

Legal Models for Implementing Agri-Environment Policy after Brexit

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The 2018 Health and Harmony policy statement signaled major changes in the way that public financial support for agriculture is delivered in England.² Similar discussions on future policy are ongoing in Scotland, Northern Ireland and Wales.³ Public financial support for agriculture post-Brexit will be based on the principle of ‘public money for public goods.’ But what are ‘public goods’ in this context, and how should environmental policy be restructured in its application to agriculture if it is to fit within this new policy framework? Agriculture will also need to play a central role in our response to climate change mitigation, and this will, similarly, require significant shifts in public policy (and public financial incentives) for future farming.⁴

This chapter will examine legal models for capturing the environmental objectives of future farm policy, and in particular the idea that farm policy should be based on payments to farmers for providing ecosystem services (‘PES’). Key questions include the identification of those ecosystem services that farming can deliver for the future; how these should be measured and incentivized; how private funding for environmental land management might be encouraged and then captured in mixed public/private funding models for PES; and how PES arrangements can be given transactional effect and legal force? These are important issues that will need close examination if post-Brexit agri-environment policy is to be successfully restructured. To fully understand the scale of the challenge that this presents, we must first consider the manner in which agri-environment policy is implemented within current EU arrangements, before moving on to consider the options for reform following Brexit, and finally looking at the shape of the legal framework needed for the future governance of agri-environment policy in the UK.

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² <https://www.gov.uk/government/publications/the-future-for-food-farming-and-the-environment-policy-statement-2018/health-and-harmony-the-future-for-food-farming-and-the-environment-in-a-green-brexit-policy-statement> (last accessed 22 November 2018)

³ See “Sustainable Farming and our Land; consultation” (Welsh Government 2019) <https://gov.wales/sites/default/files/consultations/2019-07/brexit-consultation-document.pdf> (last accessed 4 August 2020). The Scottish Government has established a taskforce to examine changes to the way the CAP is administered in Scotland up to 2024, see “Report of the Simplification taskforce” (Scottish Government, 2020) available at <https://www.gov.scot/binaries/content/documents/govscot/publications/corporate-report/2020/01/report-simplification-taskforce/documents/report-simplification-taskforce/report-simplification-taskforce/govscot%3Adocument/report-simplification-taskforce.pdf?forceDownload=true> (last accessed 17 August 2020).

⁴ See <https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/>

Agri-environmental policy and the Common Agriculture Policy

The arrangements for supporting environmental land management within the context of the CAP are complex. Although public financial support for the agriculture sector has declined in relative terms, spending on the CAP in the UK still stands at over £3 Billion annually. Direct payments to farmers are delivered separately under the two ‘Pillars’ of the CAP. Pillar 1 channels direct payments to farmers through the ‘basic payment scheme’ (“BPS”), while Pillar 2 funds rural development measures, including the financing of the agri-environment schemes (‘AES’) under the England Rural Development Plan and the rural development plans for Scotland, Wales and Northern Ireland. Expenditure under Pillar 1 is fully financed from the EU budget, whereas expenditure under Pillar 2 is, in almost all cases, dependent upon co-financing by Member States. In 2019 direct payments under Pillar 1 in the UK rose by 0.9% to £2.77 billion; payments under Pillar 2 for agri-environment measures also rose slightly to £449 million.⁵ In total, in 2019 4,229 million Euros was paid to UK farmers and landowners under the various CAP support arrangements.⁶

Refocussing future agri-environment policy to ensure the payment of “public money for public goods” will require us to identify and then place a value on the ecosystem services that agricultural land management provides in different contexts. This will require us to view the interaction between the substantial public financial support for farming and its impact on the natural environment through an entirely different lens than hitherto. Since the 1980s the legal response to the interaction between farming and the natural environment has been characterised by a pluralistic, or multi-strand, approach that has relied upon an increasingly complex framework of regulations and economic incentives to shape land management decision making. Moreover, legal measures to address the environmental consequences of modern farming methods have often been reactive i.e. they have been introduced when a specific environmental problem has arisen and been identified as serious enough to merit a regulatory response. Measures to tackle diffuse water pollution provide a good example of both the reactive nature of environmental policy towards agricultural pollution, and of the pluralistic legal framework

⁵ *Agriculture in the United Kingdom 2019* (Defra, 2019) Table 10.1 at p.99. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904024/AUK_2019_27July2020.pdf (last accessed 5th August 2020).

⁶ *Ibid* Table 10.7 at p. 107.

that has become characteristic of agri-environmental policy more generally. These are explained in Box 1.

Box 1 A Pluralist Model for Agri-Environment Policy: Nitrate Pollution

The use of excessive quantities of nitrate fertilisers and manure is a major source of diffuse water pollution from intensive farming. This has raised public health concerns linked to high nitrate levels in drinking water, including so called “blue baby syndrome (methaemoglobinaemia), a potentially fatal condition that emerged as a major public health concern in the 1980s and early 1990s. This prompted the European Community to introduce a legal requirement that nitrate concentrations in drinking waters should not exceed 50 mg/litre.⁷ The use of manure and inorganic nitrate fertilisers is now covered by a statutory Code of Good Agricultural Practice.⁸ The largely voluntary approach promoted by the Code is supplemented by regulatory measures introduced by the EC Nitrates Directive in 1991⁹ which provided for the designation of “Nitrate Vulnerable Zones” (NVZs). These are now designated in England by the Nitrate Pollution Prevention Regulations 2015 and implement action plans restricting manure and nitrate applications in NVZs.¹⁰ These regulatory provisions are also linked to CAP support payments in that compliance with the NVZ regulations are one of the Statutory Management Requirements (SMR) which are a condition for receipt of Basic Payment Scheme payments – and so failure to comply will jeopardise a proportion of a farmer’s annual support payment. In addition, several land management options within the current suite of voluntary AES, including Countryside Stewardship, are intended to address and reduce water quality problems.¹¹ Notwithstanding the application of this mix of regulatory and voluntary approaches to the problem, nitrate concentrations in drinking water in England and Wales have remained stubbornly high, and regularly breach EU drinking water quality standards.

A move away from a “problem solving” approach to agri-environmental policy might involve seeking to change the fundamental way in which agriculture interacts with the natural environment. A key element in this change of approach is to identify and then recognize the positive ecosystem services that agriculture provides, and to base future policy and public support on enhancing and maximizing them – rather than on reacting to specific environmental problems as and when they arise.

⁷ Council Directive 75/440 [1975] OJ L 194/26 on drinking water quality.

⁸ *Protecting Our Water Soil and Air: A Code of Good Agricultural Practice for farmers growers and land Managers*: (2009, DEFRA). Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/268691/pb13558-cogap-131223.pdf

⁹ Council Directive 1991/676/EEC, [1991] OJ L 375/1.

¹⁰ SI 2015/668. The 2015 regulations expanded the NVZ scheme’s geographical scope and replaced the Protection of Water Against Agricultural Nitrate Pollution (England and Wales) Regulations 1996, SI 1996/888.

