Full Length Article

Restoring landscapes to build common futures: Land redistribution and environmental action in rural Scotland

Adrien Chanteloup [a,*], Jayne Glass [b], Harry W. Fischer [c]

[a] Department of Environmental Psychology, Groningen University, Grote Kruisstraat 2/1, 9712 TS, Groningen, the Netherlands
[b] Natural Resources and Sustainable Development, Department of Earth Sciences, Uppsala University, Villavägen 16, 752 36, UPPSALA, Sweden
[c] Department of Forest Ecology & Management, Swedish University of Agricultural Sciences, SLU Umeå, SE 901 83, Umeå, Sweden

ABSTRACT

Ecosystem restoration is crucial for reversing environmental degradation, yet contemporary approaches often frame restoration as a technical, science-driven endeavour, neglecting the social and political processes through which communities mobilise for landscape revitalisation. This paper develops the concept of restorative commoning, which we define as a bottom-up creative process in which communities envision and enact new futures for their landscapes in pursuit of collective thriving. We ground this concept in an ethnographic study of Langholm in Scotland, where local residents organised a landmark community buyout of private land, establishing the Tarras Valley Nature Reserve. Through interviews, participant observations, and transect walks, we analyse how residents engaged with restoration not just as an ecological project but as a social, political, and affective act, redefining relationships with place, community, and ecosystems. Our findings reveal how restorative commoning emerges from grassroots mobilisation, historical solidarity, and supportive policy frameworks, particularly land tenure reforms that enable collective ownership. The Langholm case demonstrates that such ownership acts as a catalyst, transforming reactive resistance into proactive reimagination of landscapes. Beyond ecological outcomes, the process nurtures civic revitalisation, challenging dominant paradigms of privatisation and expert-led restoration. We argue that restorative commoning shifts restoration from a return to past conditions to a forward-looking, collective process of socio-ecological change. The study highlights the need for policies that create enabling conditions for community-led restoration, emphasising the interdependence of ecosystem health and social well-being. By centering local agency, affective ties to place, and democratic governance, restorative commoning offers a pathway for more inclusive and sustainable approaches to landscape revitalisation.

1. Introduction

In our human-dominated world, notions of environmental restoration, repair, and revitalisation are increasingly on the agenda (Djenontin et al., 2025). In the UN's current "Decade of Ecosystem Restoration" (2021–2030), countries around the world have come together in support of a broad agenda to reverse the degradation of rural landscapes (Aronson et al., 2020; Fischer et al., 2020). These global objectives are being realised through a host of national and subnational policies that seek to restore ecosystem functionality and safeguard the environment, while also supporting a broader vision of human well-being[1] (Dick et al.,

2020; Erbaugh & Oldekop, 2018). Current discourses point to the interconnected nature of ecosystem processes within the broader global commons, where our unabated, large-scale human interference risks undermining natural processes at a planetary scale (Richardson et al., 2023). A wide range of efforts – including reforestation, regenerative agriculture, rewilding, and the increasingly-used umbrella term "Nature-based solutions" - represent a growing recognition of our need to develop restorative strategies that address the negative impacts of human use on the environment (Fischer et al., 2024; Griscom et al., 2017).

Current discourse represents a paradigmatic shift in thinking.

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* Corresponding author.
E-mail addresses: a.b.m.chanteloup@rug.nl (A. Chanteloup), jayne.glass@geo.uu.se (J. Glass), harry.fischer@slu.se (H.W. Fischer).

[1] For example, the Bonn challenge (https://www.bonnchallenge.org/about) or the FranceRelance forest plan (https://agriculture.gouv.fr/francerelance-le-renouvellement-des-forets-francaises).

Beyond ideas of "conservation", pursued by restricting human use of specific landscapes (Martin, 2022, p. 336), restoration underlines a growing recognition of the close interconnection of human well-being and ecosystem functionality in landscapes used and managed by people (Djenontin et al., 2025; Erbaugh & Oldekop, 2018). Necessarily, this requires engaging with human dimensions of the environmental use, management, and action (Löfqvist et al., 2023). Yet, efforts for restoration are often pursued through abstract policy targets, such as the current emphasis on large-scale tree planting (Fleischman et al., 2020). Much restoration continues to be conceived as primarily a technical endeavour built upon natural science principles (Gann et al., 2019). While guidelines for including people in planning and management exist, actual participation is often limited (Weng, 2015), and there remains a lack of knowledge about the conditions that can encourage self-mobilised action for local restoration goals (Swart et al., 2018).

This paper is an attempt to re-envision what restoration can be – less in terms of policy interventions, and more as a social process of finding better ways to live and thrive in relation to the environment. We push these discussions forward by developing the concept of *restorative commoning*, which we define as a creative process of envisioning and acting toward new visions of a revitalised landscape, in support of a common good.

By developing the concept, we are inspired by contemporary work that has sought to move beyond a focus on the commons as a bundle of resources, property rights, or an arena for action (e.g. 'the commons' as a noun). Instead, we join recent work that analyses "common*ing*" – a verb. Commoning brings to focus the practices and performances through which people come together to realize new futures "in common" (Nightingale, 2019; Partelow & Manlosa, 2022). We find inspiration in the concept of commoning as a lens to explore the creative, everyday processes whereby people come together in pursuit of shared environmental and social objectives (García-López et al., 2021; Turner, 2017). In so doing, our work directs analytical attention away from strategies for planned policy interventions toward the histories, practices, and affective experiences that drive bottom-up restorative action of people seeking to bring into being landscapes and environments that they value.

We build the concept of restorative commoning by exploring a paradigmatic case of collective action for restoration in and around the town of Langholm, in southwest Scotland. We focus on the Tarras Valley Nature Reserve (TVNR), a moorland that was previously under private ownership and is now owned and managed by the community. This case, one of the largest community land buyouts in the UK with substantial national and international attention, is particularly worthy of study for its emphasis on ecological restoration alongside local empowerment and land ownership redistribution. The collective management of the reserve offers a compelling example of how restorative commoning can foster both environmental restoration and societal value in practice. Using an ethnographic approach, we trace the historical antecedents of local action, explore how people work together, and seek to understand how people's sense of landscape is connected to community and affective socio-natural encounters. Our work documents a strong relationship between social revitalisation and environmental action, where working together has both strengthened community and enabled new visions of the landscape to crystalise and actions to occur.

Our work has important implications for understanding restoration as a collective process of socio-ecological change. While "*to restore*" implies the recovery of an ecological state, restorative commoning instead directs attention toward the forward-looking social processes through which people aim to bring about a better future. Such an analytical lens directs attention to the multiple layers of meaning, social and cultural values, and affective experiences that people attach to land and nature, thus expanding visions of restoration beyond the remit of ecological practice toward a broader understanding of human thriving. Crucially, we find that the transfer of property toward collective ownership can serve as a focal point to galvanize processes of commoning by fostering creative spaces to build shared visions of restorative action.

2. Theoretical framework

2.1. Broadening restoration: from project-based interventions to wider societal action

As restoration has gained prominence within global environmental policy, a quickly growing body of research has sought to provide guidance for its implementation, leading to "best practice" principles to improve outcomes (Gann et al., 2019). Yet despite widespread calls to involve local stakeholders in project planning (Höhl et al., 2020), most interventions remain primarily under the purview of policy makers and scientific practitioners, using "expert" knowledge that everyday people are not able to engage with (Fleischman et al., 2022; Weng, 2015) or imposing targets that do not reflect local priorities (Fleischman, 2020). Overall, contemporary discussions tend to implement restoration through targeted "projects" (Djenontin et al., 2025). Human benefits are often described as "co-benefits" of environmental policies, generally understood as secondary to environmental outcomes that are the primary metrics of "success" (Mayrhofer & Gupta, 2016).

Restoration, we argue, is distinct from practices of conservation that have often sought to restrict human use in pursuit of an idealised vision of "pristine" nature (Martin, 2022, p. 336). Today, interventions target human dominated landscapes, and often explicitly acknowledge the potential for improved human well-being (Erbaugh & Oldekop, 2018). However, dominant modes of thinking remain entrenched within the natural sciences, limiting the capacity of the field to conceptualize human processes that lead to degradation or make possible repair (Djenontin et al., 2025; Shelton et al., 2024). Indeed, restoration ecology's dominant focus on ecological outcomes seems to imply a vision of nature as distinct from humans – where human use is seen as a "disturbance" and "social dimensions" are treated as enabling conditions for the application of natural science knowledge (Mansourian et al., 2025). As research has long shown, "expert" ecological knowledge can marginalize other priorities and ways of experiencing landscapes (Robbins, 2000; Savilaakso et al., 2023).

These disciplinary foundations, we argue, limit what restoration can be in our present moment. They keep restoration firmly embedded within the fold of technical "projects", with only limited attention to what really matters for people – and which could serve as a catalyzing force for change.

Recent work recognizes these limitations (Osborne et al., 2021; Shelton et al., 2024). Some scholars have suggested that current discussions on restoration can be taken as an invitation to envision new futures for living with the environment (Quintero-Uribe et al., 2022). Accordingly, there are growing calls to move beyond a focus on ecological outcomes to incorporate diverse values in planning (Schultz et al., 2022). Others have called to reconceptualise restoration as part of a broader process of socio-ecological transformation (Tedesco et al., 2023). Some have even argued for a more radical decentralisation of power to local people to define restoration priorities where they live (Fleischman et al., 2022). Our current paper advances these threads to explore how people may serve as a self-mobilising force for restoration in landscapes they use and value.

