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Peatland Programme

Assessing the opportunity costs associated with peatland restoration

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A report

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to

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Introduction

1. Although the social benefits of peatland restoration may outweigh the social costs, from the private perspective of an individual land manager (owner or tenant) it is the private costs that are relevant and which have to be covered by any private benefits and external funding sources if enrolment in voluntary schemes is to be achieved.

2. Private costs include expenditure on upfront capital works (e.g. blocking drainage, erecting fences) but also on-going expenditure for maintenance (e.g. repairing dams), monitoring (e.g. checking site condition), management (e.g. scrub clearance) and any income foregone.

3. Income foregone can arise if the act of restoration precludes (partially or completely) continuation of a current income stream, meaning that the possibility to realise that income is (partially or completely) foregone - there is an opportunity cost. Opportunity costs may or may not be significant and have to be considered alongside other costs in calculating the funding necessary to entice voluntary enrolment.

4. The opportunity cost of restoration may reflect the loss of commercial value (e.g. reduced agricultural output) and/or the loss of public support payments. The latter is determined by the policy rules applying to different land uses whilst loss of commercial value depends on the productivity of the land, which in turn depends on its biophysical characteristics, its management and output prices.

5. Previous discussions of opportunity costs in relation to peatland restoration have been presented by Moran et al. (2013) and Smyth et al. (2015). The aim here is to provide an updated commentary, to reflect evolving understanding of the issues as practical experience of restoration continues to accumulate and the policy context changes. Information summarised here has been gathered from published documentation and academic articles plus a sample of public sector Officials, restoration project managers and restoration scheme participants. Eligibility issues are considered first.

Eligibility for Pillar I support payments

6. Almost all agricultural land in the UK receives public support in the form of payments under the Common Agricultural Policy (CAP). Under Pillar II (Rural Development) of the CAP, payments are generally awarded competitively and are targeted at specific policy objectives. For example, modernising farms, encouraging business diversification or securing agri-environmental benefits (including through peatland restoration). Climate change objectives now feature prominently in Pillar II.

7. By contrast, Pillar I payments are (mostly) made purely on the basis of land area and are only weakly linked to specific policy objectives (i.e. through cross-compliance, Good Agricultural and Environmental Condition and, now, “greening” criteria). The total funding available under Pillar I is significantly greater than that for Pillar II.

8. The eligibility of restored peatland for continued support under Pillar I has a significant influence on land managers’ willingness to undertake restoration. That is, Pillar I payments are a major component of agricultural income and any risk of losing them through restoration

will discourage land managers from enrolling in any scheme unless alternative funding offsets the loss. Pillar I area support prior to 2015 was administered through the Single Payment Scheme, but this has now been replaced by the Basic Payment Scheme.

9. The per ha value of the Basic Payment varies across the UK, and indeed varies regionally (with approximate suitability for agricultural usage) within both England and Scotland. Moreover, values in Northern Ireland, Scotland and Wales will change over the period to 2019, reflecting gradual transition towards pure area-based calculations. Table 1 summarises the estimated payment rates for 2019.

Table 1: Indicative Basic Payment (including Greening) rates for 2019

	Euro rate	Sterling rate
England Lowland (non-SDA) Upland (SDA, non-moorland) Upland (SDA, moorland)	 €248/ha €247/ha €65/ha	 £181/ha £180/ha £47/ha
Northern Ireland	€330/ha	£241/ha
Scotland Region 1 (non-LFA) Region 2 (LFA, grade B, C or D) Region 3 (LFA, grade A)	 €145 €25 €7	 £106/ha £18/ha £5/ha
Wales	€135/ha	£99/ha

Notes: Scottish rates will be lower on larger claims due to capping; Welsh payments will be higher on the first 54 ha of any farm due to a redistributive calculation.