¹¹ For example water capital grants to improve water quality are available in water quality priority areas under the current Countryside Stewardship scheme management options: see section 4.3.5 of the Countryside Stewardship Manual available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908238/Countryside_Stewardship_Mid_Tier_2020_v1.0.pdf (last accessed 28 August 2020).

Agriculture provides multiple ecosystem services, of great value to society and the wider economy.¹² The ecosystem services arising from managing land for farming purposes may be of differing kinds.¹³ These include so-called “provisioning services” – products obtained by the use of natural ecosystems including food, timber, and other agricultural products used in industrial processes (oilseed rape for example). Agricultural land management also provides “regulating” ecosystem services e.g. climate regulation or the purification of water. “Cultural” ecosystem services include other benefits we derive from our interaction with the natural environment e.g. the preservation and management of aesthetically important precious landscapes or the provision of land for open air recreation. Finally, there are so-called “supporting” ecosystem services i.e. those natural processes that are necessary for the production of all the other beneficial ecosystem services. In the context of agriculture this might include soil formation through suitable land management, and natural nutrient cycling (such as soil breaking down animal or vegetative waste).

The transition from the current model for agri-environment policy under the CAP to a more imaginative and ecosystem-focussed approach will take time and patience. It will also require us to develop new legal instruments to capture a new understanding of the relationship between farming and the environment. Until 31 December 2020 farmers will continue to be supported by the BPS (Pillar 1 of CAP), with a period of transition following this when payments will be gradually phased out to 2027.¹⁴ Payments under the BPS are currently linked to a requirement to maintain land up to at least a “reference” level of good farming practice which includes maintaining land in “good agricultural and environment condition” (GAEC) – a standard which incorporates agricultural codes of practice.¹⁵ The BPS also requires “cross compliance” with 19 Statutory Management Requirements (SMR), so that farmers are required to bear compliance costs up to the level of land management equating to “good agricultural practice”.¹⁶ The cross-compliance rules have been described as an attempt to apply the “polluter pays”

¹² “The products of natural systems from which people derive benefits, including goods and services, some of which can be valued economically, and others which have a non-economic value.” See *The Natural Choice: securing the value of nature*, Cm 8082, June 2011, at page 12. Available at:

<http://www.defra.gov.uk/environment/natural/whitepaper/>.

¹³ See the categorization by the Millennium Ecosystem Assessment, available at: <http://www.maweb.org/en/index.aspx>. And that by Prager, Matzdorf, Dutilly et al., *Contracts 2.0. Key concepts to investigate agri-environmental contracts – shared conceptual framework* at p.12 Table 3. Available at: https://www.project-contracts20.eu/wp-content/uploads/2020/05/C20_WP1_D01_D1.1_UNIABDN.pdf

¹⁴ See Agriculture Bill 2020, Clauses 6-11.

¹⁵ But these measures are to be discontinued from the end of 2020: See <https://www.fwi.co.uk/news/environment/greening-measures-to-be-scrapped-for-2021-says-defra>

¹⁶ The concept of “cross compliance”, its introduction and then extension in European Agricultural Law is discussed in B. Jack, *Agriculture and EU Environmental Law*, (Ashgate 2009) at 66-79. “Cross compliance” is the term used to describe the link between entitlement to receive a SPS and the requirement that land is managed up to GAEC standard and in compliance with all SMR.

principle of European environmental law to agriculture, and the latest Europe 2020 CAP reform has introduced a ‘public goods’ approach to the funding of the basic payment scheme.¹⁷ It remains the case, nevertheless, that as compliance with most of the cross compliance conditions is already a mandatory legal requirement, it may equally be argued that the payment is unjustified. It is certainly questionable whether the cross-compliance conditions deliver additional benefits in return for public expenditure.¹⁸

Producers can currently engage in land management to improve the natural environment above the reference level of good farming practice by participating in voluntary AES. Under the CAP, AES use public money to create a market for environmental goods: therefore whilst achieving GAEC and compliance with the SMR are reflected in BPS support payments, farmers can currently receive additional AES payments under Pillar 2 of CAP for environmental improvements above and beyond those required to comply with the BPS.¹⁹ This means that there has for some time been a facility within the CAP for the purchase of ecosystem services from farmers – but this has been actioned principally through AES approved by the European Commission in each member state’s rural development plans. The ‘purchase’ of ecosystem services under this model is mediated by the state, with public funding delivered through the use of environmental land management agreements entered into by farmers and a public body (in the English context this will be Natural England). It is certainly arguable that publicly financed schemes such as this do not fund the direct acquisition of ecosystem services – they provide payment for land management that may (if all appropriate conditions are met) lead to ecosystem services being provided.²⁰ In other words they are “PES-like” rather than being schemes facilitating the direct purchase of ecosystem services by public bodies.²¹ In any event, AES programmes implemented using this model have had only a moderate record in delivering environmental gains.²²

¹⁷ Art174 (2) TEU; 6th Community Environmental Action Programme, Decision 1600/2002 of the European Parliament and of the Council, 2002 OJ L 242/1. And see generally Cardwell, M., “The Polluter Pays Principle in European Community Law and its Impact on UK Farmers” [2006] 59 *Oklahoma Law Review* 89-113

¹⁸ See, e.g., House of Commons Environment, Food and Rural Affairs Committee, *The Mid-term Review of the Common Agricultural Policy*, Third Report of Session 2002-03, HC 151, paras 52, 76 et seq..

¹⁹ AES payments are calculated to cover farmers’ costs and loss of profit in introducing activities. As some of these are for reducing negative externalities it is another example of how the polluter pays concept does not apply to agriculture.

²⁰ See the definition of PES schemes at : http://www.oas.org/dsd/PES/DefinitionPES.htm#_ednref6 (last accessed 20 August 2020). And see generally: Sven Wunder, “Payment for Environmental Services: Some Nuts and Bolts” (2005) CIFOR Occasional Paper No 42 (asp. at para 2.1 et seq.) available at:

https://www.cifor.org/publications/pdf_files/OccPapers/OP-42.pdf (last accessed 20 August 2020).

²¹ See Wunder op.cit. at p.4. The lack of conditionality for payments is the fundamental issue that prevents them being regarded as “true” PES schemes if we adopt this analysis.

²² See: Science for Environment Policy (2017) *Agri-environmental schemes: how to enhance the agriculture-environment relationship*. Thematic Issue 57. Issue produced for the European Commission DG Environment by the Science Communication Unit, UWE, Bristol. Available at: <http://ec.europa.eu/science-environment-policy> (last accessed 20 August 2020). And passim.: *Agri-Environment Schemes in*

Legal Models for Implementing agri-environmental schemes

(a) Contractual Models

The implementation of AES has until now been largely based on the use of a contractual model using management agreements entered into by farmers and landowners with public bodies. These have changed since 1980 as the contractual models have become more refined. There has been a movement away from the use of standard form agreements with fixed land management prescriptions and payment regimes (as for example under the Environmentally Sensitive Area programme)²³ and towards second and third generation agreements with more flexible contractual structures based on menus of land management options – but with fixed payment rates.