2.2. Toward "restorative commoning"

"The commons" looms large in discussions of ecosystem restoration – and for good reason. While private owners may undertake restoration for various reasons, a large proportion of landscapes targeted for intervention are used or managed by governments or collectives – lands that are subject to collective decision-making around their use, stewardship, and future (Erbaugh et al., 2020).

Current calls for stakeholder participation in restoration owe much

to a previous generation of research that has shown the importance of local collective action in supporting sustainable governance of the commons (Agrawal, 2023). However, extant theory is limited in several respects. Such work has tended to focus attention on the characteristics of a natural resource system, within which people are understood as primarily economically rational agents (for example Ostrom, 2009). This work has tended to overlook the diverse social and cultural ways that people relate to each other and landscapes (Nightingale, 2014), as well as the affective experiences that often drive people to come together for environmental management (Nightingale, 2019; Singh, 2017). Additionally, this work carries an implicit focus on stasis and stability by analysing how regularised patterns of interaction help to sustain resources over time (Agrawal, 2001). Such work remains limited in its capacity to identify processes and conditions under which people come together to pursue novel solutions to enact new futures (Nightingale 2022).

In this context, we see recent discussions of "commoning" in Human Geography and allied fields as an opportunity to advance these discussions toward a more socially-embedded, processes-oriented account of how people build and establish new practices of care and management of natural resources for the collective good (Garcia-Lopez et al., 2021; Nightingale, 2019; Rigkos-Zitthen et al., 2024). Whereas existing work on governing the commons has sought to analyse enabling conditions for collective action, often rendered as static variables of a context, resource, or user group, our engagement with the concept of "commoning" draws attention to process and action (Partelow & Manlosa, 2022) – in short, the creative becoming through which people come together to advance an agenda of collective thriving (García-López et al., 2021; Nightingale, 2019).

Scholarship on commoning in recent years has explored these themes through a diversity of phenomena, including natural resource governance but also experiments with collective living, urban gardens, co-operatives, and other initiatives. Aspirational in nature, the focus is often on how people pursue new alternatives or bring new commons into being as a means to build more just, sustainable, and thriving communities (see review by Turner, 2017).

From our standpoint, the concept of commoning lends a useful entry point to understand the ongoing and organic ways that people may come together to take care of and repair landscapes for more sustainable futures (see e.g. Rigkos-Zitthen et al., 2024). To begin with, research on commoning has often focused on the lived, embodied, and affective experiences that shape people's relationship with nature (Singh, 2017). Such work thus goes beyond analysis of rational self-interest to direct attention toward the broader set of human values, experiences of belonging and community, and sense of meaning that can catalyse collective action for change (Nightingale et al., 2021). This work has also often been attentive to the ways that current efforts and initiatives build upon histories of social mobilisation that open up new possibilities for continued change (Gibson-Graham et al., 2016).

We propose the notion of "restorative commoning" as a lens to study how people come together to pursue new visions of restored landscapes. Building on these theoretical antecedents, we pay particular attention to how people build and enact these visions, rooted in affect and emotion, moral and ethical convictions, a sense of place, and through community belonging. In the text that follows, we explore how these processes have unfolded in Langholm.

3. Methodology

3.1. Case study: collective ownership in Langholm, Scotland

To provide conceptual clarity around restorative commoning, we ground our analysis in the paradigmatic case (Flyvbjerg, 2006) of Langholm in southern Scotland (see Fig. 1), where a community-led land purchase exemplifies intersecting dynamics of ecosystem restoration and collective action. Langholm is a rural town with around 2,040 inhabitants (2022 census). The sparsely-populated character of large parts of the Scottish countryside, in which Langholm is located, is mainly due to the clearances of the eighteenth and nineteenth centuries, when many landlords removed people forcibly from the land and replaced them with more profitable grazing animals (Devine, 2019, p. 496). The romanticisation of upland Scotland prompted wealthy landowners from south of the border to purchase large estates for sporting purposes, contributing to the concentrated land ownership that characterises much of Scotland's rural landscape: a pattern shaped by key historical events, legislation, and agricultural support (Warren & Glass, 2024, p. 544). Buccleuch Estates Ltd., one of Scotland's largest private landowners, was estimated to have nearly 100,000 ha - just over 1 % of Scotland's land area - in its portfolio in 2014 (Elliot et al., 2014, p. 263). Langholm, historically dominated by the Duke of Buccleuch's estates since the 16th century, saw its agricultural and textile industries flourish in the 19th century under lease agreements that allowed sheep-rearing and wool production (Scott, 2022). Despite the Duke's control, relations were often amicable, with tenants praising his support for local improvements (MacDonald, 2022). The community's identity was shaped by mill work, with women forming a significant part of the workforce, fostering strong communal bonds (MacDonald, 2022). However, the industrial downturn by the late 20th century led to population decline and economic challenges. The lack of employment has been associated with land ownership inequality in the area (MacDonald, 2022), reflecting an historical complaint in many Scottish communities where a single, private owner often controls the use of a large set of local land and assets (Combe et al., 2020; Glass et al., 2019; Mackenzie, 2010).

In the current century, it is estimated that 30 percent of Scotland's 6.36 million ha of privately-owned rural land is held by around 110 owners, and 50 percent by between 400 and 450 owners, with approximately 30 owners with more than 20,000 ha each (Langholm Alliance official website welcome page,). Like many of the country's sporting estates, Langholm Moor, which extends over 115 km^2 to the north east of the town, has a long history of management for red grouse shooting (see Thomson et al., 2020, p. 41) and sheep farming, extending back to the nineteenth century. In May 2019, Buccleuch Estates Ltd. opted to sell just over 10,000 ha of the moor. Following extensive local consultation and fundraising, Langholm Initiative (hereafter referred to as LI), a community development trust that was formed in 1994, now owns 4, 250 ha of the land, which is being developed by the community into the TVNR.

The purchase and restoration of Langholm Moor intersects with long-term processes of community building, and the nature reserve is one of several community-led projects and groups in Langholm. The ability of the Langholm community to enter into collective ownership of such a large area of land was made possible by a community land ownership movement that has grown in size and influence since the 1990s. With its beginnings at the 'radical fringe' in 1999, community land and asset ownership has since become the centrepiece of Scottish land reform legislation (Warren & Glass, 2024, p. 544). In 2023, there were 840 assets in community ownership, owned by 533 groups and covering an area of 208,597 ha (2.7 % of the total land area of Scotland) (Scottish Government, 2024). The benefits of collective ownership are considerable, both for people and the land, and across a range of aspects, such as increases in local spending and housing provision, and increased community confidence and collective action (Danson & Burnett, 2021).

Scottish community land rights evolution allows different routes to collective ownership (see Combe et al., 2020; Lovett, 2020; McKee et al., 2025). The Land Reform (Scotland) Act, first passed in 2003 and updated in 2016, includes a right-to-buy for local communities, whereby a community has the right of first refusal when land to which they have a direct connection is sold. In some cases, communities have an absolute right-to-buy (Combe et al., 2020), and, since 2015, communities can also make 'asset transfer requests' from public bodies, under the provisions of the Community Empowerment (Scotland) Act (Sharma et al.,
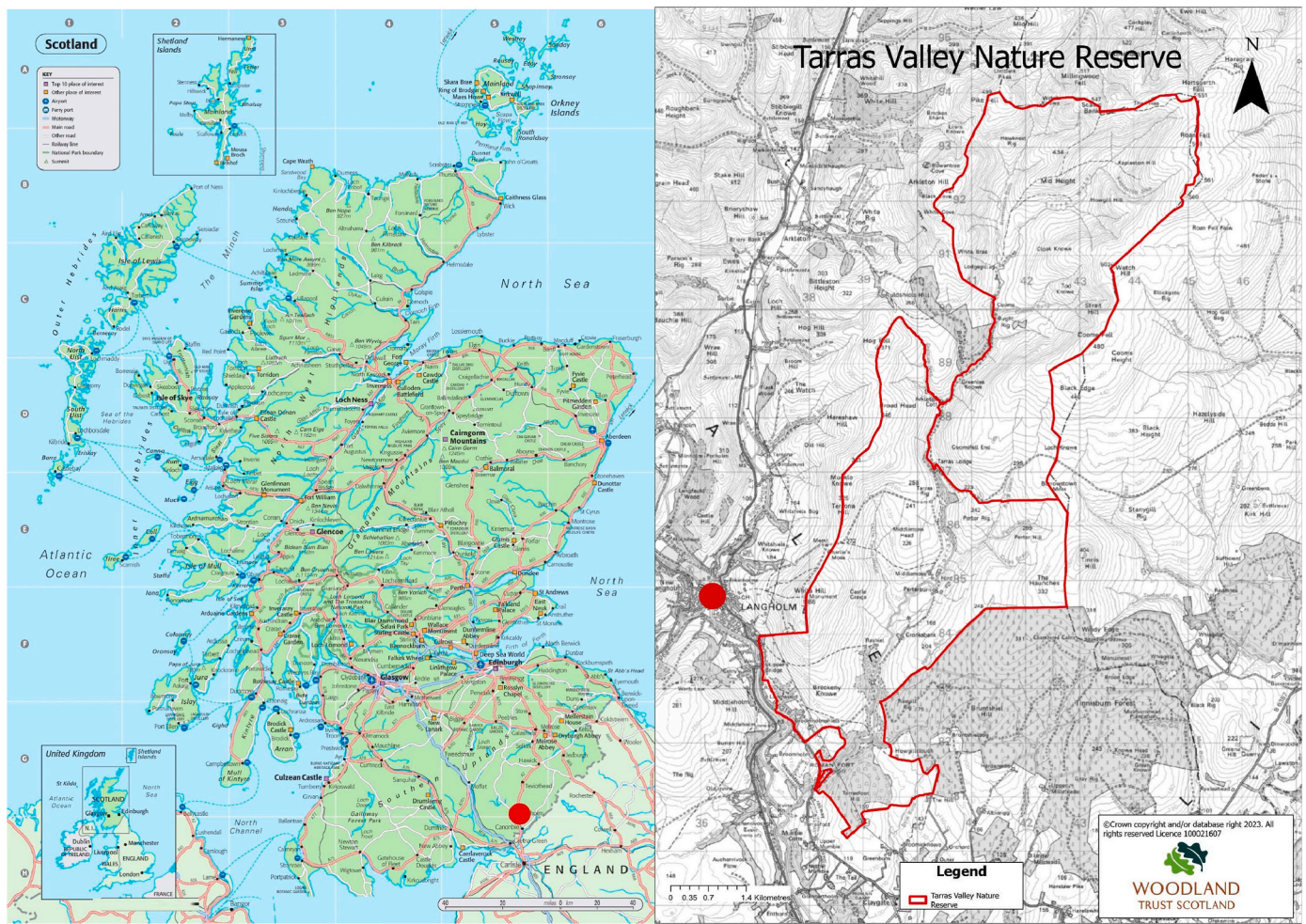
Fig. 1. On the left, Location of Langholm in Scotland (red dot) © Map: OnTheWorldMap. On the right, map of the Tarras Valley Nature Reserve (The red dot points out Langholm town. The TVNR is circumscribed by the red line and divided into two parts: the lower part consists of the first part of the buyout (achieved in 2019), and the northern part was acquired by the community in 2022. © Langholm Initiative. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