10. The influence on voluntary enrolment in restoration of any perceived risk of losing eligibility for the Basic Payment is likely to vary with the payment rate. For example, loss of eligibility will be more significant in the non-LFA regions of England and Scotland than in their lower-paid upland regions. This may affect the relative attractiveness to land managers of lowland vs. upland restoration. Equally, eligibility concerns may be more influential in Northern Ireland than anywhere else. Ironically, by increasing payment rates on poorer land, the shift away from the historic basis for payments increases the potential disincentive effect on enrolment if eligibility is perceived to be at risk.

11. Eligibility essentially rests on whether land is available for agricultural usage and whether it is being actively managed.[1] Availability for usage relates to the presence or absence of ineligible features such as woodland, roads and buildings but also potentially bracken, rushes and scrub if their density precludes grazing. Actively managed generally equates to production of agricultural commodities or maintenance of land in a condition suitable for grazing or cropping, but some exceptions have been made for membership of agri-environment schemes.

12. Government officials have previously offered assurances that they were aware of the potential tension between Pillar I eligibility rules and peatland restoration ambitions and that issues could be resolved through flexibility in how rules were set and/or interpreted. However, there remains some caution amongst land managers and their advisors as to how restoration

[1] Provided that farmers are able to demonstrate appropriate management to recognise and mitigate the risks, a separate potential issue of eligibility under cross-compliance with Animal Health & Welfare obligations is not considered serious given the role of other factors in determining health risks (see below).

actually affects Pillar I eligibility. In particular, the switch from the previous Single Payment to the Basic Payment and the accompanying introduction of "active farmer" criteria have added to perceived uncertainties. Arrangements in the four parts of the UK are considered in turn below, followed by some discussion points.

Wales

13. Of the four parts of the UK, the published Basic Payment guidance for Wales is the clearest in terms of not impeding peatland restoration. Specifically, although "active farmer" is primarily defined in terms of either producing agricultural commodities or maintaining land in a condition suitable for grazing, membership of an agri-environment scheme also confers "active" status.

14. Hence, provided that land was used previously (in 2008)[2] to activate entitlements for the Single Payment, there is no loss of Basic Payment for enrolment in an agri-environment scheme. The guidance helpfully lists various agri-environmental options, including management of upland bogs, together with the land use codes to be entered onto Basic Payment application forms. Lowland bogs are not, however, mentioned.

15. In terms of ineligible land features, various land covers associated with agri-environment schemes are listed explicitly as eligible. For example, grassland with livestock excluded and natural regeneration. Hence, again, the intent (confirmed by Officials) is clearly to allow members of agri-environment scheme to continue to receive their full Basic Payment rather than suffer area deductions for ineligible features likely to appear as a result of reduced agricultural activity.

England

16. The published Basic Payment guidance for England is also relatively supportive of peatland restoration. Specifically, although "farmer" is primarily defined in terms of either producing agricultural commodities or maintaining some land in a condition suitable for grazing, land within certain rural development schemes is eligible for Basic Payment support. "Active farmer" status appears to rest mainly on whether at least 36ha are being claimed or less than €5000 are being claimed or on the absence of certain non-agricultural activities (none of which encompass peatland restoration).

17. Hence, again provided that land was used previously (in 2008) to activate entitlements for the Single Payment, there is no loss of Basic Payment for enrolment in certain rural development schemes. The guidance makes explicit reference to the fact that eligibility is normally dependent on land being available for agricultural activity, but that some exceptions have been made for selected Pillar II options. For example, maintenance and restoration of lowland raised bog. However, options associated with upland bogs are not mentioned. For example, restoration and maintenance of moorland.

18. In terms of ineligible land features, various land covers associated with peatland areas are listed explicitly as permissible. For example, heather and scrub. However, the guidance for England is less explicit than the guidance for Wales and ineligible features arising as a result of restoration could potentially lead to reductions in the area paid on.

[2] The base year specified in Article 32 of Regulation 1307/2013.

