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Abstract:

Blended finance offers a way of increasing total expenditure on tackling the twin climate and biodiversity global emergencies. However, this requires effective methods for combining private and public funding. As an example of the barriers and opportunities facing practical implementation of a blended finance approach, this Viewpoint paper presents a case-study of the UK Peatland Code which will have relevance to other instances of blended finance initiatives elsewhere. Restoration of degraded peatlands reduces their carbon emissions and can provide emission reductions and other environmental gains in a socially cost-effective manner. However, many benefits are public goods arising as externalities which are difficult to convert into financial returns to private investors. To address this problem, the Peatland Code has been developed as a voluntary certification standard for UK peatland projects wishing to seek additional private funding via the voluntary carbon market. However, uptake of the Peatland Code has been slow. Despite growing demand in the voluntary carbon market, we observe six main barriers to supply-side uptake: lack of awareness amongst land managers; resistance to land use change, particularly when measures are seen to potentially compromise agricultural production; high upfront capital costs; limited equipment and skills; uncertainty over ongoing costs and support; and, administrative bureaucracy/inflexibility. We offer recommendations for how such barriers could be reduced to increase supply-side uptake, including: increased effort to promote sustainable land management and blended financing in general, and restoration activities and the Peatland Code in particular; continued public funding of upfront capital investments, with private funding directed more at ongoing payments; and, simplified and more flexible administrative arrangements, with public and private schemes designed in tandem to improve their practical complementarity.

Keywords:

Agri-environment schemes; Carbon credits; Ecosystem markets; Land Use Policy; Payments for Ecosystem Services.

1. Introduction

Recognition of the inadequacy of public funding alone to tackle the twin climate and biodiversity global emergencies has prompted interest in the potential for attracting private funding to restore environmentally degraded land (CBD High-Level Panel, 2014; Carney, 2020). Different mechanisms can be envisaged, but all face the challenge of converting what are mostly public good benefits often arising as externalities into commercial returns to private investors, meaning that some way of capturing non-market values must be created. Moreover, total non-market values typically comprise a mix of co-benefits realised in combination but experienced in different ways over different time periods and geographic scales, further complicating matters and increasing the transaction costs of market creation (Engel et al., 2008; Jack et al., 2008; Vatn, 2010; Anderson and Parker, 2013).

One approach is to combine different sources of funding through 'blended finance'. This has been adopted in the UK in relation to both afforestation and peatland restoration through, respectively, the Woodland Carbon Code[1] and the Peatland Code.[2] In both cases, government policy seeks to achieve ambitious targets by encouraging voluntary enrolment by land managers through public funding, but to stretch limited public budgets further by leveraging additional private funding. The latter is attracted primarily by the value of carbon credits in the voluntary carbon market, with public funding used to cover a significant proportion of implementation costs and justified in terms of the wider co-benefit values (such as biodiversity, recreation, and landscapes) that are yet to be captured by market mechanisms to the same extent as carbon (Smyth et al., 2015; Reed et al., forthcoming).

As an example of the barriers and opportunities facing practical implementation of a blended finance approach, this Viewpoint paper presents a case-study of the Peatland Code and offers some recommendations of relevance to other instances of blended finance initiatives elsewhere. Although the motivation for the paper was provided by a recent research study canvassing views from peatland

[1] See https://woodlandcarboncode.org.uk/ (accessed 31/01/2021)

[2] See https://www.iucn-uk-peatlandprogramme.org/funding-finance/peatland-code (accessed 31/01/2021)

stakeholders in Wales (Taylor et al., 2020), the observations presented also draw upon our personal experiences of working with public policy makers, restoration practitioners, carbon market brokers and (especially) land managers across the UK on various projects since (and indeed prior to) the launch of the Peatland Code in 2015.

2. UK Peatlands and the Peatland Code

Across the UK, over 80% of peatlands are in a degraded state due to damaging land management practices. Consequently, rather than functioning as a carbon store and potential carbon sink, many peatlands represent a source of emissions (Bain et al., 2011; IUCN, 2018). However, restoration of degraded sites through raising water tables and revegetating bare peat can reduce emissions, with additional co-benefits for water supplies, habitats and biodiversity (Bonn et al., 2016; Committee on Climate Change, 2020).

Reflecting variation in site conditions, restoration costs can range from a few hundred to several thousand £ per ha, and emission savings can range from less than one tonne of carbon dioxide equivalent (CO_2e) per ha per year to over 30 tonnes per ha per year (Smyth et al., 2015). Mitigation costs per tonne of CO_2e are generally below the social value of carbon used in policy analysis and are competitive with other mitigation options, making peatland restoration cost-effective for society (Committee on Climate Change, 2020). Reported estimates of social benefit:cost ratios for restoration range from 1.3:1 to 8.9:1 (Harlow et al., 2012; Bright, 2019). However, whilst such figures confirm that peatland restoration would improve social welfare in the UK, many of the benefits take the form of externalities and public goods. Consequently, restoration to-date has predominantly relied upon public funding.