2023). Despite the range of legislative mechanisms available to communities, negotiated sales are often preferred by communities and landowners (McKee et al., 2025). This was the case in the sale of Langholm Moor, where Buccleuch Estates Ltd. first met with local community councils in 2019 to explore the community's ambitions prior to entering into negotiation of the sale.

The TVNR project is led by the LI, and management aims include large-scale restoration of peatlands and ancient woodlands, and improving people's access and connection to the land (Langholm Initiative, 2025). The LI works in close cooperation with local residents to shape the future of the reserve, including planning and development initiatives, as illustrated in Fig. 2. The LI is a Scottish Charitable Incorporated Organisation (SCIO) governed by a volunteer Board of Trustees that is elected by local members - membership of the LI is open to all

Fig. 2. Extract from the five year plan 2025–2030 depicting the community participation model developed since the first phase of the buyout in 2019. Langholm Initiative. (2025).

residents living in two postcode areas in and around the town. There is a small staff team responsible for day-to-day operations and project delivery, including the TVNR.

3.2. Data collection and analysis

We undertook intensive fieldwork in spring 2022. Back then, the first half of the TVNR was already under community ownership (since 2019), and the LI community group was still gathering the remaining funds (2.2 million pounds) to complete the second part of the buyout (achieved by the end of July 2022). This comprised 17 semi-structured interviews with community members (inhabitants involved in diverse professional and community activities, as described in the Results section) and other individuals directly involved in, or employed within, the LI (ten men and seven women, aged between 20 and 70); participant observation at three restoration sessions with volunteers at the TVNR; and five transect walks with community members to visit and discuss local assets, as well as more solo walks conducted by the lead author in the TVNR and around Langholm. To recruit participants, we started with a phase of "purposeful sampling" (Palinkas et al., 2015) by strategically focusing on potential participants with personal experience or interest in the Langholm land purchase (Creswell & Plano Clark, 2011). To do this, we searched for information online about community leaders in Langholm who were directly involved in the community buyout. This enabled us to recruit half of the participants. Then, we used a snowball method to recruit more participants, by asking those who took part in an interview if "they knew someone who knew a lot" (Patton, 2002) about the development of the TVNR. Further recruitment was carried out by the lead author at various social or community events in the area, while staying in the community for around six weeks. The restoration sessions also provided an opportunity to interact with participants and find additional interviewees through those conversations, thereby reaching the "hidden population" (Atkinson & Flint, 2001) which was not visible in the initial online searches.

The purpose of the interviews, observations and walks was to understand people's experiences of purchasing and managing the land. The semi-structured interviews were organised around seven questions relating to the participant's motivations to take part in the TVNR project, their experience so far, and their perceptions of positive aspects (potential "co-benefits" (Mayrhofer & Gupta, 2016)) and any challenges (see the interview protocol in the Supplementary Material). The interviews each lasted between 30 and 90 min, and four were conducted by Zoom. Interviews were audio recorded and transcribed. The restoration sessions each lasted 3 h and comprised different practical tasks led by volunteers under the supervision of a LI staff member. The sessions included 10–15 participants aged between 30 and 70 and with an equal mix of men and women. Participant observations were conducted during the sessions. During the walks with five participants, structured interview questions were not used. This was an opportunity to listen to each participant's descriptions of the landscape and their interactions with it. We did not record the discussions during the walks or restoration sessions. Instead, we took photographs and made detailed written notes, which are used in the analysis that follows. Finally, to better grasp the local context, the lead author conducted "solo walks" collecting pictures and notes summarising the observations of the (non)economic activities undertaken around the TVNR by observing how the landscape was used (and by which stakeholders).

Given our aim to explore the socio-environmental conditions that enhance restoration projects, our data analysis process was inspired by grounded theory (Glaser & Strauss, 1967). As Charmaz (2014, p. 225) defines it, grounded theory is "a decidedly emergent process of learning about and interpreting research participants' views of their experience". To better understand the organising processes behind community activities in Langholm, we also took an inductive approach, focusing on the observations of actors' activities and interactions (see Borraz & etMusselin, 2022). This involved thematic analysis of interviews, with

attention to participants' motivations, the benefits they experienced from commoning, and their aspirations for the future of the community. We cross-validated our analysis by incorporating other materials collected during the research, including photographs, field notes, and the written observations from the walks and restoration sessions. As Dey (1999, p. 251) reminds us, "There is a difference between an open mind and an empty head." While our grounded approach allowed themes to emerge from the data, our theoretical framework (Section 2) also informed and shaped the direction of the analysis. While our original data explored community perspectives of different assets and community groups in Langholm, here we focus on the LI and restorative commoning in the TVNR.

4. Results

4.1. Participant motivations to engage in restoration

This first section presents the socio-cultural and environmental context in which the work of the LI is embedded, and how LI has shaped people's motivations to engage actively in the creation and management of TVNR. In so doing, we show how restorative commoning has emerged out of an existing history, sense of place, and community that provided the foundation for collective action. The research participants described how Langholm's socio-historical context has contributed significantly to the capacities of individuals and the community as a whole to lead collective projects. The town (see Fig. 3) has thrived in the past due to the textile industry and shared cultural traditions, such as the "Common Ridings", an equestrian festival that has taken place for over 250 years (see Young, 2004, p. 160). Several participants saw the current collective action as strongly linked to the inherited capacities of the community to self-organise and manage local socio-economic activities in the past. For instance, the Langholm Alliance (LA), officially registered in 2020 as a charity group,[2] was created as an umbrella organisation for the existing local associations, and led by representatives from local enterprises to "oversee the economic regeneration of [the] town by 2030" (Langholm Alliance official website welcome page,). One of its members described during an interview:

"In the last 20 years we lost 1,200 jobs here. Five mills closed down. When I was 16, 15, you walked out of the school and you were wondering "What am I gonna do now?". You just got a job at the mill. I was a paper boy for the local newspaper. […] I worked there for 13 years, printed the paper, taking the adverts … […] What I found was a pity was that the machines were eventually sold to some museums […] But Langholm has one thing, which is that local people will support any good project. It has an ethos of togetherness that you won't find anywhere else. For me, for instance, it's been an absolute pleasure to be involved in the work of the community here in the town. You got to know everybody, get on well with everybody, it's fantastic". (Participant 16 - LA member)

Before the LA, The creation of LI in 1994 was perceived as fundamental for the social development of the town. Described as a charitable group founded by "a local businessman who could see the demise of the textile industry" (Participant 09 - LI staff member during an interview), LI has enabled many bottom-up local actions and projects. Interviewees described how community spirit and local inhabitants' skills have been sharpened through several decades of bottom-up community action development (e.g. in relation to fundraising, which was particularly evident during the recent buyout campaign). Community members have also accumulated a large amount of knowledge and connections with public institutions and policymakers, strengthening the web of an active minority of inhabitants engaged in community groups. The creation of TVNR is a continuation of a long line of locally-led projects that have

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[2] See Scottish Charity Regulator: (OSCR): https://www.oscr.org.uk/about-charities/search-the-register/charity-details?number=SC050588.

Fig. 3. Left: the town of Langholm. Picture taken during a solo walk. Right: The Tarras Valley Natural Reserve landscape. Pictures taken during transect walk with a LI volunteer. © Lead author.

mobilised community members around local priorities. However, the process of LI taking ownership of the area to establish the TVNR was not straightforward. The control of the available land is contested among various uses, including agriculture (such as pastures for sheep and cattle in the hills and valleys), tourism (like camper van areas), agroforestry, and the development of renewable energy (such as wind farms). This was illustrated through the different transect walks we conducted in the region surrounding Langholm and the TVNR, along with the pictures displayed in Fig. 4.

Nonetheless, with a proactive ability to launch projects and a strong capacity to include and engage a broader audience (including people living outside of the town), LI was described by participants as having encouraged people to continue to live in the town, as well as entice potential newcomers to settle there thanks to the restoration projects. As one new resident and LI volunteer explained:

"[…] in [Northern England city], I spent most all my working life within cities. I kind of got a bit divorced from country life, and I wanted to go to it. And [Langholm] is such a unique town. It's got such a well-developed community spirit compared to other places that I've looked at. It's extraordinary" (Participant 13, LI volunteer).

