climate regulation. All provisioning and regulating ecosystem services are public goods.[vii]

How should the new policy based on supporting public goods be coordinated and delivered?

7. The coordination of new environmental policies should be done at a devolved national level. However, delivery may be most appropriate at the ecosystem level. Connecting agri-environment schemes (AES) on a larger spatial scale, within which priority species are targeted, has the potential to maximise environmental benefits, ensure the land meets multiple objectives and manage any potential trade-offs. Most important ecological processes and ecosystem services, such as pollination, water retention and filtration, nutrient cycling, seed dispersal, natural pest control etc. operate at larger scales than single farms. They will however, still require management at multiple scales from field to catchment scale. The current AES are all related to individual farms and will therefore inevitably be limited in their scope. It is well established that the effect of conservation or restoration measures applied to an area are highly dependent upon the surrounding land use and management.[viii]

8. Public money for public goods appears to be a cost-effective way of delivering value for money for taxpayers, however directly linking payments to outcomes ("payment by results") can be problematic. For example, schemes are costly to monitor, farmers may be exposed to unnecessary risk if a natural disaster prevents them from meeting agreed outcome, or well-organised NGOs and large landowners could out-compete small individual farmers when competing for payments to deliver a public good.[ix] However, recent research funded by the Valuing Nature Programme, draws on experience in the Welsh Rural Development Programme, and proposed three key changes to agricultural payments:
    i) Pay for the ecosystem services that are valued most by society based on economics research into public preferences;
    ii) Spatially target payments to locations where ecosystem services can most efficiently be provided, based on evidence from land use modelling, using random sampling to validate outputs in place of more widespread farm inspections; and
    iii) Provide incentives for cross-boundary collaboration for the provision of ecosystem services that need to be managed at catchment or wider spatial scales.

9. Following this approach, land managers would be given a menu of environmental benefits to choose from, with the menu differing between areas, depending on the public preferences,[x] [xi] and which benefits can most cost-effectively be provided in any given location. In this way, spending is prioritized (by increasing scheme points available) to the locations that can most easily provide the benefits that society wants, and land managers in those locations are paid for the work they do on a stable, ongoing basis. It is important to note that there would be both winners and losers if those managing certain areas are paid more or less, based on the different levels of benefits they are able to provide society.

10. An alternative option, which could be combined with the previous option, is to supplement public funding for the provision of environmental benefits with private funding via Payments for Ecosystem Services schemes, such as the Woodland Carbon Code and the Peatland Code. Place-based schemes have the potential to integrate payments for multiple services and habitats to provide payments at higher levels over longer periods than are currently available for similar work under the EU funding.[xii] Landscape Enterprise Networks (LENs) were highlighted in the 25 year plan to improve the environment as an example of this approach, integrating funding from private beneficiaries to deliver benefits for the environment, farmers and businesses. The LENs approach is currently being researched in the Global Food Security programme's Resilient Diary Landscapes project.[xiii]

Monitoring

11. Delivery of AES needs to be complimented by a large-scale, high-quality, scientifically robust monitoring system.[xiv] [xv] The monitoring should be carried out and reviewed regularly, to inform independent, evidence-led decision making. The current monitoring systems tend to be vague and do not measure the full impacts of AES, making it difficult to repeat or improve practices.[xvi] Improved quality of monitoring could help identify if the problem is with the AES design, implementation, if it is context specific or if it is unsuitable for use in all regions and landscapes. Therefore, Natural England should be adequately resourced and committed to a country-wide monitoring programme.

12. However, delivering public goods through better environmental management requires more than just monitoring more species and taxa. It also requires a robust monitoring framework for ecosystems, particularly ecosystem functions (this is still an area requiring further research and agreement). For the moment, environmental monitoring is very much geared towards species occurrence and abundance, but not covering/acknowledging the multiple dimensions of biodiversity[xvii]. Without further research, a change in approach and scope as well as better monitoring, England will struggle to deliver on ecosystem services enhancements. We will remain limited by our understanding of how changes in composition link to ecosystem functioning, and therefore ecosystem services.

Environmental Regulation and advice

13. The Government should develop a new Code of Good Agricultural Practice, setting a regulatory baseline above which public monies will be paid. Without this baseline, farmers could be paid for one positive practice such as planting and maintaining hedgerows while continuing activities that have a negative environment effects, such as reduced soil organic matter and soil biodiversity in the field. During the transition period, the Government should help farmers to achieve the regulatory baseline, but after this period enforcement of regulations should be undertaken.