Scotland

19. The published Basic Payment guidance for Scotland also appears to be supportive of peatland restoration, although is not as explicit as either the Welsh and English guidance in terms of particular agri-environment schemes. However, active land use is defined primarily in terms of a minimum stocking density of 0.05LU/ha (i.e. less than one ewe per ha), but helpfully a lower stocking density is acceptable if prescribed by either membership of an agri-environment scheme or historical records detailing a lower carrying capacity. Moreover, an annual environmental audit is accepted as an alternative form of evidence of active land use. As such, restoration should be entirely compatible with Basic Payment eligibility.

20. Equally, stocking densities are calculated as an average over a claimed area rather than individual parcels (or sub-parcels) of land. This implies a degree of tolerance over variation in grazing utilisation, which would suggest a relaxed view of whether all parts of a claimed area had to be demonstrably grazed. Moreover, (managed) heather is an eligible land cover. However, large open pools of water, and dense scrub or tall heather are ineligible, even if within an agri-environment scheme – implying the need for some post-restoration management to retain Basic Payment eligibility. "Marsh" is also ineligible, but Officials indicated that much depends on the degree of wetness and its uniformity such that re-wetted areas still capable of being grazed would remain eligible.

Northern Ireland

21. Of the four parts of the UK, the published Basic Payment guidance for Northern Ireland is the least supportive of peatland restoration. Specifically, following being fined by the European Commission (EC) a few years ago for being too lax in permitting payments on land incapable of supporting agricultural activity, definitions and interpretation of eligibility criteria are now deliberately restrictive.

22. For example, active usage is defined simply in terms of agricultural production or maintaining land in a condition suitable for grazing or cropping, and is required over the entire claimed area on a consistent basis over the whole year. Inaccessibility for livestock and/or machinery due to (e.g.) wet conditions or dense scrub is cited explicitly as a cause of ineligibility, as is the absence of tracks and livestock droppings as evidence of no grazing on particular parcels (or sub-parcels) of land.

23. In addition, the non-eligibility of bog or heathland with low stocking densities and/or grazing only at certain times of year is noted explicitly in the guidance. Although enrolment in a blanket bog agri-environment scheme is noted as a possible justification for low stocking densities, the Basic Payment guidance nevertheless suggests that stocking rates should be at or close to the maximum permitted under the agri-environment scheme agreement - and even then not all of a claimed area will necessarily be paid on if parts of it are clearly not being grazed.

24. Separately, examples of reductions to claimed areas arising from the presence of ineligible features explicitly include a number of vegetation types associated with peatlands. In particular, scrub, mature heather and rushes – with the latter being ineligible if deemed too wet for grazing or simply not having being grazed in the past two years. Hence the published guidance is clearly in conflict with ambitions to improve peatland conditions.

Discussion

25. Continued eligibility for Pillar I support matters for peatlands in that it offers a degree of funding security for sustainable land management. However, although all four parts of the UK are operating under the same over-arching EU regulations for Pillar I and Pillar II payments, differences in budget allocations and payment models have resulted in very different payment rates whilst differences in interpretation and/or policy priorities have led to differential treatment of peatlands within the published guidance.

26. The position in Wales appears to be the most favourable for peatlands, with a clear intent to seek compatibility between Pillar II restoration and Pillar I payments. As such, any land managers' concerns over continued Basic Payment eligibility should be allayed by simply making them (and their advisors) aware of the existing guidance. Further clarification of the treatment of lowland bogs would perhaps be helpful.

27. The positions in England and Scotland are also broadly supportive, with no explicit discouragement for restoration but yet some ambiguity about how particular aspects of restoration might be regarded. For example, in England, whether upland bogs enrolled in agri-environment options are treated the same as lowland bog options or, for Scotland, whether marsh is an ineligible feature if arising from restoration. In both cases, some minor editing of published guidance may be sufficient to overcome any land managers' concerns over continued Basic Payment eligibility.

28. The position in Northern Ireland appears to be one of direct policy conflict. Indeed, new enrolment in restoration has apparently ceased and areas not enrolled in agri-environment schemes are reportedly experiencing increased management intensity (including mowing, flailing and burning as well as grazing) as land managers seek to ensure eligibility for the relatively high Basic Payment rate.