So, for example, the first generation of Environmentally Sensitive Area (“ESA”) agreements in England and Wales, introduced in 1986, were based on a standard contractual model and strongly demand led – in the sense that management prescriptions and objectives for the scheme were fixed by government with no option to offer farm level ecosystem services other than those centrally prescribed and applicable to all farms in an ESA area. Standardised and relatively inflexible management prescriptions were applied to all participating farms in each ESA, with prescriptions appropriate for the type of farming predominant in each area. A more sophisticated approach was adopted in the second and third generation of ESA agreements from 1992, which combined participation in a basic tier of obligations with optional additional (or higher) “tiers” of participation under which extra premiums could be paid for allowing public access to farmland or for additional environmental obligations targeted at particular habitat types. This was essentially a more sophisticated variant of the standardised or “general” contractual model, in which prescriptions were targeted at

England: a review of results and effectiveness (Natural England 2009): available at http://www.naturalengland.org.uk/Images/AE-schemes09_tcm6-14969.pdf; and Whitby and Saunders, “Estimating the Supply of Conservation Goods in Britain; A Comparison of the Financial Efficiency of Two Policy Instruments” (1996) 72 *Land Economics* 313-325.

²³ The Environmentally Sensitive Area scheme was a classic example of this type, with prescriptions for management agreements and payment rates set out in the statutory instruments designating each ESA area: see for example the Environmentally Sensitive Areas (Stage 1) Designation Order 2000 SI 2000/3049, Environmentally Sensitive Areas (Stage 11) Designation Order 2000 SI 2000/3050, Environmentally Sensitive Areas (Stage 111) Designation Order 2000 SI 2000/3051 and Environmentally Sensitive Areas (Stage 1V) Designation Order 2000 SI 2000/3052.

particular ESA areas²⁴ rather than at individual farms and farm-based habitats.²⁵ The ESA scheme has been closed to new entrants since 2005 and most management agreements under the scheme are now spent.

In contrast, the principal current English AES – the Countryside Stewardship scheme - is in theory supplier led. Applicants can offer ecosystem services at farm level, specific to their location and resources, and applications for funding are scored by reference to two factors. A *Statement of Priorities* for the scheme sets out separate priorities for protecting and promoting biodiversity, landscape, water protection and quality, woodland management, protecting the historic environment, and multiple environmental benefits (for example establishing new wetlands, or enhancing existing woodlands). The priorities are specified in some detail for each region and district in England.²⁶ The applicant’s score will be derived from the priorities selected for each parcel of land submitted, the appropriate land management options chosen, and the targeting priority (high medium or low) given to the feature or issue. A standard number of points are assigned to each priority level; so high priority features will score more than medium or low priority features. Each score will be ranked to determine which applicants are offered agreements, considering the available budget in a given year of the scheme. There are three levels of participation in the scheme: (i) Mid-Tier agreements are aimed at securing agreements for environmental improvements to the countryside in its widest sense; (ii) Higher Tier agreements are aimed at securing agreements to manage environmentally significant sites, and those where complex management is required (for example on common land); and (iii) there is a capital grant element, which can fund capital improvements, such as providing new hedgerows. The management options and conditions, and rates of payment, are specified in some detail.²⁷

Countryside Stewardship offers land management agreements for 5 years in most cases. It can be seen that the scheme was ostensibly based on a “public goods” model paying farmers for providing environmental improvements and/or environmentally beneficial land

²⁴ Some of which were geographically very large, such as the Cambrian Mountains ESA in Wales: see the Environmentally Sensitive Areas (Cambrian Mountains – extension) Designation Order 1987, SI 1987/2026.

²⁵ See Whitby M (ed.), *Incentives for Countryside Management: the Case of Environmentally Sensitive Areas* (CABI, Oxford, 1994), esp. Chapters 10 (Colman) and 11 (Whitby).

²⁶ See: <https://www.gov.uk/government/collections/countryside-stewardship-statements-of-priorities> (there are for example 25 sets of local priorities for different districts within the North East of England, and 158 for different districts within England in total) (last accessed 17 August 2020).

²⁷ See generally the Countryside Stewardship Manual, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908238/Countryside_Stewardship_Mid_Tier_2020_v1.0.pdf

management. This was intended to introduce a targeted mechanism that could deliver more cost-effective farm level conservation if coupled with competitive allocation mechanisms.²⁸ Nevertheless, the payments are input-based (focussed to delivering specific land management actions, not outcomes) and there is little transparency in the link between the public funding received by land managers and the ecosystem services they provide under the scheme. There has been a low uptake from farmers.²⁹ It is seen as overly complex, the land management obligations as overly prescriptive, and its formal requirements (for example the bidding process and subsequent reporting requirements) as time consuming and burdensome.³⁰

The 2018 *Health and Harmony* policy statement promised a new environmental land management scheme (hereafter “ELM” scheme) to replace Countryside Stewardship and deliver the outcomes of the UK government’s 25 Year Environment Plan³¹ and its Clean Growth Strategy.³² Brexit offers the opportunity to develop large scale multi-actor PES schemes to deliver environmental services at a landscape scale – something that was much more difficult to achieve working within the constraints of Pillar 2 of CAP. In England the new “ELM scheme” options are currently under consultation and review, with a view to the new scheme opening in late 2024.³³ The ELM scheme will be based on a PES model, and the ethos of ‘public money for public goods’ is the driving focus of the review. The current proposals are based on a three tier approach. Tier 1 of the proposed ELM scheme would encourage sustainable farming and forestry across each farm or land unit and be delivered at scale. Tier 2 would encourage locally targeted environmental outcomes, for which spatial targeting and local planning may be necessary. Tier 2 may also require new mechanisms to encourage collaboration and joint planning between different land managers on different farms. The most ambitious environmental outcomes would be delivered by Tier 3, which would fund landscape scale projects for land use change e.g. establishing or expanding peat

²⁸ On which see for example: Ian Hodge, “Agri-environment policy in an era of lower government expenditure: CAP reform and conservation payments” (2013) 56 *Journal of Environmental Planning and Management* 254-279; Institute for European Environmental Policy and Cumulus, *Land Stewardship in England post-2013: CAP Greening and Agri-Environment* (Report for the National Trust and The Co-operative farms) esp. Chapters 4 and 5. Available at:

<https://ieep.eu/publications/land-stewardship-in-england-post-2013-cap-greening-and-agri-environment> (last accessed 1st September 2020)

²⁹ See Agriculture in the United Kingdom 2019 (above, note 4), Table 10.6 at p. 106. There were 13,800 Countryside Stewardship agreements in place in 2019; this was still substantially less than the number of agreements still in place under its predecessor the Environmental Stewardship scheme (20,700 agreements)

³⁰ See the *Environmental Land Management: policy discussion document* (February 2020, Department of Environment Food and Rural Affairs) at p 7. Available at:

<https://consult.defra.gov.uk/elm/elpolicyconsultation/> (last accessed 5 August 2020).

