

Net Zero, Transport and Energy Committee Session | 26th March 2024

Submission of evidence for session on Natural Capital Financing in Scotland

Dr Lydia Cole, presenting evidence on behalf of collaborative project "[Community priorities in peatland restoration](#)" with Dr Cornelia Helmcke and Ewan Jenkins (all based at the University of St Andrews). Dr Cole is a peatland (palaeo)ecologist and environmental geographer, carrying out research on peatland ecosystem dynamics and human-peatland interactions in temperate (Scotland) and tropical (Malaysia, Peru) climates.

Further details on our research, carried out in crofting communities in rural Scotland, of relevance to this committee and session, can be found [here](#), which includes our key output: [Peatland Restoration Guide for Crofting Communities](#).

Topics that we suggest require further scrutiny by the Committee in relation to Natural Capital Financing (submitted in response to request for expertise):

1. The impact of carbon finance, i.e., money directed from private sources for carbon credits resulting from peatland restoration, on the Scottish Government's land reform objectives and rural landholdings, in particular crofting communities and tenant farmers, and on the objectives of the National Just Transition Planning Framework.
2. The impact of the domestic voluntary carbon market and market mechanisms (e.g., UK Peatland Code, Wilder Carbon registry <https://www.wildercarbon.com/>), on the long-term health of peatland ecosystems (considering ecological realities of peatland restoration).
3. The impact of the domestic voluntary carbon market and market mechanisms, and their current incentive structures (i.e., benefiting mostly large landowners who have heavily degraded/exploited their peatlands in the past) on the long-term health of rural communities (considering rural livelihoods and changing economic conditions).
4. The relative benefits of public vs. private vs. blended finance schemes for peatland restoration, considering the long-term health of peatland environments and rural communities, under the full spectrum of land ownership and management.
5. The fair distribution of financial benefits - resulting from restoring peatlands - from either carbon financing or agri-environment schemes amongst communities/landowners/managers that have kept peatlands in relatively healthy states, and fair distribution of costs/responsibilities in the context of common grazings – making sure that crofters that have statutory rights to access/use the land do not lose their rights.

Perspective on key themes considered by the Committee:

The Net Zero, Transport and Energy Committee resources state that "Natural capital finance is investment to conserve the value of the natural environment for the long term." Our research has demonstrated various challenges to the fulfilment of this statement in relation to peatland ecosystems and carbon credit schemes.

Firstly, through research in crofting communities in Lewis, Outer Hebrides, we have seen that, instead of natural capital finance leading to the long-term conservation of peatland ecosystems, speculation and uncertainty associated with private investment is one key factor leading to the slowing down of commitment to restoration work (in these contexts). Further details on this situation are presented in our article in *The Conversation* (<https://theconversation.com/ecosystem-restoration-in-the-scottish-highlands-isnt-going-to-plan-heres-why-219841>) and this [Correspondence](#) in *Nature* (open access version [here](#)).

Secondly, the framework for directing private finance to the restoration of peatlands is not incentivising the holistic regeneration of peatland ecosystems, aimed at securing their health and resilience for the long term. The Peatland Code protocol, the UK standard that awards carbon credits based on the emissions avoided/reduced through restoring peatlands, calculates carbon credits according to the depth of the organic-rich layer, the area of the peatland, and the average change in condition of the peatland in response to interventions (with further details in [these FAQs](#)). Each restoration project registered with the Peatland Code is awarded carbon credits for the expected immediate change in “category condition”, moving the peatland from a damaged state (actively eroding or drained) into a less-damaged state (drained or modified). As the amount of avoided emissions (i.e., carbon units) reduces significantly with each category change (towards the near-natural state) and moving beyond one category would require longer-term interventions and lead to slower, less dramatic changes, restoration beyond a change in one category condition is not incentivised. As a result, the peatland is neither restored to a state in which it can act as a net carbon sink (removing emissions through peat growth), nor does it build resilience to the ongoing environmental disturbances inevitable under a warming climate. This example illustrates how private funding is not currently leading to the long-term conservation of peatlands or the goal of achieving net zero, with interventions leading to carbon reductions but not the removal of carbon (via sequestration in healthy peatlands). Addressing longer-term ecosystem change, in consultation with rural communities, would further prevent “greenwashing” practices (superficial restoration that covers the bare minimum in order to maximise profit).

Thirdly, the “investment” dimension of private financing opportunities under natural capital schemes is providing a source of uncertainty, and understandably, eliciting caution amongst rural communities (according to our experience in Lewis). Crofters and members of rural communities are uncertain of what the opportunity costs are of carbon finance for peatland restoration, and how it compares to accepting ‘free’ support from the publicly-funded Peatland ACTION scheme. What does accepting and committing to private investment mean in terms of rights to and responsibilities over land and resources for those people living in and around peatlands, now and in the future? How might private investment alter the relationship rural communities have with peatlands, especially with the elements of these landscapes that possess value beyond carbon (carbon being a historically novel dimension)? How might private investment alter the pattern of access to, management or ownership of local peatlands? And over the multiple generations that could be affected by a decision on carbon trading made at this point in time? The lack of answers to these questions and state of uncertainty reflect the current lack of regulations and guidance around the voluntary carbon market and associated mechanisms.