29. To resolve this policy conflict, either Pillar II payments would need to increase to account for lost Pillar I payments and/or the eligibility rules would need to be relaxed. The former is unlikely given budget constraints, unless some form of ring-fenced modulation was possible. However, given the approaches taken elsewhere in the UK, relaxing the eligibility rules would perhaps be more feasible.

30. For example, allowing a higher proportion of certain ineligible land covers (e.g. rushes) that are associated with restored peatland and/or permitting inspectors some discretion over how management intensity was calculated over the farm (e.g. an overall average rather than in detail for each and every parcel).

31. However, officials are wary of allowing Basic Payments on land with little or no agricultural activity. Given that the strict criteria appear to have been adopted as a response to previous criticism from the EC, there may be merit in seeking clarification from the EC regarding the (unintended) impact on peatlands and whether this is consistent with the stated desire to "green" the CAP. An analogy could also possibly be drawn with retained eligibility for Pillar I support to farmland used for woodland creation – loss of eligibility had previously inhibited progress against forestry targets, but the rules were amended to remove this disincentive.

Loss of commercial value

32. Restoration does not necessarily lead to a loss of commercial value and may increase productivity in some cases. For example, bare peat has no agricultural production potential and grips can pose a drowning hazard to lambs and chicks. Nevertheless, restoration may reduce productivity per hectare, and hence commercial value, in some cases by displacing (completely or partially) an existing activity and/or affecting the growth of individual animals and/or through lowering the quality of output (and hence the price received). For example, restoration can reduce the carrying capacity of a site and thus total numbers of livestock held whilst possible animal health problems associated with wetter conditions can further reduce the growth rates and market value of individual animals.

33. Unfortunately, the evidence for productivity effects- positive or negative - is somewhat inconclusive due to a lack of specific monitoring, complexity of the underlying relationships, time-lags between cause and effect and confounding variability across different sites and different years. For example, given heterogeneity in growing conditions and market prices, it is often difficult to attribute performance changes to one particular cause, such as restoration.

34. Consequently, definitive information on commercial opportunity costs remains elusive and conclusions have to be drawn from essentially impressionistic case-study reports offered by restoration project managers and scheme participants, supported by some academic literature.

35. The limited extent of peat extraction operations and the high profitability of intensive cropping activities mean that most peatland sites targeted for restoration are currently used for upland livestock grazing or grouse management, thus it is these activities that are addressed here. Three aspects are considered in turn: existing profitability; displacement; and animal health.

Profitability

36. The maximum opportunity cost arising from the displacement of an activity is determined by its current profitability. Estimates for the profitability of cattle and sheep enterprises are published routinely by government and industry analysts. For example, from the Farm Business Survey in England and Wales. Although there is some year-on-year variation, the general position is one of very relatively profitability even if fixed costs are excluded. If fixed costs and capital depreciation are considered, many livestock enterprises actually operate at a loss on average.

37. Table 2: Indicative Gross Margins (£/head) for livestock grazing enterprises (2013/14)

	Cows		Ewes	
	Lowground	Hill	Lowground	Hill
England	£206	£178	£43	£36
N. Ireland	£164	£134	£47	£1
Scotland	£288	£169	£19	£6
Wales	£470	£334	£49	£19

38. Individual farmers may not consider fixed costs but instead focus on cash income or gross margins as an indicator of profitability. Table 2 presents some indicative gross margin figures per animal. These can be converted to per ha figures using typical stocking densities of about

1.0 cow per lowland ha or up to 0.7 cows per hill ha and 5.0 to 6.0 ewes per lowland ha or 3.0 to 4.0 ewes per hill ha (although lower densities are common in some areas). Exclusion of all livestock would forgo the total amount, a reduction in stocking density would forgo only a proportion.

39. For grouse shooting, the absence of routinely published and standardised performance figures means that the profitability figures are harder to infer. Moreover, structural and management differences across different shooting estates in terms of (e.g.) intensity of shooting and number of birds bagged are likely to generate significant variation in per ha figures. Some enterprises may run at a loss. Moran et al. (2013) estimated indicative gross margins of around £20/ha to £100/ha.