³¹ Department of the Environment Food and Rural Affairs, *A Green Future: Our 25 Year Plan to Improve the Environment* (London: HM Government, 2018).

³² *Health and Harmony* op.cit. at page 36.

³³ See generally *Environmental Land Management: policy discussion document* (February 2020, Department of Environment Food and Rural Affairs). Available at:

<https://consult.defra.gov.uk/elm/elpolicyconsultation/> (last accessed 5 August 2020).

mires, or new forestry projects. An extensive test and trial programme is being carried out by DEFRA with a wide range of participating land managers, NGOs and public and private organizations.

The focus of Tiers 2 and 3 of the ELM scheme is on landscape scale environmental management, an objective that is intended to align AES policy with the priorities of the 25 year Environment Plan. Public policy has been moving strongly towards adopting a landscape-scale rather than a farm-by-farm approach to countryside management since the publication of the Lawton Report in 2010.³⁴ This can, for example, be seen in the establishment of Nature Improvement Areas (NIA)³⁵ and a large number of Local Nature Partnerships (LNP)³⁶ - initiatives which involve formalized collaborative partnerships and the development of a regionalized approach to environmental management.

The introduction of the new ELM scheme will necessitate a major expansion in landscape scale initiatives. Whilst some environmental management options can generally be undertaken by individual farmers working alone, providing many ecosystem services will require farmers to work in partnership with one another. Managing complex ecosystems such as peat lands, water tables and sensitive wetlands, or protecting and enhancing the foraging and migration behaviour of wildlife, requires a co-operative approach that crosses traditional property or farm level boundaries. If Tiers 2 and 3 of the proposed ELM scheme are to successfully deliver landscape scale environmental improvements, they will need to be underpinned by innovative legal mechanisms that foster collaboration between landowners and managers and focus on outcomes as well as inputs. The test and trial programme for the new ELM scheme options is, for example, looking at the potential use of “reverse auctions” as a process for implementing Tier 3 – an approach that would require the “buyer” of ecosystem services to stipulate the environmental outcomes required for a specific landscape or area (for example improving the natural wildlife habitat provided by peat mires in an upland area), and for the seller of the services (farmers and land managers in that area) to bid to provide those services.³⁷ Fostering collaboration between land managers will also require

³⁴ Lawton JH., Brotherton PNM, Brown VK, Elphick C, Fitter AH, Forshaw J, Haddow RW, Hilborne S, Leafe RN, Mace GM, Southgate MP, Sutherland WA, Tew TE, Varley J and Wynne GR, (2010) *Making Space for nature: a review of England's wildlife sites and ecological network*, available at:

<http://www.defra.gov.uk/publications/files/pb13428-newp-discussion-239710.pdf>

³⁵ See: <https://data.gov.uk/dataset/a19c95e3-9657-457d-825e-3d2f3993b653/nature-improvement-areas> (last accessed 28 August 2020)

³⁶ See: <https://environment.data.gov.uk/DefraDataDownload/?mapService=NE/LocalNaturePartnershipsEngland&mode=spatial> (last accessed 28 August 2020)

³⁷ *Environmental Land Management: policy discussion document* (February 2020, Department of Environment Food and Rural Affairs) at p.29. Available at: <https://consult.defra.gov.uk/elm/elpolicyconsultation/> (last accessed 5 August 2020).

the development of innovative new legal instruments – a question to which we will return below.

(b) Shortcomings of Existing Contractual Models

A key characteristic of the management agreements used to implement the AES developed under the CAP is that they are based on a ‘linear’ or ‘binary’ model. They typically engage one purchaser (a public body) and one ‘seller’ (the farmer/land manager). The linear model is unsuited for capturing complex relationships operating at a large geographic scale focussed to protecting and enhancing ecosystems. For example, a river catchment system will provide multiple ecosystem services, including clean water abstracted by the utilities for the provision of drinking water; carbon capture and storage in upland peat mires; clean air; high value natural habitats for bird and animal species; and public access for recreational land use. In order to capture all of these benefits, a catchment-level PES scheme will require the participation of multiple actors, some ‘buying’ and some ‘selling’ the ecosystem services provided by agricultural management of land in the catchment. This will require legal arrangements at a large scale that break free of the property-based focus of previous AES.

The use of management agreements to implement AES has, since the 1980s, focused principally on adjusting the property rights subsisting over land in order to control or restrict the activities of the landowner or occupier. Hence most enabling legislation has required the recipient of an agreement – and of payments for environmental management prescriptions – to have a legally recognised ‘interest’ in the land.³⁸ This will typically be a freehold owner, or a tenant (with a sufficient leasehold period unexpired to guarantee performance of the agreement). Or it may include someone with rights of common entitling them to take some of the land’s natural produce e.g. grazing rights, turbary (the right to take peat) or estovers (the right to take other natural produce, such as timber or bracken).³⁹ In legal terms common rights are a type of *profit a prendre* - an incorporeal hereditament - and hence an ‘interest’ in land in the required sense.⁴⁰ Controlling damaging land use on common land is especially problematic. Those with a relevant ‘interest’ would include the owner of the soil and

³⁸ E.g. Agriculture Act 1986 s.18 (Environmentally Sensitive Area Agreements); the Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) reg. 20 (1) (agreements in European wildlife sites); Countryside Act 1968, s. 15 (agreements in SSSIs).

³⁹ For the categories of common right see: Edward Cousins and Richard Honey, *Gadsden on Commons and Greens* (2nd Ed. 2012, Sweet & Maxwell) at 2-34 ff.

⁴⁰ Edward Cousins and Richard Honey, *Gadsden on Commons and Greens* op.cit. at 2.03; *Beckett (Alfred F.) v. Lyons* [1967] Ch. 449, *Besley v. John* [2003] EWCA Civ 1737.

(additionally) a potentially large number of commoners with rights of common (for example grazing rights) over the land in question. In order to establish an effective environmental management scheme on a particular common, all commoners would have to sign up to a menu of prescriptions in one overarching environmental land management agreement. If some fail to participate then the possible future exercise of their rights to take some of the land resource (for example to graze large number of livestock) could render the long-term viability of the scheme questionable.⁴¹ This has led in some cases to commoners creating separate collective legal entities that can enter into a management agreement across a common.⁴²

The approach to implementing management agreements has therefore been heavily oriented around modifying property rights and entitlements. This has resulted in several significant further disadvantages: (i) it limits participation in environmental land management schemes to those with a defined and recognised ‘property’ interest, who may not be the persons actually managing the land; (ii) it makes it difficult to establish effective environmental management where there are multiple potential participants; and (iii) management agreements only modify a farmer’s property rights for the duration of the agreement. At its termination the property rights ‘traded’ in the agreement will revert to the landowner, who can exploit the land resource as s/he wishes, even if this is environmentally damaging.⁴³ They are not, therefore, a mechanism that can “lock in” for the future any environmental gains generated by agricultural land management and paid for by public funding under an AES.⁴⁴

Two other features of the model for management agreements used under previous AES merit attention in this context. The first is that the ecosystem services purchased with public funds from a farmer will have been determined by the scheme options set out in the overall design of each AES. In other words, the design of the AES limits the ecosystem services that can be offered and delivered, and the scheme performs a “channelling” function. The history of AES since 1980 shows a move from a strongly prescriptive and inflexible approach under which

⁴¹ For an example of the issues that can arise see: C.P. Rodgers, E.A. Straughton, A. J. L. Winchester and M. Pieraccini, *Contested Common Land: Environmental Governance past and present* (Earthscan, London and Washington DC, 2010), Chapter 8 esp. pp. 154ff. (Cwmdeuddwr common, Elan valley, Wales).