The motivations of LI volunteers to engage in the creation of the natural reserve are diverse. However, they all relate to personal positive and negative aesthetic experiences and values. Concretely, most of the interviewees insisted on the urgent need for environmental protection to avoid the worst consequences of climate change, and in this way justified their engagement with the TVNR project. One participant noted that the LI is engaging with the local school by providing pupils with environmental courses on nature discovery, for instance. Even the negative emotions shared by the participants (e.g. during discussions between participants about the news and climate catastrophes during the restoration sessions), reinforce the volunteers' willingness to preserve nature, and the beauty they are contemplating during these sessions. Negative and positive aesthetic experiences of the world appear to fuel their motivation to act upon and be part of what they consider to be a better world. One LI staff member justified their high workload through their strong urge to provide a safe future environment for their daughter:

"And for me who has a young daughter I have a stronger feeling of that. You know, if we do manage to solve the climate problems, or if we don't […] you'll have to turn around. She will be like, if that was your generation, what did you do? […] So we tried to show that [TVNR] was trying to help a nobler future. I think that's a nice thing to leave for your kids. You know, like the […] stuff that we've planned on there. I wouldn't see them, but she would see them […] she will come back and see, and this is what we fought for" (Participant 10, LI Staff member 3).

Place attachment also motivated engagement and reinforced social ties among volunteers who share this love for the common natural

Fig. 4. Top left: Valley used for crop cultivation, hillsides for forestry, and hilltops for cattle grazing (solo walk). Top right: Native tree replanting in the TVNR undertaken by the Buccleuch Estate just before the community buyout, now supported by LI (transect walk with two LI volunteers). Bottom left: Area set up for camper van tourism (solo walk). Bottom right: Renewable energy infrastructure alongside agroforestry development (taken during a walk with Participant 12). © Lead author.

surroundings. Both well-established inhabitants and newcomers involved in the TVNR work cited the beauty of the landscapes and the potential for restoration as the main reasons for them settling in Langholm. Some also noted a long-lived connection they had with the landscape and nature present in the TVNR, with retired participants describing how they had bathed in the river that crosses TVNR when they were children (see Fig. 5).

Importantly, for some volunteers, working on restoring nature was an opportunity for reinforcing community ties, meeting new volunteers, and for involving local people and future generations in the project. Some also felt the need to engage in the project for reasons of climate justice, fuelled by aesthetic experiences and emotions and providing them with the energy and willingness to engage concretely in the restoration of natural spaces:

"I am here for nature. If it was just me, you know, the land should be owned by no one. I am here because I want to protect what can be protected, and there is some beautiful nature, plants, and animals around here. I really care about that, and the UK has been terrible at protecting it, when it was the most important thing to do perhaps". (LI volunteer, notes taken during a participant observation in a restoration session)

This perspective captures the frustration felt by some volunteers regarding the management of the land by a private interest (the former owner of the TVNR land, Buccleuch Estate, who retained part of the current TVNR as a hunting reserve). One participant, for example, described the Duke of Buccleuch as "the man in possession" (Participant 12, former shepherd, interview after a transect walk) to whom he and other shepherds had (and still have, for those renting some remaining lands in the possession of Buccleuch Estate) to pay rent. As underlined in an interview with a local inhabitant involved in the management of the local archive (Participant 4), the history of land ownership around Langholm remains rather opaque, and comes from a long history of enclosure:

Participant 04: *"The monks were registering everything* […] *For Buccleuch this is the same and this is how he built a stronger claim on the area for its ancestry.* […] *you need special permission to have access to his* [the Duke of Buccleuch] *records concerning his … family history, if you like. So, um, he still has a lot of power, just to restrict things".*

The action of LI volunteers to (re)build the commons through collective ownership and management is thus in sharp contrast with the previous forms of private land management. The emergence of creative ideas and plans was also often captured in the politicised views of the participants (in the sense of engaging in public action to achieve desired outcomes related to collective life). They encapsulated a global vision of the reasons for engaging in the project, e.g. with a degrowth perspective on the use of the natural landscape to restore some natural balance:
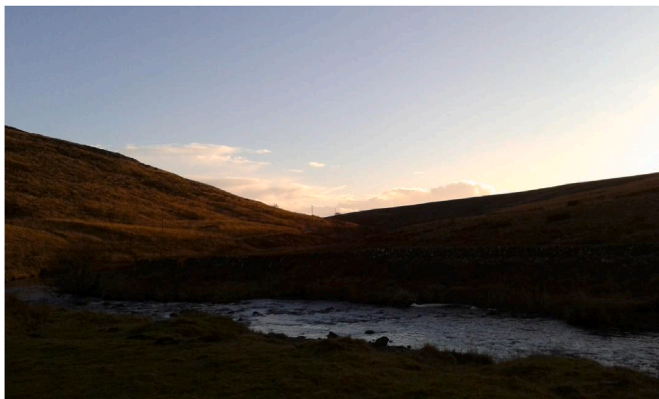

Fig. 5. Tarras water crossing the natural reserve. Pictures taken during a transect walk with a participant 14. © Lead author.

"What I also think is wrong is our economic model. You know, we can't have eternal growth. […] we've already reached planetary boundaries in a variety of areas, you know, we can see the damage we've done, both to nature, to the environment, to ourselves even". (Participant 17 - LI volunteer during an interview)

Many participants justify their engagement in LI activities and the creation of the reserve as a positive way to take concrete, bottom-up actions that support their political, ideological, and/or community idea(l)s. This suggests that motivated people involved in land restoration can demonstrate collective self-efficacy by uniting the community around a shared project that is focused on environmental protection, such as the land buyout to create the TVNR. Local people and volunteers even see their work and the development of LI as a chance to inspire a broader audience beyond Langholm, while simultaneously supporting the development of their local community:

"The natural reserve, at least, gives the local people a chance to make a difference … we can't solve climate change and the biodiversity crisis on our own [but] we can make a difference in a local area. And this nature reserve, this is a real golden opportunity to do that. […]. And I hope it acts as a kind of a roadmap role model as well". (Participant 17 - LI volunteer during an interview)

After examining the motivations behind volunteer engagement, we can describe the processes that led to the creation of the TVNR.

4.2. Co-creation of plans and gaining support

The TVNR project originally arose due to existing social ties and friendships, fostering the emergence of a strong community spirit and enabling creative, collective ownership restoration concepts to emerge and be developed. This section shows how the process of the transfer of private land into collective ownership, and how the initial phases of the project enabled the first step of the restorative commoning process by enhancing environmental protection and the (re)construction of social ties.

In Langholm, the bottom-up process of securing funding for the community land purchase was described by participants as particularly challenging, as were discussions surrounding the responsibilities for future management of the land, if the purchase were to be successful. Therefore, LI members and other local people explained that they had to quickly learn a diverse range of skills to support the development of the TVNR project. To this extent, a high level of self-efficacy was also needed:

"[…] if you're working with a partner, you need to understand everybody's agenda, but at the same time, you need to be confident about it. You need to be good at designing a project and you need to understand what makes a project sustainable. […] you need consultative skills and organisational skills, you need planning skills. You need to understand governance, I think, and how things work in that respect" (Participant 14 - LI volunteer and LA staff, during an interview)

In Langholm, it appears that good intentions were not enough to launch a successful project: the project needed support from skilled community members who could provide a sufficient level of self-efficacy to support the most ambitious ideas from the whole community. Indeed, in a rural community like Langholm, resources (e.g. time, money, expertise, volunteers) are limited. To develop these skills, participants followed a process of co-learning through public meetings, door-to-door consultation, and the collection of signatures in support of the LI's intention to buy the land and to lead land restoration sessions.

Participants described how these early-stage consultations were crucial for incorporating the opinions of local inhabitants and laying the groundwork for involving motivated volunteers in the co-creation of the TVNR. By informing and consulting the broader community about the TVNR project (e.g. through door-to-door campaigning and collecting

signatures in support of the buyout, as described by Participant 10 p. 17), LI staff and volunteers succeeded in raising awareness and, to some extent, strengthening and expanding their support base by recruiting future volunteers (some of whom we met during the restoration sessions). However, the concept of community ownership was still relatively unfamiliar in this part of Scotland, which made mutual education and understanding essential, both for the active minority group (LI) promoting the project, and for the wider community seeking to grasp the practicalities and implication creating the TVNR:

> *"[…]it's trying to learn about what community ownership is about. And it's not well-known in the south of Scotland, it's mainly in the Highlands, or islands, that sort of thing. So it was a lot of learning"* (Participant 09 - LI staff member during an interview)

To move the project forward, community members worked together to develop a concrete plan that would meet the administrative and legal requirements for entering into collective ownership, while also clearly communicating the aims of the project and motivating broader involvement. Participants described how the LI conducted a targeted campaign to ensure local acceptance and support, using local newspaper articles and door-to-door communication once again to frame the TVNR as a vision for a positive, collective future. To this end, the LI communicated through the local newspaper and a door-to-door campaign. As one participant described, this stood in contrast to the more individualistic and uncertain outlook that had become widespread during the Covid-19 lockdown period:

> *"There was so much negativity in the world because of COVID that again, positioning this [land buyout and creation of the TVNR project] as a really positive beacon for people about climate change with communities making a difference, balancing land ownership with cultural connections about what people can do … People felt powerless, and our story at the opposite resonated with people […]."* (Participant 10 - LI staff member during an interview)