Yet, given constraints on public budgets, interest has grown in the possibility of attracting a degree of private financing to UK restoration activities. Hence the Peatland Code has been developed as a

voluntary certification standard for UK peatland projects wishing to market the climate benefits of restoration (Bonn et al., 2014, Smyth et al., 2015). The Code is led by the IUCN Peatland Programme, with development supported by all four government administrations within the UK. Similar peatland initiatives using voluntary carbon markets have been developed in other countries, such as Belarus (Tanneberger & Wichtmann, 2011) and Germany (Joosten et al., 2015).

The Peatland Code sets out a standard method for quantifying and independently validating the emission reductions arising from peatland restoration. Sites and restoration plans must meet various criteria, are subject to independent monitoring and validation, and are listed on a formal online register. Independent validation to this standard provides assurance for buyers in terms of quantity, permanence and additionality of emission reductions purchased.

For the seller (usually the landowner), the funding received from the sale of carbon depends on the extent of damage prior to restoration, the size of the project, and the length of the management agreement (a minimum of 30 years), and on the prevailing carbon price on the voluntary carbon market. The fact that projects have recognised procedures and standards to work to, and have validated/verified status, provides a means to market the carbon benefits to potential buyers. Funding obtained from the sale of climate benefits can also sit alongside traditional public sources of funding through various schemes.

However, since its launch in 2015, uptake of the Peatland Code has been slow. This is despite growth in the voluntary carbon market and increasing awareness amongst potential buyers of the scope for peatland restoration. The next section summarises our observations on why this is the case, with Section 4 offering some recommendations on how supply-side constraints might be relieved.

3. Observations

First, awareness of the need for, and benefits of, peatland restoration is not universal and, moreover, the Peatland Code itself is largely unknown amongst land managers and restoration practitioners. As a comparator, awareness of the Woodland Carbon Code is notably greater, as is its uptake. This suggests that more effort needs to be put into publicising the case for restoration and raising the profile of the Peatland Code.

Second, the willingness to participate in peatland restoration schemes is highly variable, and attitudes towards peatland restoration are shaped by cultural ties. Some land managers very much see the potential to capitalise on additional carbon income and are eager to learn more of the opportunities therein. For other groups, change is clearly constrained by a desire (reinforced by peer and/or landlord pressure) to continue (indeed honour) practices and landscapes inherited from previous generations rather than undertake what is perceived as radical and possibly irreversible change. For individuals within such groups, a bad experience with previous agri-environment schemes often dampens enthusiasm to engage with new initiatives.

Third, restoration activities can require expensive up-front capital expenditure that realistically can only be funded through public grants, since voluntary carbon market prices alone will not generate sufficient revenue to fully displace grant-aid.[3] Higher carbon prices available through the compliance market (such as the EU Emissions Trading Scheme or the UK's post-Brexit successor scheme)[4] could rectify this, but the Peatland Code is not yet sufficiently mature to access them. As a result, at least in

[3] Either by upfront private finance or public soft loans.

[4] See https://www.gov.uk/guidance/participating-in-the-eu-ets and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/889037/Government_Response_to_Consultation_on_Future_of_UK_Carbon_Pricing.pdf (both accessed 20/03/2021). EU-ETS carbon prices at the end of 2020 were around £29/t CO2e but voluntary carbon market prices were lower at around £5/t CO2e, and both are subject to considerable year-on-year fluctuations. To reassure potential investors about future carbon prices for afforestation under the Woodland Carbon Code in England, minimum prices have been set by government via the Woodland Carbon Guarantee. This offers investors a guaranteed price (set by auction) at which they can sell carbon credits to the government at a future date, but allows them to sell instead on the open market if the market price is higher at that point. See https://www.gov.uk/guidance/woodland-carbon-guarantee (accessed 20/03/2021).

the short to medium-term, the Peatland Code should be viewed as complementary to public funding schemes, rather than a substitute, and they should be designed in tandem.

Fourth, the administrative bureaucracy associated with applying for joint funding via agri-environment schemes and via the Peatland Code are perceived as overly complex, with interactions between them adding to the complexity. The latter arises particularly with respect to demonstrating additionality (where there is a need to prove that a project would not have gone ahead in a 'business as usual' scenario and that any emissions reductions are 'additional'), aligning funding cycles between different funding sources, and coordinating across multiple land managers and multiple investors. Again, this suggests that public and private funding schemes need to be designed in tandem, with some flexibility to accommodate variation in site-specific circumstances.

Fifth, restoration often requires specialist knowledge, equipment and skills, all of which are currently limited in supply, particularly at the local level, as increasingly large programmes of restoration are being undertaken across the UK. This means that realisation of ambitious restoration targets needs to be preceded by efforts to increase capacity, possibly through subsidised advice, investment, and training.