Moreover, and fourthly, they reflect the fact that the Peatland Code has not been designed with crofting communities in mind. It is thus not unexpected that there have been unintended

consequences of the peatland carbon market to date, such as carbon brokers/investors, reportedly, creating false hope for crofting communities through suggesting they can financially gain from their peatlands, while the existing patterns of ownership and management make these promises doubtful. The next iteration of the Peatland Code has the opportunity to develop guidance that directly addresses the context of different types of landowners and land managers, in order that local communities do not feel “shut out” of opportunities provided by natural capital.

Fifth, irrespective of the potential of a revised Peatland Code, we would caution that there are commitments inherent within developing a trusted investment opportunity for private financiers - such as ensuring permanence of carbon stored in peatlands - which seem incompatible with rural land management and crofting rights. The physical footprint and dynamics of land use and landownership in rural communities need to be able to adapt over time, over multiple generations, in response to environmental and political change. Private investors, under current schemes, are less able to support that flexibility whilst getting the guarantees they require. There may be opportunities for de-risking investments (as being explored by companies such as [Rainmaking Climate](#)), which could help to provide the assurance required by the market, whilst providing the flexibility for those responsible for the stewardship of healthy ecosystems. However, we would suggest that there are alternative routes to incentivising and supporting the restoration of peatlands on crofting land, for example, through government subsidies to encourage management of the farmed land in a particular way, as is currently being explored via the Piloting an Outcomes Based Approach in Scotland (PoBAS) scheme. This suggestion comes with the caution that natural capital investment schemes must be designed to avoid further exacerbating wealth disparities between rural population groups, and relatedly, ongoing depopulation. Instead of “land sparing” approaches, governments need to uphold crofting rights, facilitating locally grounded “land sharing” practices.

Sixth, the Peatland Code is a visible, supported framework for managing private investment towards peatland restoration, providing a level of transparency and accountability - This is not the case for other market instruments that are providing opportunities and structures for investment into peatland-based natural capital, such as [Wilder Carbon](#). These unregulated brokers have the potential, without checks and safeguards in place, to drive the voluntary carbon market towards unintended consequences (e.g., false promises, misinformation, social exclusion/marginalisation, and green washing), which run counter to the goals of Scotland’s “just transformation” to net zero.

Seventh, natural capital financing schemes directed at peatlands are principally focused on quantifying and selling carbon at present, i.e., carbon constitutes the “value” of natural capital on which investment is concerned. Long-term carbon sequestration in/through peatland ecosystems with the goal of achieving atmospheric carbon dioxide removal, in pursuit of climate change mitigation, is dependent on the simultaneous practice/achievement of biodiversity conservation. It also requires restoration approaches that take a landscape-scale approach, or more specifically for peatland ecosystems, consider interventions at the scale of a hydrological unit (akin to a drainage basin). Natural capital schemes, in order to create scalable, cost-effective procedures for initially quantifying, then monitoring, reporting and verifying change over time, are in danger of missing key ecological details, or values, that may deem any interventions unsuccessful in achieving the ultimate, universally-shared goal of achieving a sustainable future.

Eighth, our research in crofting communities in Lewis suggests that addressing energy poverty would contribute significantly to reducing the extraction of peat for use as a domestic fuel. Multiple

respondents associated a recent increase in peat cutting (over the last several years) with an increase in energy prices (in a region where energy prices are already relatively high). This example further illustrates how different policy areas need to work in conjunction. Failing to address the need for energy security while advocating for peatland restoration can have social detriments on already marginalised population groups.

Finally, the focus on the carbon stored in peatlands, or the value of carbon reductions possible via peatland restoration, is driving up rural land prices, as peatlands are now seen as a scalable investment. This trend pushes land centralisation and prevents diversification of land use and ownership. Particularly, community-buy-out is increasingly unfeasible and new market entrants, like less affluent young families, cannot compete. In part due to the speed of the development of the carbon market and the technical challenges of quantifying peatland assets (requiring area, depth and condition measurements), there is uncertainty as to whether these elevated land prices even accurately reflect the carbon within the landscape and thus the carbon credits available for sale on the voluntary carbon market. The Land Reform Bill should make sure to address the ways in which natural capital finance is challenging democratic processes of land governance in rural areas (e.g., through limited available information on the consequences of schemes) and countering attempts to secure more widespread ownership of land.

With relevance to all above points, our research suggests that any natural capital financing initiatives must explore, with well-planned consultations (to ensure effective public engagement), the different landownership/land management scenarios across Scotland, to reduce the likelihood of unintended consequences generated by interventions. Any new injection of finance into landscapes will inevitably alter the relationship between farmers/"traditional" managers of the land/rural communities and elements of their environment, in predictable and unpredictable ways. Before any further significant agreements, policy changes or investments are made by the Scottish Government, it would be pertinent to co-design a pilot scheme, working closely with rural communities (across the spectrum of geographies and modes of governance) and researchers, to test and learn, and then co-develop strategies that do not rely on one-size-fitting-all.