⁴² For example, a company limited by guarantee as in Ingleton, North Yorkshire: see C.P. Rodgers, E.A. Straughton, A. J. L. Winchester and M. Pieraccini, *Contested Common Land: Environmental Governance past and present* op.cit. at 128.

⁴³ See Rodgers, Christopher, “Property Rights, Land Use and the Rural Environment: A Case for Reform” (2009) *Land Use Policy* 26S 134-141.

⁴⁴ The position is different for forestry projects, where the Forestry Act 1967 prohibits the reversal of land use following afforestation through the felling licence system: Forestry Act 1967, s.9 et. seq.

the environmental management obligations expected of a participant were fixed in the scheme itself,⁴⁵ to one where a farmer can offer environmental improvements and services and ‘bid’ for public funding at a farm scale – but where the obligations offered are measured and scored against a set of strategic environmental objectives set out in the AES design. Countryside Stewardship is an example of a flexible approach of this kind.⁴⁶

The second is that AES have, until now, all been input focussed, not output focussed. In other words, they have been targeted to deliver those changes in land management that have been identified as necessary to produce ecosystem improvement or services, but with no guarantee that the latter will ensue. There has been little focus on measuring the environmental outcomes of individual agreements - “payment for results” – or of tying payment for management obligations to successful delivery of the environmental gains sought.

Importantly, the new ELM scheme could facilitate the offer of a wider range of ecosystem services than was possible under earlier AES, which focussed mainly on wildlife habitats, water pollution and water management issues. The movement to PES as the basis for future agri-environment policy should lead to a further movement away from the ‘channelling’ of publicly funded environmental management to specific benefits targeted by AES prescriptions. The use of output-based models is also being explored in some of the test and trial work for Tiers 2 and 3 of the proposed ELM scheme in England.⁴⁷

Another drawback of the linear model is that management agreements have hitherto only created legal obligations between a public body (the ‘purchaser’) and each ‘seller’ of ecosystem services (typically a farmer or perhaps a group of farmers). They do not facilitate the creation of multiple and reciprocal legal relations between the different participants in an environmental scheme. In particular, a management agreement will not create legal relations between different ‘sellers’ of ecosystem services to a public body within a large-scale environmental management scheme. In other words, there will be privity of contract between buyer and seller, but not between multiple sellers. This problem is partially addressed in

⁴⁵ For example, under the ESA programme, above notes 23 and 24.

⁴⁶ Above notes 26, 27.

⁴⁷ See: Reed, M.S., Moxey, A., Prager, K., Hanley, N., Skates, J., Evans, C., Glenk, K., Scarpa, R., Thompson, K. et al. (2014) [Improving the link between payments and the provision of ecosystem services in agri-environment schemes in UK peatlands](#). *Ecosystem Services* 9: 44-53. One problem of output-based systems is that they allocate the risk of non-performance due to unforeseen circumstances (for example adverse weather conditions) to the land manager. Proposals for the new Sustainable Farming Scheme in Wales are, accordingly, based on the state taking the risk of non-performance (see “Sustainable Farming and our Land; consultation” (Welsh Government 2019). Available at: <https://gov.wales/sites/default/files/consultations/2019-07/brexit-consultation-document.pdf> (last accessed 4 August 2020). Defining the circumstances in which risk is allocated to either seller or buyer is, of course, the key issue – one that needs to be further explored in the trial scenarios for ELM scheme in England.

England by the Countryside Stewardship Facilitation Fund, which provides a funding mechanism to enable a “facilitator” or organisation to bring together groups of farmers and land managers to work together in order to improve the environment at a landscape-scale.⁴⁸ The mechanism does not, however, lead to the creation of multiple reciprocal obligations: participating farmers will still have individual stewardship contracts, usually in parallel with a collective agreement between them that coordinates the delivery of scheme benefits.⁴⁹

Resolving this problem will be important if we are to successfully move to introducing PES schemes at a landscape or catchment scale. The hypothetical example in Box 2 illustrates the issues.

Box 2 An Environmental Management Scheme for the Blue Water Catchment

The Blue water river catchment encompasses a land area of 150,000 ha, some of which is forest, some is upland peat mire, and some 50,000 ha is currently farmed for livestock. The peat mires host rare species of lichen and bog floral mosaics of international importance. They also support a number of protected bird species including hen harriers and merlin. The streams and rivers in the catchment also feed into a water treatment facility operated by Blue Water Services plc, which supplies drinking water to Blue Town and other nearby urban conurbations. The farmers in the catchment entered into an environmental land management agreement with Natural England in 2015 to manage the natural habitats on their land for the benefit of protected wildlife in the catchment. A management agreement of this kind⁵⁰ creates legal obligations between Natural England and each of the 15 farmers who have signed the agreement. It does not create legal obligations between each or any of the 15 participating farmers. If farmer A decides to opt out of the arrangement (for example he decides to drain a peat mire on his land), he may face enforcement proceedings from Natural England. But they may suspend payments to all 15 farmers under the agreement. This will cause a substantial loss of income to the other participating farmers. Farmers B and C, however, do not have any legal redress against Farmer A to either prevent his/her breach of the agreement or for the loss sustained as a consequence of his/her actions. Similarly, Blue Water Services plc would have no remedy against Farmer A if the water entering its downstream treatment facility has higher levels of pollutants due to Farmer As actions.

The movement to a system based on PES therefore offers a challenge, and an opportunity to move to a more flexible legal regime for delivering environmental land management. It also poses difficult questions about how we can establish markets in ecosystem service provision.

⁴⁸ See <https://www.gov.uk/government/collections/countryside-stewardship-facilitation-funding>

⁴⁹ See Prager, Matzdorf, Dutilly et al., *Contracts 2.0. Key concepts to investigate agri-environmental contracts – shared conceptual framework* at p.28. Available at: https://www.project-contracts20.eu/wp-content/uploads/2020/05/C20_WP1_D01_D1.1_UNIABDN.pdf (last accessed 1 September 2020).

⁵⁰ For example, one under section 7 Natural Environment and Rural Communities Act 2006.

In the first place, it should lead to a closer focus on the ‘seller’ as the person delivering the service to be purchased – and this may not be someone with a property interest in the land to be managed. This could be beneficial. And secondly, it will require the development of a new approach to targeting management at the broader ecosystem level – this will require legal arrangements that can accommodate the much longer time frames needed for the successful management of ecosystems, and which can capture obligations entered into by potentially numerous sellers and ‘purchasers’.