Sixth, even if capital works are fully-funded, restoration uptake is hampered by land managers' concerns about ongoing income losses due to reduced productivity and/or ineligibility for agricultural support payments and tax breaks. Such fears are exacerbated by uncertainty over future support arrangements, and over the carbon market. Assuming continued policy reliance upon the voluntary behaviour of incumbent private land managers, this suggests that post-Brexit policy support for land management in the UK needs to be designed, urgently, to explicitly reward delivery of a wider range of ecosystem service benefits, not provisioning services such as agricultural production which can be the cause of environmental degradation.

4. Recommendations

The findings summarised above suggest a number of recommendations to encourage uptake of peatland restoration activities.

In the short-term, greater effort should be directed to raising awareness amongst land owners and managers of both the Peatland Code and the merits of peatland restoration. Put simply, their lack of awareness is hampering efforts to engage with them, reducing the likelihood of the scheme to succeed. This could be undertaken by public bodies, but also by NGOs (the IUCN Peatland Programme is already active, but more could be done if better resourced). The variances seen between groups in the willingness to participate in peatland restoration schemes reflects nuances in knowledge of, and attitudes towards, climate change and broader environmental issues, as found in other studies (e.g. Reed et al., 2020). To be effective, efforts to raise awareness and to encourage uptake of such schemes should be cognisant of the need to tailor the approach to different audiences (Vanclay and Pannell, 2011; Hyland et al., 2015).

More generally, promoting the positive case for sustainable land management and blended finance through marketing and advisory campaigns could be more effective than simply focusing on payment rates and scheme design (Vanclay & Pannell, 2011; Mack et al., 2019). At the same time, it would be helpful if the specialist capacity for restoration could be bolstered through provision of training. This has been achieved, for example, in Scotland under the Peatland Action programme and, more recently, the IUCN Peatland Programme itself, with training offered for free and tailored to meet the local needs of land managers and contractors.[5]

In the longer-term, public policy support should shift to more explicit rewards for delivery of a wider range of ecosystem services. This is consistent with the rhetoric of 'public money for public goods'

[5] https://www.nature.scot/climate-change/nature-based-solutions/peatland-action/peatland-action-project-resources and https://www.iucn-uk-peatlandprogramme.org/resources/peatland-learning-training (both accessed 20/03/2021).

prominent in discussions of post-Brexit land use policy, yet the details of future schemes remain uncertain (Bateman & Balmford, 2018; Helm, 2019). In advance of this, it would be helpful if assurances could be given that enrolment in restoration activities now will not be penalised under future arrangements through the opportunity cost of loss of eligibility for other payments and/or tax reliefs (Moxey, 2016). At the same time, care needs to be taken through, for example, Code criteria and/or regulatory policies, to guard against perverse incentives and the possibility of land being degraded, or restoration being delayed, in order to access greater funding (Gordon et al., 2015).

If blended funding is to play a bigger role in supporting restoration activities, the interaction between public funding schemes and the Peatland Code (or other possible private schemes) needs to be improved (Smith et al., 2013; Reed et al., 2017). This partly relates to administrative sequencing. For example, greater flexibility in when applications for funding need be made and/or expenditure incurred would help greatly in co-ordinating across different funding sources, as would some flexibility with respect to how additionality is estimated (including recognition of the co-ordination costs incurred in establishing and running restoration projects involving multiple land managers and investors, and indeed the wider transaction costs of validation/verification necessary for the market to function). The Peatland Action programme in Scotland was introduced partly as a way of side-stepping difficulties and complexities encountered under Pillar II of the Common Agricultural Policy, and it may be that a similar approach should be pursued in other regions of the UK.

Equally, whilst capital investment is likely to be reliant on public funding in the short to medium term, interactions between public and private funding schemes should be designed to allow for the possibility of private funding contributing a higher share in the longer run. This implies a need for purposeful, joint planning to design schemes in tandem. For example, to unify registers of which

parcels of land are receiving different payments and to, perhaps, allow private funds to be routed through public administrative systems, or vice versa.[6]

5. Conclusions

Blended finance offers one approach to attracting additional funding to tackle the twin climate and biodiversity global emergencies. The combination of public and private funding seeks to address the fact that whilst some ecosystem service benefits are now valued through markets and offer rewards to private investors, others still take the form of public goods and externalities that are not. Moreover, because most are generated jointly as co-benefits, a degree of co-ordination is required to optimise across them all. In the UK, this is being attempted for peatland restoration through the Peatland Code. However, our experiences of working with public policy makers, restoration practitioners, carbon market brokers and (especially) land managers suggest a number of opportunities for improvement. In particular, promotion of the Peatland Code could increase demand for peatland carbon credits and therefore restoration projects whilst purposively designing public and private funding schemes in tandem would facilitate interactions between the two. Although focused on a specific application in one country, as a case-study of barriers and opportunities to blended finance the observations offered will have relevance to other applications elsewhere.

[6] For example, routing public funding through private peer-to-peer lending platforms has been tried in other policy contexts (e.g., https://www.ft.com/content/d6529d94-2ce4-11e2-9211-00144feabdc0, accessed 20/03/2021), and public-private initiatives are relatively commonplace. However, administrative efficiencies would not be automatic and, moreover, would need to be balanced by consideration of other issues such as transparency, risk and probity.

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