The main difficulty, aside from developing a good story that would attract external finance for the land purchase, was ensuring that the community was supportive of the project. Thus, the perception of a collective self-efficacy materialised through a clear plan that included guidelines and potential outcomes for the community (and the wildlife). This plan was discussed and proposed to local people. The co-creation of the plan, which promoted community ownership as a way to create a natural reserve, was seen by participants as an opportunity to strengthen the connections among community members. This process of consultation was visible at the very beginning of the TVNR project, since the LI was asked by the Buccleuch Estate to collect signatures of local people to ensure their support for the buyout:

> *"[…] we felt that we were closer to the community [than Buccleuch Estates] and that we could […] demonstrate there would be support to investigate this option. […] we've got a group of volunteers and we went door to door in the community with this idea of getting signatures. So after about 10 days, there were over 800 people in support and at that point Buccleuch said: "okay, we get it" [laughs]".* (Participant 10 - LI staff member during an interview)

From that point, and as underlined by the LI staff member, the rest of the buyout project, which was formally led by a minority of volunteers and LI staff, has always been conducted in partnership with the larger group of Langholm inhabitants to involve them as much as possible in the planning process:

> *"[…] we've got a lot of support. We're trying to learn, educate the community. We're trying to consult the community at the same time and then try to develop plans about how it can all work."* (Participant 09 - LI staff member during an interview)

All of the research participants who were engaged in LI (either as members or local residents) insisted that the success of the creation of

TVNR relates to all community members agreeing with and feeling part of a common and achievable plan. In Langholm, because people envisioned collective action together, they were able to create opportunities through the commoning process to achieve their objectives. The successful purchase of the land, leading to the creation of the collectively-owned and managed reserve, demonstrates benefits of commoning as a process, allowing people to come together to achieve goals that would seem unattainable for individuals. The co-created plan was also considered by some participants as strong enough to reinforce self-efficacy and allow local people to share their creative vision of the landscape. As described by one participant who was not directly involved in the work of LI in the community buyout:

> *"It's [the TVNR plan for the moor] way ahead of its time. It's fantastic. And if we adhere to that business plan it's the way forward. […] We've secured phase two, we've got the land, it's going to take a few years to get established, probably two or three years […]. But then we'll have the signs up".* (Participant 06 - Former member of the LI and staff member at a local cultural organisation, during an interview)

4.3. (Re-)establishing community through restoration

The case of TVNR shows that restorative commoning is often about far more than restoring nature. It may also serve to strengthen social ties and a sense of community. Contributions from the research participants suggest a shared belief that environmental restoration cannot occur in isolation from social enjoyment and economic opportunity at the local scale. These insights flow primarily from the discussions with, and observations of, volunteers participating in the TVNR restoration sessions. Given the high ambitions associated with TVNR and the large workload and responsibilities assumed by LI volunteers, TVNR was widely perceived as needing to be socially, economically and politically (in the sense of the organisation of public affairs) acceptable. This broader acceptability was considered crucial for mobilising local people and creating the collective energy needed to foster and sustain the project's development.

One of the most tangible economic co-benefits identified by the LI board members and volunteers was the creation of new permanent jobs, primarily within the TVNR organisation. Six full-time positions have already been established, including roles such as education and engagement officer, estate manager, shepherd, and creative digital media manager, and all been employed directly through the community development trust. The Chair of LI also emphasised the importance of the development of community-owned renewable energy, both to meet local energy needs in the long term and to support the creation of additional permanent jobs (e.g. environmental educators and project officers, as well as rangers to take care of the natural reserve). These economic developments highlight the overall sustainability of the restoration project by demonstrating how it can generate meaningful employment for the community.

However, the most significant outcomes that have been observed were social. TVNR has played a key role in (re)generating social connections among the community members who participate in restoration activities. Even the use of the word "restoration" by LI staff reflects this broader social dimension, expressing a commitment not only to ecological renewal but also to community regeneration:

> *"We call it ecological restoration rather than rewilding. Well, it's interesting, because rewilding still has a lot of … for some people, of negative connotations. And also, we're very clear that this project is about people. And although ecological restoration or rewilding, […] is an integral part of it, ultimately, this project is about people"* (Participant 01 - LI staff member, during an interview)

The purpose of TVNR, as defined by LI members, is to combine nature and human life harmoniously. In doing so, it aims to promote local people's wellbeing, enhance nature and also restore a sustainable

human community through reinforcing social ties. Hence, it seems that an efficient combination of both the restoration process and commoning process is possible and even desirable in this context. Local volunteers do not consider TVNR as land to exploit, but rather a common space to be shared between humans and nature that can be enjoyed through observation, contemplation, and by walking through the area.

Part of TVNR will be reforested with native tree species such as the Scot Pine. Other areas are voluntarily left untouched and turned into sanctuaries for rare natural species, especially birds. As several LI staff members noted, TVNR is a 'disruptive' project as no human activities will be conducted for 20 years in these untouched areas, demonstrating a clear detachment of any form of targeted short-term economic benefits to enhance wildlife protection. Nevertheless, there is also a high level of consciousness among the research participants that this restoration of the natural landscape cannot be done without human support, and thus with benefits that flow to local people. However, in light of the values expressed by volunteers, the nature of what is a "benefit" varied. There was a high level of consciousness among participants that what happens from a social and environmental perspective at the local scale can make a difference at the global scale. Thus, this restoration project is not just considered to be about ecological functionality; it is tied to how people find meaning in life, and their place in the world in connection to both nature and the rest of society:

"I've been on a lifelong journey as we all are, in trying to find meaning in life, find out what's important. And it strikes me that community is important. Reaching a balance between us and nature is important". (Participant 17 - LI volunteer during an interview)

These reflections from individuals on their sense of place both locally and in the world also mirror broader political decisions taken at a larger scale regarding the future of land governance. The Scottish context is particularly interesting since inequalities in land ownership remain visible, and the negative impacts of poor land management are dramatic for the social and economic sustainability of local communities and ecosystems (as described in Section 3.1). As underlined by a local resident, transferring land into community ownership has opened a window of opportunity for the community of Langholm to collectively rethink how they want to (re)organise their natural environment and make actual changes. However, to make these new, collectively imagined futures a reality, the ownership question was seen as fundamental, as described by Participant 03, a LI volunteer, during an interview after a restoration session:

Participant 03: So, taking back some of the land, I think, is quite important for the community. […]

Interviewer: It reinforced the idea of community?

Participant 03: Yeah. That's another thing that a country as Scotland has got to embrace through this land reform, I think, yeah. But that's going to be hard. And land reform is important because it will then allow us to think about actually, what are we aiming for in nature restoration? How far do we go?

Finally, shifting the focus to the most active volunteers in our case study, the most visible outcomes of the restoration process, which were particularly noticeable during the restoration sessions, were the social benefits generated by the initiative. The restoration activities led by LI on the collectively-owned land created a space for community members and others to gather and collaborate on shared projects, such as removing old fences (Fig. 6). This shared, social space not only facilitated practical work but also encouraged conversations about values, allowed people to exchange ideas, and provided opportunities for social connection more broadly.

Most importantly, the restoration sessions were perceived by the participants to create positive social habits and consolidate relationships by allowing people to share time and space with other members of the community. The natural reserve, both as an area of common land and as

Fig. 6. Volunteers discussing. In the background, there are wire fences, wood posts and other materials that have been cleared up during the session. Pictures taken during participant observation, session 2. © Lead author.

a shared space to be restored, was seen as a catalyst for building and deepening social connections contributing to a growing sense of community. By working together toward a common purpose that benefits the natural environment, local volunteers can also reinforce their own sense of belonging to the community through sharing times, land, and purpose on ground that they collectively owned:

"[when] a community owns one asset, it tends to take on civic space […] so there's a kind of bond that it's just about maintaining civic space and capacity within a community to meet actually, and their economic models tend to be a kind of stewardship that they cover their costs, but they're not actually kind of necessarily making a huge profit." (Participant 02 - External stakeholder expert in community ownership in Scotland, during an interview)

Despite the positive engagement in TVNR to date, the people of Langholm already encounter, and will continue to encounter, challenges that may endanger the future prospective development of community initiative(s). Notably, the success of such projects relies heavily on the time and energy of community members. Volunteer fatigue was observable in our discussions and was also noted by several of the older members of community groups who struggle to find new volunteers:

"Well you know, to sustain an organisation, you need people to come on board. And eventually, you have people like X and Y [mention senior members of LI] get to the age when they don't really want to do it. And they really want to "retire retire" because they are retired, but they actually want to stop because it was and it is still a commitment. And we need to bring younger people. […] This whole town is run by volunteers. […] (Participant 14 - LI volunteer and LA staff, during an interview)

Langholm has a relatively large number of community groups, with numerous projects. While this reflects a community that is vibrant and active, it also raises the potential for conflicts or overlaps between different groups, particularly given the limited pool of volunteers and financial resources. Therefore, the current level of volunteering within the community may not be enough to sustain all future projects. Despite a strong sense of what one would call "goodwill" among most of the volunteers, Langholm's associative milieu is not necessarily sheltered from tensions arising from the differing ambitions and priorities across the different organisations – a challenge that has also been identified in other research on communities that own land and other assets (e.g. Doyle, 2023; Skerratt & Hall, 2011). For instance, while some groups, such as the LI and the LA, currently benefit from synergies between their activities (often supported by the same individuals), differing long-term visions could create friction. The LI, with its emphasis on nature conservation, and the LA, with a potential focus on economic development, may eventually face challenges aligning their goals. This divergence

could risk dividing the volunteer base.