A good example of the challenges this will pose is the provision of ‘slow clean water’ and its impact on upland water catchment management. Managing upland grasslands to improve water quality will require the participation of the majority of property managers with land in the water catchment of a river system, and the purchasers of the ecosystem services they provide could be numerous, as can be seen from Box 3. These might include a water utility company that abstracts water from the catchment for drinking water supply; a charitable rivers trust that manages parts of the system for wildlife enhancement; Natural England if the management benefits protected wildlife species and/or improves the conservation status of protected sites such as SSSIs, SACs or SPAs; or a dairy manufacturer if the improvement in water quality and water based habitats leads to an enhancement of the health and productivity of dairy herds on farms that supply it with milk.

Box 3 Capturing Multiple Ecosystem Services - a Blue Water Catchment PES Scheme

Consider the environmental management of the Blue water river catchment from an ecosystem services perspective (see Box 2 above). It encompasses a land area of 150,000 ha, some of which is forest, some is upland peat mire, and some 50,000 ha is currently farmed for livestock. It also feeds into a water treatment facility operated by Blue Water Services plc, which supplies drinking water to Blue Town and other nearby urban conurbations. The ecosystem services provided by farmers managing the upland portions of the catchment are potentially numerous. They include regulating services – carbon capture in the peat mires and regulating water quality and water flow into streams feeding into the Blue Water Services treatment plant. Restricting the use of pesticides and herbicides and keeping livestock away from stream margins will financially benefit Blue Water Services, who will save on the cost of extracting pollutants from drinking water. Provisioning services might include the production of rare breed sheep and cattle for food suppliers and manufacturers. Other potential benefits include wildlife protection and enhancement. And cultural services could include expanded recreational access to upland areas provided by participating farmers for walking, hiking, recreational camping etc. These services could be captured in a single PES agreement, comprising a number of ‘buyers’ of the services provided – Natural England, Blue Water Services, the electricity utilities, food

suppliers sourcing products from farms in the catchment, and local government bodies (for example if expanded voluntary rights of access are to be provided over the land).

Implementing a PES scheme at a landscape scale with multiple buyers and sellers will pose significant challenges. The property basis required for participation in legal transactions means that the property rights traded in a management agreement will revert to the “seller” at the end of an agreement. How do we perpetuate any environmental improvements provided by the scheme at public expense? And the use of management agreements to clothe AES obligations with enforceability has meant that the timeframe for providing environmental management is limited⁵¹ – whereas improving ecosystem functions is a long-term project. In this context, it has been suggested that the use of conservation covenants – a type of property obligation that binds in perpetuity the land over which it is taken - might offer the flexibility to underpin long term management under PES schemes. This would certainly be an important addition to the legal toolkit needed to deliver stability and long-term management, and to ‘capture’ the environmental benefits purchased under a PES arrangement. We will return to this below.

Legal Provision for Underpinning the Market in PES

As the examples in Boxes 2 and 3 show, we have the opportunity in reshaping agri-environmental policy to broaden the range of potential ‘purchasers’ of ecosystem services to include private sector bodies, and to widen the range of ecosystem services that can be captured and provided by farmers and landowners. Brexit also offers an opportunity for wider private funding of environmental land management. A well-designed PES scheme could offer a mixture of private and public funding delivering multiple benefits.⁵² But this will in turn create problems for the efficient integration of private funding streams with public funding – for example under the new ELM scheme in England. Private funding streams may be appropriate to provide “value added” benefits that are not provided by ELM scheme options but cannot be used to incentivise actions that are a regulatory requirement. In other words, “additionality” is a key problem,⁵³ in that both public funding under an AES such as

⁵¹ Countryside Stewardship agreements are, for example, typically of either 5 or (in the case of Higher-level agreements) of 10 years duration.

⁵² See generally Colin T Reid and Walters Nsoh, *The Privatisation of Biodiversity* (Cheltenham UK, Edward Elgar, 2016), Chapter 3.

⁵³ See further *Integrating Natural Capital Schemes: opportunity analysis for integrating carbon markets into multifunctional landscape market places such as those developed by the Landscape Enterprise Networks (LENS) approach* (May 2020, 3Keel, Forest Carbon and Newcastle University) at 3.1. Available at: <https://www.iucn-uk-peatlandprogramme.org/sites/default/files/header-images/Resources/Combining%20LENS%20with%20Carbon%20Markets.pdf> (accessed 1 September 2020).

the new ELM scheme, and/or under alternative or additional private funding streams, cannot be used to pay for actions that “would have happened anyway” because they are covered by regulatory requirements – such as the GAEC “cross compliance” conditions⁵⁴ or statutory land management prescriptions.⁵⁵

A possible use of private funding might, for example, be to ‘pump prime’ environmental management and thereby unlock potential participation in further publicly funded income streams for providing specific or advanced ecosystem benefits. One variant of this model would involve the provision of public funding conditional upon private investment in further land management actions, and the release of additional public funding when this has been secured. In this mixed funding model, the private investment acts as a “trigger” to release further public funding streams.⁵⁶

What legal instruments are available, then, to implement these ambitious policy goals, and what refinements to them might be needed to do so successfully?

(a) Management agreements

The shortcomings of the existing model of management agreement have been outlined above. Contractual arrangements remain, nevertheless, a flexible legal tool that can be used to ‘wrap’ environmental undertakings in a legally enforceable arrangement which can deliver PES.⁵⁷ There are flexible contractual models that can be developed and made available to support PES arrangements. So, for example, Natural England has wide power⁵⁸ to enter into an agreement ‘with any person who has an interest in land about the management of that land’. This power is not limited (as are other management agreement powers⁵⁹) to securing management in SSSIs or other protected areas and could be used to underpin an arrangement

⁵⁴ Above notes 15 and 16.

⁵⁵ Examples of statutory requirements would include, for example, the preservation of important hedgerows as required by the Hedgerow Regulations 1997 (SI 1997/1160), or the safe storage of silage and slurry as required by the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (SI 2010/639).

⁵⁶ Examples of how this might work in practice are to be found in *Integrating Natural Capital Schemes: opportunity analysis for integrating carbon markets into multifunctional landscape market places such as those developed by the Landscape Enterprise Networks (LENS) approach* (May 2020, 3Keel, Forest Carbon and Newcastle University) at 3.2. Available at: <https://www.iucn-uk-peatlandprogramme.org/sites/default/files/header-images/Resources/Combining%20LENS%20with%20Carbon%20Markets.pdf> (accessed 1 September 2020).