14. Environmental regulations, AES and best practice can appear complex. Compliance with these rules and the implementation of practices which increase habitats, protect wildlife, increase biodiversity and maintain ecosystem services, requires extensive knowledge. Therefore, the relevant Government body should be resourced to provide advice on the range of issues which farmers and land managers must address is important for better results for the environment.[xviii xix xx xxi]

15. To implement the approach mentioned under this section, three principles are going to be particularly salient:
    - Understanding of ecosystem services in societal perspectives and preferences.
    - Harnessing and adapting the natural environment for diverse, rather than singular, ends.
    - Ensuring decisions maintain ecosystem functions and a resilient natural environment.

The consultation indicates a transition period will be needed. How long should this last and what lessons can be learnt from previous implementation of agricultural policy?

16. A transition period will likely need to last at least three years to bring all land managers and farmers up to the regulatory baseline.

17. The new scheme should consider:
    - Biodiversity indicators which cover a broader range of landscapes and wildlife to more effectively monitor different regions in the UK.
    - Indicators for ecosystem service outcomes or natural capital assets.
    - Broad, overarching schemes which can increase wildlife protection, encourage collaboration, and reduce habitat fragmentation.
    - Schemes could be tiered and voluntary as to what level people choose to enter.
    - A scheme of public accountability, setting out the benefits that are being delivered.
    - Data from monitoring could be consolidated into a searchable database and made publicly available.
    - Scheme should include expert advisory services to promote cooperation, compliance and the achievement of environmental goals.[xxii]
    - Facilitated learning and knowledge exchange to connect land managers.
    - Classes/courses on legislation and good practice.
    - Knowledge exchange between the devolved nations.

- Training for farmers and landowners on specific ideas for environmental improvements with measurable outcomes.

18. Improved consistency across different AES would be welcome. Payments for restoration/creation in previous schemes have not always been carried forward into future schemes. An example is the planting of traditional orchards under Higher Level Stewardship (HLS) where under the Countryside Stewardship (CS) scheme these are not eligible for payment. The result is an incentive under the CS scheme to remove the traditional orchards planted under HLS from the land as opposed to maintaining them. The Law Commission's Conservation Covenants report[xxiii] identifies the use of conservation covenant as a way to safeguard public investment in AES and payments for ecosystem services, by ensuring appropriate maintenance in the future. In addition, moving to payments to protect and maintain 'ineligible features' for environmental benefits (as opposed to excluding them from the payment system) will be an important first step to take.

19. Consistency between scientific evidence, the Government's ambitions, and the schemes available to farmers and landowners, would be welcome. In the 25 year plan to improve the environment, it states: "We will ensure broader landscapes are transformed by connecting habitats into larger corridors for wildlife, as recommended by Sir John Lawton in his official review. Yet Annex B: Current Countryside Stewardship Options – Mid Tier, Higher Tier and Capital Items, in the consultation, does not include a clear option to manage, restore or create priority habitat. As stressed in Sir John Lawton's official review, priority habitat sites are paramount. They need to be improved in condition, extended, restored, and new sites need to be created. This should take priority over connecting them using non-priority habitat.

The Brazilian Forest Code

20. The UK could look to the Brazilian Forest Code as a model for monitoring and regulation land management[xxiv]. The vast majority of farmers in Brazil need to set aside part of their land for native habitat, with exception made where the farm is considered very small. This proportion is 20% in biomes such as Atlantic Forest and Cerrado, and 80% in the Amazon. This means that a farmer buying a new piece of land in the Amazon can only deforest and plant in 20% of their land. There are some challenges with compliance and surveillance in such a large country. To overcome these challenges the Brazilian Government is putting into practice more ways to ensure compliance. For example, all farmers must now have the boundaries of their properties and the area which is set aside mapped, and uploaded into an online database. This will enable better planning for future restoration and landscape management.

In which areas should the Government seek agreement with the Devolved Institutions to ensure a common approach across the UK?

21. We support Institute for Governments recent report (ref needed!) which states:
"*An opportunity to rebuild the relationship between the UK and the devolved nations Ensuring that the UK's 'internal market' continues to work after Brexit, by limiting divergence in the*

way the four nations regulate business and manage key policy areas such as the environment, agriculture and fisheries, will require a new approach to co-operation between the UK's governments. The current mechanisms for facilitating co-operation is the Joint Ministerial Committee (JMC)."

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