40. Where sites are not currently used for commercial purposes, there is no commercial income to forgo and hence no opportunity cost. This is the case for areas already managed for nature conservation (e.g. by NGOs), but also for some areas on commercial holdings where individual parcels of land are regarded as unproductive due to, for example, being inaccessible and/or of poor quality. The latter case highlights that opportunity costs may not be uniform across a land holding and can depend partly upon how individual parcels of land are managed within a system as much as upon the inherent characteristics of the parcels themselves. As such, indicative gross margins are at best a rough guide to the opportunity costs at a particular site and local information is required to provide a more accurate estimate: only the wearer truly knows where the shoe pinches.

Displacement

41. In some cases, such as lowland arable cropping or peat extraction, restoration is generally incompatible[3] with current land uses requiring low water tables and all current profitability would be displaced (although a substitute activity[4] might reduce the net loss). However, for livestock grazing or grouse management, the extent to which restoration will displace the current land use is uncertain and displacement appears to be often only partial or even absent.

42. For example, bare peat has no productive capacity and hence re-vegetation following restoration would be expected to actually improve productivity. Equally, where grips and gulleys are relatively wide and pose a drowning risk for lambs and chicks, blocking them would again improve rather than reduce productivity. Examples of both of these effects can be found across some existing restoration sites.

43. Conversely, increasing overall wetness of a site is generally regarded as lowering the carrying capacity of land. For example, accessibility for grazing becomes restricted and sward composition may be less nutritious. Indeed, many agri-environment schemes prescribe reductions in stocking density as a trade-off for gains in other ecosystem services and examples of reduced livestock numbers can readily be found, causing partial (but rarely total) displacement.

44. However, in other cases, particularly where stocking densities were already low, carrying capacities have not reduced noticeably. Indeed there are, again, some counter examples where re-wetting has led to sward quality and productivity actually improving. Much appears

[3] Short-term adjustments to tillage activities can mitigate degradation rates for some arable land uses, but this is less beneficial than actual restoration.
[4] Activities compatible with wetter conditions, such as extensive grazing or paludiculture.

to depend on the level and spatial uniformity of post-restoration wetness and how animals' grazing habits (supported by active grazing management) utilise available grazing resources (including land other than the restored site). The traditionally assumed trade-off between commodity production and other ecosystem services may not apply in all cases.

45. Very limited objective information is available for the impacts of restoration on grouse numbers. A few sites report no decline and even modest increases in grouse numbers, albeit that they dip immediately post-restoration before recovering. This is attributed to wetter conditions increasing the availability of invertebrates as a natural food source. Conversely, game keepers more commonly report lower numbers and attribute this to wetter conditions impairing nesting and reducing the abundance or palatability of heather (through reduced burning). Increased heather beetle populations have also been observed in some cases, lowering productivity - although the underlying scientific causes are unclear.

Animal Health

46. Beyond direct effects on the level of grazing capacity, ground conditions can also potentially affect livestock production through impacts on animal health. For example, individual animals may become stuck in boggy areas and, in the extreme, drown in watercourses or open pools of water. More commonly, restoration is perceived by livestock managers to be associated with increased risks of liver fluke infestation and Bog Asphodel poisoning.

47. Liver fluke is a parasite that affects various mammals, including sheep and cattle. Eggs are ingested from infected grazing and lead to lower growth rates in younger animals and impaired fertility in older animals. Moreover, infected livers are rejected by abattoirs, leading to price penalties. Snails act as an intermediary host during the full lifecycle of the parasite.

48. The incidence of flukes can be managed through diagnostic attentiveness to monitor rates of infection plus control of snail habitats, restricted access to affected grazing at high risk periods and the strategic use of anti-helminth flukeicides to treat livestock.