⁵⁷ For a comparative analysis of the available models see further: Prager, Matzdorf, Dutilly et al., *Contracts 2.0. Key concepts to investigate agri-environmental contracts – shared conceptual framework*, Concept Note 2 at p 16ff.. Available at: https://www.project-contracts20.eu/wp-content/uploads/2020/05/C20_WP1_D01_D1.1_UNIABDN.pdf

⁵⁸ See Section 7 Natural Environment and Rural Communities Act 2006

⁵⁹ For example, under section 15 Countryside Act 1968 (SSSIs), or Conservation of Habitats and Species Regulations 2017, regs. 23 and 24 (SACs and SPAs).

for the provision of ecosystem services. It could be used to provide long term (or even perpetual) obligations to provide public goods, but greater flexibility in the legal enabling power to enter into agreements would be required if this was to be achieved. Nothing prevents the power being used to create a perpetual agreement, but it is currently used mainly to enter into short term agreements with periodic payments for environmental management. Its use to create long term or perpetual obligations for environmental management would also require substantially increased resourcing e.g. for the payment by Natural England of a lump sum payment on conclusion of the agreement.

If private finance were to be provided in an agreement for the provision of ecosystem services, it will also be necessary to widen the scope of potential participants in a management agreement. This is currently limited⁶⁰ to Natural England (the ‘buyer’) and those with a legal interest in the land over which the agreement is taken (the ‘sellers’ of ecosystem services). But in an arrangement for providing ‘slow clean water’ (see Box 3 above) a water utility company may also be a ‘buyer’ of the services envisaged by a management agreement; as may a local access forum if public recreational access is to be provided to land in the catchment. And a widened management agreement power would also need to ensure that the agreement binds not only the successors of the land managers providing the service, but also the successors of the recipients of the ecosystem service captured and provided by the agreement e.g. a utility company paying for land management in a water catchment. The current legislation provides that a management agreement is ‘binding on persons deriving title under or from the persons with whom Natural England makes [an] agreement’.⁶¹ The term ‘deriving title’ may be problematic in some circumstances and needs clarification to ensure that an agreement would be binding on all successors of the contracting parties, whether deriving legal title to the land or a property interest in it or not.

(b) Conservation covenants

One solution to the problem of guaranteeing the perpetual effect of a PES arrangement may be the use of a conservation covenant.⁶² These have been relatively little used in England and

⁶⁰ See Natural Environment and Rural Communities Act 2006 s 7 (3)

⁶¹ Section 7 (3) (a) Natural Environment and Rural Communities Act 2006

⁶² See the Department of the Environment Food and Rural Affairs, *A Green Future: Our 25 Year Plan to Improve the Environment* (London: HM Government, 2018) at 62; and the suggestion in *Environmental Land Management: policy discussion document* (February 2020, Department of Environment Food and Rural Affairs), above note 30.

Wales, where the National Trust is currently the only body with covenanting power.⁶³ In 2014 the Law Commission recommended the establishment of a new, and much wider, statutory scheme for conservation covenants in England and Wales, with ‘core conditions’ that covenants should meet.⁶⁴ These proposals are currently being taken forward in the Environment Bill 2019-20.⁶⁵ The covenant would have to be agreed by two parties, one of whom would be a landowner⁶⁶ and the other a ‘beneficiary’ holding the covenant on behalf of the public – this would be a ‘responsible body’ with responsibility for monitoring and enforcing the obligations in the covenant.⁶⁷ The responsible bodies empowered to hold conservation covenants would include public bodies, conservation charities, and ‘for-profit’ bodies with expertise in land management for nature conservation, such as community interest companies.⁶⁸ A conservation covenant should include an obligation(s) for the public benefit to preserve, protect, restore or enhance one or more of three key features of the covenanted land: its natural environment including flora and fauna; its natural resources; or historical, cultural or built heritage features that are to be found there.⁶⁹

The covenant would bind the land in the hands of successors of the original covenanting parties, if the land were subsequently sold or transferred. The covenant would, in other words, be ‘perpetual’ in effect and bind the land indefinitely. This would be important for delivering the long-term management and improvement of ecosystems - long term conservation management of the land which, once dedicated, cannot be released when the land passes into the hands of successors or new owners. This could be a model for an arrangement binding land in a collaborative landscape scale scheme indefinitely, with multiple landowners, land managers and beneficiaries of each covenant. The model for conservation covenants in the Environment Bill is arguably too narrow to achieve this, however. The range of possible bodies holding the benefits of a covenant would need to be wider than currently proposed:⁷⁰ for example, a water utility company may wish to enter into a covenant over land in a water catchment, and the range of ecosystem services that can be

⁶³ see National Trust Act 1937, s 8.

⁶⁴ Law Commission *Conservation Covenants* (Law Comm.349, 2014) at paras 2.82 et seq.

⁶⁵ See Part VII Environment Bill 2019-20, ss. 102 ff..

⁶⁶ That is, someone with a freehold interest in the land burdened with the covenant, or someone with a lease of at least 7 years duration (see Environment Bill 2019-20 s. 102 (1) and (4); Law Commission *Conservation Covenants* (Law Comm.349, 2014) at para 2.82.

⁶⁷ Environment Bill 2019-20 s. 104. This is a similar model to that in Scotland, where only designated conservation bodies can hold the benefit of a conservation covenant: Title Conditions (Scotland) Act 2003, 38.

⁶⁸ Environment Bill 2019-20 s. 104 (4), (5).The inclusion of ‘for profit’ bodies is an extension of the Law Commission’s original proposals..

⁶⁹ Environment Bill 2019-20 s. 102 (3), s. 104 (9).

⁷⁰ See Environment Bill 2019-20, s. 104 (5).

provided by a covenant would need to be substantially wider than simply the promotion of nature conservation for public benefit.⁷¹

(c) Natural Infrastructure Scheme (NIS)

An interesting mixed funding model that is currently being trialled is provided by the Natural Infrastructure Scheme (NIS), developed by the National Trust and Green Alliance.⁷² This seeks to fix the price for ecosystem services on the basis of the *avoided cost* delivered to the ‘purchaser’. This would allow the payment calculation to capture the costs saving to (for example) a water utility of ‘slow clean water’ provided through changes in catchment land management by farmers working with the ‘purchaser’ utility. This represents a variation on the PES ‘payment range’ model that has previously been suggested as a best practice option.⁷³ It would cover net profits foregone by farmers in changing their land management so as to provide the service: the upper ceiling would be variable and represent the external benefits of the ecosystem provided. In the case of uplands grazing management, for example, this could be flood risk management, water quality improvements or habitat protection, as the case may be. The scheme would provide a means to bring groups of land managers together to sell environmental services to groups of beneficiaries, facilitated by a new area-based market in avoided costs.⁷⁴

(d) Landscape Enterprise Networks (“LENS”)

Landscape Enterprise Networks (“LENS”) are a means to create, and then manage, the market for ecosystem services provided by multifunctional landscapes. They are therefore an innovative way to establish a PES arrangement incorporating both private and public funding streams. A LENS will typically pull together demand-side actors with shared interests in how a landscape is to be managed. It will then arrange the procurement of landscape outcomes on

⁷¹ See Environment Bill 2019-20, s 102 (3) (definition of “conservation purposes”). The covenant might provide for public access to land, but this is specifically required to be “ancillary” to the principal purpose, which must be conservation as defined in the Act : s. 103 (3).