The data was collected during a pivotal period in January–February 2022, when the LI had managed to secure half of the buyout of the land and begun initial restoration activities, while simultaneously mobilising donors for purchasing the remaining land. Thus, we caught the community at a strategic moment when they had already achieved their first success, enjoying local and global support, and were backed by active volunteer groups working to develop the natural reserve as a community-owned asset. Whether this momentum can be sustained remains an open question. Future research should examine how Langholm's community groups navigate long-term collaboration, particularly their ability to negotiate common goals and coordinate efforts in the face of constrained volunteer and financial resources.

5. Discussion

While global restoration debates have often focused on large-scale, targeted action (Fleischman et al., 2020), much environmental policy continues to operate through economic incentives (such as carbon finance) or on the basis of 'best practice' principles to guide ecosystem interventions (Gann et al., 2019). These approaches, however, often fail to support the locally-embedded, collective processes through which communities build and enact their own visions of landscape restoration.

In this paper, we have developed the concept of "restorative commoning" as a lens to explore the processes through which local people build and enact new visions of restored landscapes in support of a common good. Through the case of Langholm, our work has explored how these processes can unfold on the ground, which has generated several key lessons for future bottom-up restoration action. First, restoration of landscapes should be understood as a creative and collective process, where local actors develop new solutions that advance both social and environmental thriving. In Langholm, restoration and community building were deeply intertwined. Second, policy can facilitate such processes: legislative frameworks enabling land tenure transfer allowed the community to secure access to the landscape, enabling the opportunities we observed. Overall, the Langholm case demonstrates that landscape revitalisation can emerge from bottom-up societal action, as communities build and pursue new imaginaries for collective thriving. Below, we explore these lessons and the implications for restoration and social-ecological change.

5.1. Restorative commoning as a creative process

The Langholm case contrasts sharply with dominant restoration approaches. Contemporary policies often prioritise urgent, large-scale interventions informed by planning optimisation models and natural science driven interventions (Gann et al., 2019). While some initiatives have been successful, outcomes have been highly uneven – both in terms of environmental benefits and human well-being outcomes (Fleischman et al., 2020). Fundamentally, policy actions tend to treat restoration as a technical intervention (Weng, 2015) detached from the social processes and lived experiences that motivate people to value and take care of landscapes.

In Langholm, however, restorative commoning emerged from a deep history of social mobilisation and collective action, which provided a foundation for local people to organise around the buyout opportunity. While the initial announcement of the buyout might have appeared as a reactive response to the threat of private land ownership (as seen in other cases, e.g. Rigkos-Zitthen et al., 2024), the efforts of the community were more than opposition to the private model. Through collective action, the activities of the community evolved into a proactive reimagining of the landscape's future. This shift was made possible by the community's capacity to leverage collective ownership rights, which allowed them to reorganise connections - not just among residents but also between residents and the local environment. In doing so, they disrupted the status quo of privatised land management and created

space for alternative, creative visions to take root.

Our notion of restorative commoning therefore reframes restoration as a collective act whereby communities envision and enact revitalised landscapes in support of a common good. In the Langholm case, residents demonstrated how collective ownership could facilitate a socio-economic model not predicated on capitalist profit motives, but rather on relationships - between people, and between people and place. This was not just about resisting private land ownership but about constructing an alternative system grounded in shared values and ecological care.

The Langholm case shows an example of restoration as a creative process – and one that is deeply collective. It shows, for example, the bottom-up characteristic of both the design and the decision-making processes for the TVNR project, as well as the co-creation of an inspiring narrative to mobilise participation. The direct involvement of local people also enhanced self-efficacy and gave participants the confidence to turn creative vision into concrete restorative action once the buyout of the land was completed.

To a certain extent, the outcomes of Langholm align with existing theory on common pool resource management: where a clearly defined natural resource, managed by a cohesive community with rights for discretionary action, often leads to sustainable outcomes (Agrawal et al., 2023). Yet this body of work has less to say about the creative processes through which people may build new commons in cases like Langholm, where existing systems of management did not exist. Indeed, while such factors likely played a role, the actions we observed went further, with participants collectively reimagining what the landscape is and what it should provide for the community. The process of bringing this landscape into being was simultaneously a social, a political, and, for some, a spiritual act – rooted in affective and personal experience and identity of the community and the individuals that comprise it.

By framing restoration as a creative process, the notion of restorative commoning draws attention to long-term societal processes that enable collective action to bring about new futures. The LI's efforts illustrate how restorative commoning can transform what begins as a defensive reaction into a forward-looking movement. By reclaiming land through collective ownership, the community did not just resist an external threat—they actively reshaped their relationship to the landscape, embedding restoration within a broader vision of socio-ecological thriving.

5.2. Collective action enabled by supportive legislation

The case of Langholm also shows that restorative commoning does not emerge in a policy vacuum. While the initiative was driven by grassroots mobilisation, legislative frameworks played a decisive role in enabling its success. This aligns with broader critiques of purely community-based approaches that overlook the structural conditions necessary for collective action to flourish (Agrawal et al., 2023). However, unlike cases where formalising commons rights can introduce ambiguities (Voicu & Vasile, 2022), and even reinforce local exclusion and poor resource management (Gargule, 2025), Langholm's experience demonstrates how well-designed policy in conjunction with mobilised communities can serve as a catalyst for restorative commoning.

Central to Langholm's success was the legal mechanism facilitating collective land ownership. In Scotland, legislative reforms such as the Land Reform (Scotland) Act 2003 and the Community Empowerment Act 2015 have created pathways for communities to acquire land traditionally held by private estates (McKee et al., 2025; Satsangi & Purves, 2025). These laws do not merely grant ownership; they embed community rights into the legal fabric of land governance, ensuring long-term security for collective stewardship. For Langholm, this meant that when the moor was put up for sale, residents had a legally recognised avenue to pursue a buyout, transforming what might have been a reactive protest into a proactive reimagining of land use.

Without this legislative foundation, the Langholm Initiative's vision

would have faced existential threats. Private land ownership, especially in regions with concentrated landholdings, often leads to decisions made unilaterally by absent landlords. Even if individual landowners are increasingly engaging in ecological restoration and rewilding, their actions are typically disconnected from local social priorities and are vulnerable to sudden changes—such as sales to developers or shifts in land-use priorities (Roberts, 2025). In Langholm, collective ownership removed this uncertainty, allowing the community to align restoration with long-term goals for both ecological health and social well-being. This reflects broader research on how the concept of rewilding is evolving from its initial focus on restoring large-scale ecosystems with minimal human influence to a more inclusive approach that integrates human activity and cultural landscapes (Martin et al., 2023).

Critically, land tenure reform was not just about ownership but about reconfiguring power. Research on commons governance emphasizes that formal rights alone are insufficient without mechanisms for inclusive decision-making (Fischer & Ali, 2019; Thorat & Rai, 2023). In Langholm, the legal transfer of land was accompanied by participatory governance structures, ensuring that management of the TVNR reflected community priorities. This distinction is crucial: policy did not just 'enable' commoning - it actively shaped how commoning unfolded, reinforcing democratic control over land and resources (Higgins et al., 2018).

The implications extend beyond Langholm. Similar legislative frameworks such as Norway's Commons Act, Mexico's ejido system, or India's Forest Rights Act show how land tenure reforms can amplify community agency (Doyle, 2023; Gupta & Koontz, 2019). Yet, Langholm adds a new dimension: the interplay between policy and restorative commoning. Unlike traditional commons, which often focus on maintaining existing resources, Langholm's case highlights how legal mechanisms can facilitate transformative change, allowing communities to not just manage landscapes but reimagine them.

6. Conclusion: restoring landscapes to build common futures

The Langholm case demonstrates how restorative commoning can reconfigure relationships between communities and their landscapes. While unique in its specific context, this example aligns with growing evidence that locally-driven initiatives can generate meaningful ecological and social transformations (Jeffrey & Dyson, 2021; Rigkos-Zitthen et al., 2024). The significance of such cases extends beyond their immediate impacts, offering tangible examples of alternative socio-ecological configurations that challenge dominant paradigms of land management.

Our research has highlighted several key insights. First, restorative commoning represents more than oppositional politics; it constitutes a creative process through which communities thrive and are able to articulate and enact alternative visions. Second, successful commoning initiatives require both grassroots mobilisation and supportive policy frameworks. Third, these processes generate outcomes that exceed conventional restoration metrics, fostering new forms of social-ecological organisation that may support continued care and management into the future.

Combined, these findings have important implications for contemporary restoration debates. While large-scale interventions remain necessary to address global environmental challenges, the Langholm case demonstrates how local initiatives can bring about new socio-ecological relationships, with the potential to build momentum for change. Ultimately, restorative commoning offers an analytical lens for understanding how communities might navigate sustainability transformations. It directs attention to the social processes through which people reconstitute their relationships with land and with each other, while acknowledging the policy infrastructures that make such transformations possible. In an era of ecological crisis, these local experiments in commoning may prove as significant as top-down interventions for building more resilient futures.

CRediT authorship contribution statement

Adrien Chanteloup: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jayne Glass:** Writing – review & editing, Validation, Methodology, Conceptualization. **Harry W. Fischer:** Writing – review & editing, Validation, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.polgeo.2025.103471.

Data availability

The data that has been used is confidential.