49. The background incidence of flukes has been increasing in many areas over time. This is largely attributed to higher rainfall and warmer temperatures favouring the intermediate snail host, but poor drainage is also a contributory factor. In addition, it appears that there is considerable variation in farmers' adherence to best practice in fluke control.

50. Hence, although wetter conditions generated by restoration may increase the risk of infection, restoration is not necessarily the sole cause of infection risks and risks can be better managed. In particular, cold acidic upland sites do not favour the host snail (lower, in-bye land is actually more favourable) and closer attention to fluke monitoring and management can alleviate some problems.

51. Bog Asphodel (*Narthecium ossifragum*) is a perennial, yellow-flowered moorland plant associated with high, wet areas (although, ironically, not in actual bogs). Not all individual plants are toxic,[5] many are and can affect the kidneys and livers of sheep and cattle, leading to increased photosensitisation and extreme sunburn, resulting in disfigurement and often death. Management is traditionally through restricting grazing at certain times to avoid

[5] This may imply that it is not the plant itself but interaction with some other environmental factor, possibly a fungus, that is the problem.

poisoning and/or close grazing through the season to limit establishment, although affected animals can sometimes be treated through controlled feeding and antibiotics.

52. As with liver fluke, the health risks posed by Bog Asphodel are not new nor restricted to restored peatland – the plant occurs widely and its increased abundance in many areas is attributable to general increases in rainfall plus reduced grazing pressure resulting from the advent of decoupled Pillar I payments as well as various agri-environmental schemes. Hence many farmers are facing potential animal health risks and are having to respond through adjusting grazing practices. For example, using fencing and/or active shepherding to restrict exposure to the plant at certain times – most often outwith actual bog areas.

53. Grouse are susceptible to Louping ill, a viral disease spread by ticks. This health risk is commonly managed though using sheep as "tick mops" with the sheep either vaccinated and/or treated with acaricides to kill the ticks. If sheep are displaced from restored land, this control measure becomes less effective and the health risk to grouse will increase. More generally, irrespective of peatland restoration, the use of medicated (anthelmintics) grit/feed is increasing for grouse and it is not clear whether restoration poses any other specific health risks.

Discussion

54. Historically, many peatland sites were improved for agricultural and sporting production through, for example, drainage and liming – almost all of it funded through grant aid. Hence the reversal of such practices through restoration to return peatlands to a more natural condition might be expected to lower productivity and hence impose private opportunity costs on land managers. However, the productivity gains from "improvement" were not necessarily significant nor have they been sustained – without repeated maintenance much land has gradually reverted towards its previous state.

55. The current profitability of livestock grazing and grouse management is not high – typically in the range £20/ha to £140/ha. For example, most hill sheep enterprises achieve only modest Gross Margins on average. Moreover, reported variation across farms reveals that many actually suffer negative Gross Margins (i.e. even before considering fixed costs, they make a loss). As such, even if productivity is diminished through restoration, the value of the lost output is not necessarily significant and may even be negative. The same may apply to grouse estates.

56. Separately, reductions in productivity are themselves not necessarily certain. This may seem surprising given the historical emphasis on improvements but reflects both possibly exaggerated claims for the original productivity gains and the reality that initial improvements were not sustained once the withdrawal of grants reduced land managers' capacity to maintain any improvements.

57. Productivity losses may nonetheless arise from partial displacement in some cases. For example, restoration may indeed reduce (but rarely eliminate) the carrying capacity of some sites. However, equally, other sites may experience improved productivity. Moreover, although productivity is influenced by underlying biophysical conditions and relationships, it is also affected by management. In particular, an individual parcel of land is not managed in isolation but as part of a wider farming system. Given that a peatland area will typically be characterised by spatial variation – a mosaic of land parcels - this suggests that the degree of

any displacement of current activities will not be uniform and, potentially, that land managers may have scope for substituting between individual parcels of land to minimise overall displacement effects. Hence assessment of displacement essentially has to rely on detailed, local information.