⁷² *New Markets for Land and Nature: how natural infrastructure schemes could pay for a better environment*, by A. Francis, S.A. Brown, W.A. Tipper and N. Wheeler (Green Alliance 2016), ISBN 978-1-909980-74-7

⁷³ Defra 2013, *Payments for Ecosystem Services: A Best Practice Guide*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/200920/pb13932-pes-bestpractice-20130522.pdf (last accessed 30 November 2018) .

⁷⁴ See *New Markets for Land and Nature: how natural infrastructure schemes could pay for a better environment* *ibid.* at 26ff.

their behalf from “suppliers” of the ecosystem services sought and ensure that suppliers have appropriate accreditation and quality assurance arrangements.⁷⁵

The collaboration sought by a functioning LENS requires the use of contractual arrangements between demand and supply side actors to provide defined ecosystem services. It will be important to ensure that potentially beneficial LENS approaches to environmental management are integrated with existing regulatory regimes that impact farming. For example, in order to comply with the “additionality” requirements identified above,⁷⁶ a LENS trade should only pay for ecosystem services that would not be required by regulatory compliance rules i.e. it must not be something that “would happen anyway”. It follows that where environmental permitting requirements for the discharge of pollutants to air and/or water from farm-based activities impose mandatory land use obligations,⁷⁷ these cannot then be ‘sold’ or exchanged in a PES arrangement. Similarly, land management obligations imposed to address diffuse water pollution cannot be traded in a PES arrangement. These might include limits on nitrate or manure applications under an NVZ action plan, for example, or requirements for the safe storage of silage and slurry.⁷⁸ But participation in a LENS as a way of purchasing ecosystem services may be a legitimate way to provide the necessary funding to improve silage and slurry storage facilities on a farm, or to install new drainage systems to eradicate discharges to nearby streams or watercourses and improve water quality.⁷⁹

Where a LENS is used to purchase ecosystem services, it will also be important to ensure that it does not purchase services that can attract public funding under an AES – for example the new ELM scheme. Conversely, the new ELM scheme will need to be designed in a way that avoids problems of duplication and ‘additionality’ where ecosystem services can be provided by LENS with private funding. In particular, close consideration should be given to whether grant payments under the proposed ELM scheme can be designed to incentivise co-

⁷⁵ See generally: Gosal, A, Kendall, H., Reed, M., G Mitchell, Rodgers, C., and Ziv, G. (2020). *Exploring ecosystem markets for the delivery of public goods in the UK*. Yorkshire Integrated Catchment Solutions Programme (iCASP) and Resilient Dairy Landscapes Report, DOI: <https://doi.org/10.5518/100/48>

⁷⁶ Above note 53.

⁷⁷ See Part 2, Environmental Permitting (England and Wales) Regulations 2016 (SI 2016/1154).

⁷⁸ For example, as required by an action programme made under the Action Programme for Nitrate Vulnerable Zones (England and Wales) Regulations 1998 (SI 1998/1202); or (as to safe storage of silage and slurry) by the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (SI 2010/639) or the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (Wales) Regulations 2010 (SI 2010/1493).

⁷⁹ See further Gosal, A, Kendall, H., Reed, M., G Mitchell, Rodgers, C., and Ziv, G. (2020). *Exploring ecosystem markets for the delivery of public goods in the UK* (above note 75) at section 4

investment with privately funded LENS actions, and also act as triggers for best practice. The grant system should be designed to act as an incentive to participate in privately funded LENS solutions; rather than funding obligations that could have been provided more cost-effectively through a privately funded LENS approach.

Conclusion

There are challenges to replacing direct, area-based payments with PES schemes that link public money to the provision of public goods. Some of the challenges relate to problems of scheme design.⁸⁰ Others relate to the problems of finding legal mechanisms that can clothe new PES arrangements with enforceability and capture the more sophisticated and multi-faceted legal relationships that a PES-based approach will entail.

It was noted above that agri-environment policy has, since the 1980s, been implemented through a pluralist approach, using a mix of legal and economic instruments to condition and change land use decision-making and promote environmentally beneficial outcomes. This has not always proved especially successful. As we move to a new approach based on “public money for public goods” the basic approach will need to remain one rooted in pluralism: the new ELM scheme, whatever its ultimate shape, will continue to “sit alongside regulation as part of a wider agriculture system”.⁸¹ The “mix” of legal instruments in this pluralist system will, however, change. And leaving the CAP regime will, in particular, offer the opportunity to develop more innovative approaches to delivering ecosystem services.

Management agreements will remain an important tool for delivering the public funding of AES, and the new ELM scheme will be a key element in a revised pluralist approach. It will, however, need to be calibrated in a manner that encourages private supply-side led initiatives, and care must be taken to ensure that regulatory requirements do not obstruct the development of a larger scale focus to the protection of ecosystems. An important element of this new approach should be the development of so called ‘blended’ agri-environment

⁸⁰ For example, how can one design a programme that pays farmers by results rather than on an area basis? See Reed, M.S., Moxey, A., Prager, K., Hanley, N., Skates, J., Evans, C., Glenk, K., Scarpa, R., Thompson, K. et al. (2014) Improving the link between payments and the provision of ecosystem services in agri-environment schemes in UK peatlands. *Ecosystem Services* 9: 44-53; J. Bateman and B. Balmford, ‘Public Funding for public goods: A Post-Brexit perspective on principles for agricultural policy’ (2018) 79 *Land Use Policy* 293-300, 296.

⁸¹ *Environmental Land Management: policy discussion document* (February 2020, Department of Environment Food and Rural Affairs) at page 7 (above note 30).

schemes. Ensuring the integration of public and privately funded environmental management will also require a ‘blended’ approach that recognises and resolves regulatory barriers and facilitates a well-functioning market in natural capital and ecosystem services.

This could include the encouragement of demand-side private sector initiatives – for example the NIS or a LENS based approach. These could build on cooperation in ecosystem management between private demand-side bodies – for example the water and electricity utilities and dairy manufacturers - and supply-side actors, typically farmers and landowners. It will be necessary to maintain significant levels of public funding through the new ELM scheme to target strategic priorities for environmental policy e.g. to develop climate change adaptation and mitigation measures, and to protect high value conservation sites and assets. Blending public and private funding in this way will require the new ELM scheme to be carefully designed to provide strong incentives for private sector funding. It might, for example, be designed so that participation by landowners in privately funded schemes on the LENS model could ‘trigger’ or ‘unlock’ further funding streams for additional publicly funded ecosystem management through entry into higher tiers of the new ELM scheme.⁸² It will also be important to ensure that work undertaken using private funding streams does not act as a barrier to later participation in ELM scheme.

⁸² As suggested in *Integrating Natural Capital Schemes: opportunity analysis for integrating carbon markets into multifunctional landscape market places such as those developed by the Landscape Enterprise Networks (LENS) approach* (May 2020, 3Keel, Forest Carbon and Newcastle University) (above note 56).