References

Agrawal, A. (2001). Common property institutions and sustainable governance of resources. *World Development, 29*, 1649–1672. https://doi.org/10.1016/S0305-750X(01)00063-8

Agrawal, A., Erbaugh, J. T., & Pradhan, N. (2023). The commons. *Annual Review of Environment and Resources, 48*. https://doi.org/10.1146/annurev-environ-112320-113509

Aronson, J., Goodwin, N., Orlando, L. F., Eisenberg, C., & Cross, A. T. (2020). A world of possibilities: Six restoration strategies to support the United Nation's decade on ecosystem restoration. *Restoration Ecology, 28*. https://doi.org/10.1111/rec.13170

Atkinson, R., & Flint, J. (2001). Accessing hidden and hard-to-reach populations: Snowball research strategies. *Social Research Update, 33*. https://sru.soc.surrey.ac.uk/SRU33.PDF.

Borraz, O., et al.Musselin, C. (2022). Introduction. In *O. Borraz La société des organisations* (pp. 5–23). Presses de Sciences Po. https://doi.org/10.3917/scpo.borra.2022.01.0005.

Charmaz, K. (2014). *Constructing grounded theory. Introducing qualitative methods series* (2nd ed.). SAGE. ISBN 1446297225, 9781446297223.

Combe, M., Glass, J., & Tindley, A. (2020). Introduction. In M. Combe, J. Glass, & A. Tindley (Eds.), *Land reform in Scotland: History, law and policy*. Edinburgh: Edinburgh University Press. https://doi.org/10.3366/shr.2020.0479.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed method research* (2nd ed.). Thousand Oaks, CA: Sage.

Danson, M., & Burnett, K. A. (2021). Current Scottish land reform and reclaiming the commons: Building community resilience. *Progress in Development Studies, 21*(3), 280–297. https://doi.org/10.1177/14649934211018393

Devine, T. (2019). *The Scottish clearances: A history of the dispossessed, 1600-1900.* Allen Lane. ISBN 9780241304105.

Dey, I. (1999). *Grounding grounded theory : Guidelines for qualitative inquiry.* San Diego, CA: Academic Press.

Dick, J., Carruthers-Jones, J., Carver, S., Dobel, J. A., & Miller, J. D. (2020). How are nature-based solutions contributing to priority societal challenges surrounding human well-being in the United Kingdom: A systematic map. *Environmental Evidence, 9*, 25. https://doi.org/10.1186/s13750-020-00208-6

Djenontin, I. N., Fischer, H. W., Yin, J., & Chi, G. (2025). Unveiling global narratives of restoration policy: Big data insights into competing framings and implications. *Geoforum; journal of physical, human, and regional geosciences, 161*. https://doi.org/10.1016/j.geoforum.2025.104241

Doyle, C. (2023). Rethinking communities, land and governance: Land reform in Scotland and the community ownership model. *Planning Theory & Practice, 24*(3), 429–441. https://doi.org/10.1080/14649357.2023.2225322

Elliot, A., Watt, J., Cooke, I., & Tabor, P. (2014). The land of Scotland and the common good. *Report of the land reform review group*. Edinburgh: Scottish Government. https://www.gov.scot/publications/land-reform-review-group-final-report-land-scotland-common-good/.

Erbaugh, J. T., & Oldekop, J. A. (2018). Forest landscape restoration for livelihoods and well-being. *Current Opinion in Environmental Sustainability, 32*, 76–83. https://doi.org/10.1016/j.cosust.2018.05.007

Erbaugh, J. T., Pradhan, N., Adams, J., Oldekop, J. A., Agrawal, A., Brockington, D., Pritchard, R., Pritchard, R., & Chhatre, A. (2020). Global forest restoration and the importance of prioritizing local communities. *Nature Ecology & Evolution, 4*, 1472–1476. https://doi.org/10.1038/s41559-020-01282-2

Fischer, H. W., & Ali, S. S. (2019). Reshaping the public domain: Decentralization, the Mahatma Gandhi national rural employment guarantee act (MGNREGA), and

trajectories of local democracy in rural India. *World Development.* https://doi.org/10.1016/j.worlddev.2018.09.013

Fischer, J., Farny, S., Abson, D. J., Zuin Zeidler, V. G., von Salisch, M., Schaltegger, S., Martín-López, B., Temperton, V. M., & Kümmerer, K. (2024). Mainstreaming regenerative dynamics for sustainability. *Nature Sustainability.* https://doi.org/10.1038/s41893-024-01368-w

Fischer, J., Riechers, M., Loos, J., Martin-Lopez, B., & Temperton, L. (2020). Making the UN decade on ecosystem restoration a socio-ecological endeavour. *Trends in Ecology & Evolution, 36*(1), 20–28. https://doi.org/10.1016/j.tree.2020.08.018

Fleischman, F., Basant, S., Chhatre, A., Coleman, E. A., Fischer, H. W., Gupta, D., Güneralp, B., Kashwan, P., Khatri, D. B., Muscarella, R., Powers, J. S., Ramprasad, V., Rana, P., Solorzano, C. R., & Veldman, J. W. (2020). Pitfalls of tree planting show why we need people-centered natural climate solutions. *BioScience, 70*(11), 947–950. https://doi.org/10.1093/biosci/biaa094

Fleischman, F., Coleman, E., Fischer, H. W., Kashwan, P., Pfeifer, M., Ramprasad, V., Rodriguez Solorzano, C., & Veldman, J. W. (2022). Restoration prioritization must be informed by marginalized people. *Nature, 607*, E5–E6. https://doi.org/10.1038/s41586-022-04733-x

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry, 12*(2), 219–245. https://doi.org/10.1177/1077800405284363

Gann, G. D., McDonald, T., Walder, B., Aronson, J., Nelson, C. R., Jonson, J., Hallett, J. G., Eisenberg, C., Guariguata, M. R., Liu, J., Hua, F., Echeverría, C., Gonzales, E., Shaw, N., Decleer, K., & Dixon, K. W. (2019). International principles and standards for the practice of ecological restoration. Second edition *Restoration Ecology, 27*, S1–S46. https://doi.org/10.1111/rec.13035.

García-López, G. A., Lang, U., & Singh, N. (2021). Commons, commoning and co-becoming: Nurturing life-in-common and post-capitalist futures (An introduction to the theme issue). *Environment and Planning E: Nature and Space, 4*(4), 1199–1216. https://doi.org/10.1177/25148486211051081

Gargule, A. A. (2025). Shadow state and the making of informal territories: Negotiating conservation and communal land reforms in the Kenyan wildlife frontier. *Political Geography.* https://doi.org/10.1016/j.polgeo.2025.103351

Gibson-Graham, J., Cameron, J., & Healy, S. (2016). Commoning as a postcapitalist politics 1. In A. Amin, & P. Howell (Eds.), *Releasing the commons: Rethinking the futures of the commons* (1st ed.). Routledge. https://doi.org/10.4324/9781315673172.

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research* (1st ed.). New Brunswick and London: Aldine. ISBN 0202302601, 9780202302607.

Glass, J., Mc Morran, R., & Thomson, S. (2019). The effects associated with concentrated and large-scale land ownership in Scotland: A research review report prepared for Scottish land commission. https://www.landcommission.gov.scot/downloads/5dd7d807b8768_Research-Review-Concentrated-ownership-final-20190320.pdf.

Griscom, B. W., Adams, J., Ellis, P. W., & Fargione, J. (2017). Natural climate solutions. *Proceedings of the National Academy of Sciences of the United States of America, 114*(44), 11645–11650. https://doi.org/10.1073/pnas.1710465114

Gupta, D., & Koontz, T. M. (2019). Working together? Synergies in government and NGO roles for community forestry in the Indian himalayas. *World Development.* https://doi.org/10.1016/j.worlddev.2018.09.016

Higgins, D., Balint, T., Liversage, H., & Winters, P. (2018). Investigating the impacts of increased rural land tenure security: A systematic review of the evidence. *Journal of Rural Studies, 61*, 34–62. https://doi.org/10.1016/j.jrurstud.2018.05.001

Höhl, M., Ahimbisobwe, V., Stanturf, J. A., Elsasser, P., Kleine, M., & Bolte, A. (2020). Forest landscape restoration - What generates failure and success? *Forests, 11*(9), 938. https://doi.org/10.3390/f11090938

Jeffrey, C., & Dyson, J. (2021). Geographies of the future: Prefigurative politics. *Progress in Human Geography, 45*(4), 641–658. https://doi.org/10.1177/0309132520926569

Langholm Alliance official website welcome page. Consulted the 01/10/2025 at the URL: https://www.langholm-alliance.co.uk/.

Langholm Initiative. (2025). Creating the tarras valley nature reserve: 5 year action plan for Langholm's community land. Consulted 06/10/2025 https://www.tarrasvalleynaturereserve.org/wp-content/uploads/2025/02/TVN008_Report25_Spreads-5.pdf.

Löfqvist, S., Kleinschroth, F., Bey, A., de Bremond, A., DeFries, R., Dong, J., Fleischman, F., Lele, S., Martin, D. A., Messerli, P., Meyfroidt, P., Pfeifer, M., Rakotonarivo, S. O., Ramankutty, N., Ramprasad, V., Rana, P., Rhemtulla, J. M., Ryan, C. M., Vieira, I. C. G., Wells, G. J., & Garrett, R. D. (2023). How social considerations improve the equity and effectiveness of ecosystem restoration. *BioScience, 73*(2), 134–148. https://doi.org/10.1093/biosci/biac099

Lovett, A. J. (2020). Towards sustainable community ownership: A comparative assessment of Scotland's new compulsory community right to buy. In M. Combe, J. Glass, & A. Tindley (Eds.), *Land reform in Scotland: History, law and policy.* Edinburgh: Edinburgh University Press. https://ssrn.com/abstract=3326967.