58. Similarly, the additional animal health risks posed by restoration in relation to both liver flukes and Bog Asphodel are conditional on local circumstances and are not necessarily linked directly to restoration but to wider factors. The fact that they are largely pre-existing risks means that the extent to which additional funding should be offered for their management depends on the degree to which risks actually increase and whether pre-restoration management already adhered to best practice. Again, such judgements can only be made on a case-by-case basis and require careful measurement of base line conditions and on-going monitoring[6] of evolving site conditions plus discussion and planning with land managers.

59. In summary, commercial loses are possible for a variety of reasons but are not inevitable nor necessarily significant. Actual opportunity costs are dependent on local circumstances and should be included in restoration planning through explicit discussion with land managers.

Conclusions and recommendations

60. Peatland restoration targets across the UK acknowledge the range of ecosystem services associated with functioning peatlands. Given the dominant role of the CAP in determining funding patterns for land management, the treatment of restored sites under both Pillars is important. However, the advent of the Peatland Code reflects continuing evolution of mechanisms to encourage sustainable land management and a range of opportunities are being explored.

61. From the perspective of an individual land manager, it is the private rather than social costs of restoration that have to be funded if enrolment in voluntary schemes is to be achieved. Opportunity costs may be an important component of total private costs and may include both forgone public payments and forgone commercial returns. The former is determined by the policy rules applying to different land uses, the latter on how productivity of the land is affected.

62. The per ha value of the Basic Payment varies across the UK, and indeed varies regionally in some cases. Moreover, the rules attached to how eligibility for payment is determined also vary considerably. In most cases, restored peatlands within agri-environment schemes appear to retain eligibility in terms of satisfying criteria for both “activity” and eligible land covers, although there remain some grey areas for the latter since ineligible features can arise from restoration and hence potentially lead to loss of payments on at least a portion of claimed land. It is recommended that these ambiguities be clarified by amending the published guidance to make treatment of restored land clearer. This may entail further discussions with the European Commission about how peatlands should be treated under Pillar I.

63. In the specific case of Northern Ireland, however, the rules are clear but in direct conflict with restoration policy – particularly given the relatively high per ha Basic Payment rate. The rationale for strict eligibility rules stems from penalties imposed by the European Commission for previously lax rules, but it is not clear that the European Commission intended peatland restoration (or more generally land enrolled in agri-environment schemes) to be excluded in

[6] Active-shepherding and game-keeping can also play a useful role in supporting on-going monitoring and may merit support for that reason as well as for helping to mitigate any health risks.

the manner that it now is. Hence it recommended that the issues be discussed urgently with Officials in Northern Ireland and in Brussels. Adoption of rules closer to those in force elsewhere in the UK should be feasible.

64. Restoration effects on productivity are harder to generalise – much depends on particular site characteristics and how specific parcels of land are managed, both individually and as part of a wider commercial system. Hence it is possible for commercial opportunity costs to be zero, either because the land was not previously used commercially or because management adjustments are feasible.

65. However, in other cases, current activities are affected to varying degrees and a commercial loss suffered. For example, if livestock grazing or grouse numbers are reduced. Animal health issues are also a concern, although not restricted solely to restoration. Ultimately, actual opportunity costs at a given site may only become apparent after a period of time and through detailed discussions with individual land managers.

66. Further monitoring and research into productivity effects is merited. However, given the difficulties of disentangling the numerous factors at play across heterogeneous sites, it is recommended that consideration be given to simply constructing a small number of well-described case studies for publication and wider dissemination, targeted at land managers and their advisors. These should acknowledge potential problems but also highlight their context-dependence and any scope for management to alleviate them.

Addendum

67. The result of the UK referendum on EU membership implies that the future treatment of peatlands under agricultural support mechanisms will be determined more directly by domestic decisions than from Brussels. As such, amidst inevitable discussions about wider issues of overall budgets and policy instruments, the case for peatland restoration will need to continue to be presented to officials across the UK. Any increased flexibility arising from leaving the EU should be exploited. In the short-term, however, land will still be subject to the CAP and hence discussions with the European Commission over interpretation of the current rules will still be necessary.

Supporting material

General

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