MacDonald, C. M. M. (2022). *It's not the land, it's the people: Deconstructing the cultural heritage of community land buyouts in the south of Scotland.* MSc thesis in Scottish History. University of Glasgow https://www.tarrasvalleynaturereserve.org/wp-content/uploads/2023/07/Rory-Hamilton-2022.pdf.

Mackenzie, F. (2010). A common claim: Community land ownership in the outer hebrides, Scotland. *International Journal of the Commons, 4*, 319–344. https://doi.org/10.18352/ijc.151

Mansourian, S., Djenontin, I. N., Elias, M., Oldekop, J. A., Derkyi, M. A., Kull, C. A., & Pacheco, P. (2025). Situating the "human" in forest landscape restoration. *Frontiers in Environmental Science.* https://doi.org/10.3389/fenvs.2024.1522979

Martin, L. J. (2022). *Wild by design: The rise of ecological restoration.* Cambridge, USA: Harvard University Press.

Martin, A., Fischer, A., & McMorran, R. (2023). Who decides? The governance of rewilding in Scotland 'between the cracks': Community participation, public engagement, and partnerships. *Journal of Rural Studies, 98*, 80–91. https://doi.org/10.1016/j.jrurstud.2023.01.007

Mayrhofer, J. P., & Gupta, J. (2016). The science and politics of co-benefits in climate policy. *Environmental Science & Policy, 57*, 22–30. https://doi.org/10.1016/j.envsci.2015.11.005

McKee, A. M., Glass, J. H., Lawrence, A., & McMorran, R. (2025). Community land ownership: means and outcomes – Experiences of community acquisition processes in Scotland. In N. Gallent, M. Gkartzios, A. Purves, & M. Scott (Eds.), *Post-capitalist countrysides* (pp. 143–166). London: UCL Press. https://doi.org/10.14324/111.9781800087675.

Nightingale, A. J. (2014). Questioning commoning. *Social & Cultural Geography, 15*(8), 980–982. https://doi.org/10.1080/14649365.2014.916995

Nightingale, A. J. (2019). Commoning for inclusion? Commons, exclusion, property and socio-natural becomings. *International Journal of the Commons, 13*(1), 16–35. https://doi.org/10.18352/ijc.927

Nightingale, A. J., Gonda, N., & Eriksen, S. H. (2021). Affective adaptation = effective transformation? Shifting the politics of climate change adaptation and transformation from the status quo. *WIREs Climate Change, 13*(1), Article e740. https://doi.org/10.1002/wcc.740

Osborne, T., Brock, S., Chazdon, R., Chomba, S., Garen, E., Gutierrez, V., Lave, R., Lefevre, M., & Sundberg, J. (2021). The political ecology playbook for ecosystem restoration: Principles for effective, equitable, and transformative landscapes. *Global Environmental Change, 70*, Article 102320. https://doi.org/10.1016/j.gloenvcha.2021.102320

Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. *Science, 325*, 419–422. https://doi.org/10.1126/science.1172133

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. E. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research, 42*, 533–544. https://doi.org/10.1007/s10488-013-0528-y

Partelow, S., & Manlosa, A. O. (2022). Commoning the governance: A review of literature and the integration of power. *Sustainability Science, 18*, 265–283. https://doi.org/10.1007/s11625-022-01191-2

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Quintero-Uribe, L. C., Navarro, L. M., Pereira, H. M., & Fernández, N. (2022). Participatory scenarios for restoring European landscapes show a plurality of nature values. *Ecography, 4*, Article e06292. https://doi.org/10.1111/ecog.06292

Richardson, K., Steffen, W., Lucht, W., Bendtsen, J., Cornell, S. E., Donges, J. F., Drüke, M., Fetzer, I., Bala, G., von Bloh, W., Feulner, G., Fiedler, S., Gerten, D., Gleeson, T., Hofmann, M., Huiskamp, W., Kummu, M., Mohan, C., Nogués-Bravo, D., … Rockström, J. (2023). Earth beyond six of planetary boundaries. *Science Advances, 9*(37). https://doi.org/10.1126/sciadv.adh2458

Rigkos-Zitthen, I., McGregor, A., & Williams, M. J. (2024). Commoning in the anthropocene: Exploring the political possibility of caring with in Skouries of Halkidiki, Greece. *Political Geography.* https://doi.org/10.1016/j.polgeo.2024.103089

Robbins, P. (2000). The practical politics of knowing: State environmental knowledge and local political economy. *Economic Geography, 76*(2), 126–144. https://doi.org/10.2307/144550

Roberts, D. (2025). Presidential address: The case for revisiting property rights in the context of the climate and nature crises. *Journal of Agricultural Economics, 76*(3), 487–498. https://doi.org/10.1111/1477-9552.70004

Satsangi, A., & Purves, N. (2025). Making a postcapitalist countryside? Community landownership in Scotland. In N. Gallent, M. Gkartzios, A. Purves, & M. Scott (Eds.), *Post-capitalist countrysides* (pp. 123–142). London: UCL Press. https://doi.org/10.14324/111.9781800087675.

Savilaakso, S., Lausberg, N., Waeber, P., Hillgén, O., Isotalo, A., Kleinschroth, F., Djenontin, I. N., Boul Lefeuvre, N., & Garcia, C. A. (2023). Whose perspective counts? A critical look at definitions of terms used for natural and near-natural forests. *One Earth.* https://doi.org/10.1016/j.oneear.2023.10.003

Schultz, M., Jamieson, H., Piontek, E., Coon, J. J., & Halsey, S. J. (2022). The importance of cultural values in ecological restorations: A systematic review. *Society & Natural Resources, 35*, 1021–1039. https://doi.org/10.1080/08941920.2022.2073625

Scott, A. J. (2022). The changing fortunes and future prospects of a traditional industrial cluster: Woollen textile production in the Scottish borders. *Local Economy: The Journal of the Local Economy Policy Unit, 37*(3), 125–141. https://doi.org/10.1177/02690942221093039

Scottish Government. (2024). *Community ownership in Scotland 2023.* Official Statistics, 26 November 2004 https://www.gov.scot/publications/community-ownership-in-scotland-2023/.

Sharma, K., Hollingdale, J., Walters, G., Metzger, M. J., & Ghazoul, J. (2023). In danger of co-option: Examining how austerity and central control shape community woodlands in Scotland. *Geoforum, 142*, Article 103771. https://doi.org/10.1016/j.geoforum.2023.103771

Shelton, M. R., Kanowski, P. J., Kleinschmit, D., & Ison, R. L. (2024). Critical social perspectives in forest and landscape restoration – A systematic review. *Frontiers in Environmental Science.* https://doi.org/10.3389/fenvs.2024.1466758

Singh, N. (2017). Becoming a commoner: The commons as sites for affective socio-nature encounters and co-becomings. *Ephemera: theory and politics in organization, 17*(4), 75–776. https://ephemerajournal.org/sites/default/files/pdfs/contribution/17-4singh_0.pdf.

Skerratt, S., & Hall, C. (2011). Community ownership of physical assets: Challenges, complexities and implications. *Local Economy, 26*(3), 170–181. https://doi.org/10.1177/0269094211401491

Swart, J. A. A., Zevenberg, J., Ho, P., Cortina, J., Reed, M., Derak, M., Vella, S., Zhao, H., & van der Windt, H. J. (2018). Involving society in restoration and conservation. *Restoration Ecology, 26*(S1), S3–S6. https://doi.org/10.1111/rec.12709

Tedesco, A. M., López-Cubillos, S., Chazdon, R., Rhodes, J. R., Archibald, C. L., Pérez-Hämmerle, K.-V., Brancalion, P. H. S., Wilson, K. A., Oliveira, M., Correa, D. F., Ota, L., Morrison, T. H., Possingham, H. P., Mills, M., Santos, F. C., & Dean, A. J. (2023). Beyond ecology: Ecosystem restoration as a process for social-ecological transformation. *Trends in Ecology & Evolution, 38*(7), 643–653. https://doi.org/10.1016/j.tree.2023.02.007

Thomson, S., Mc Morran, R., Newey, S., Matthews, K. B., Fielding, D., Miller, D. G., Glass, J., Gandossi, G., McMillan, J., & Spencer, M. (2020). Summary report - Socio-Economic and biodiversity impacts of driven grouse moors in Scotland. *Commissioned report for Scottish government (CR/2019/01)*. Edinburgh: Scottish Government. https://www.gov.scot/ISBN/978-1-80004-212-4.

Thorat, O., & Rai, N. (2023). Commoning under the new rangeland development paradigm: 'pastoralisation' of the Banni grasslands of India. *Political Geography*. https://doi.org/10.1016/j.polgeo.2023.102924

Turner, M. D. (2017). Political ecology III: The commons and commoning. *Progress in Human Geography, 41*(6), 795–802. https://doi.org/10.1177/0309132516664433

Voicu, Ş., & Vasile, M. (2022). Grabbing the commons: Forest rights, capital and legal struggle in the carpathian Mountains. *Political Geography*. https://doi.org/10.1016/j.polgeo.2022.102718

Warren, C., & Glass, J. (2024). *Managing scotland's environment* (3rd ed.). Edinburgh: Edinburgh University Press https://edinburghuniversitypress.com/book-managing-scotland-s-environment-569.html.

Weng, Y.-C. (2015). Contrasting visions of science in ecological restoration: Expert-lay dynamics between professional practitioners and volunteers. *Geoforum, 65*, 134–145. https://doi.org/10.1016/j.geoforum.2015.07.023

Young, W. S. (2004). *A spot supremely blest: The history, lore and legends of langholm*. Cairndhu Publications. ISBN 0951785834.