

Review

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Review

Communitarianism, Complexity and Confusion in the Governance of Rural Sustainability Transitions in Advanced Industrial Economies: The Case of Scotland

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Abstract: Rural areas of advanced industrial countries have frequently experienced a dualistic set of policies: one designed for the land-use sector, especially agriculture; and another dealing with rural development [1]. As problems of industrialised agriculture and forestry emerged, a more joined up approach to policy was advocated. Since the 1980s, at national and international level, new elements of rural policy have emerged to connect these two policy fields, including environmental payments, farm diversification grants, woodland creation within the farm sector and support for community-led local development. Rural land is also closely connected to the biodiversity and climate crises which have become important policy drivers. Policy towards community-led local development has moved further in Scotland than almost anywhere else as a result of policies for community-based land reform, community empowerment and community asset transfer. These communitarian approaches connect closely to collaborative landscape management as it addresses environmental challenges. As collaborative place-based and area-based approaches emerge as the guiding stars of the new rural development, this paper explores the challenges with particular reference to Scotland in the governance of sustainability transitions in moving from a sectoral rural policy hinging around support for land use to one based much more on communitarian values and place-based development.

Keywords: community; sustainability; transition; policy; governance; place-based; Scotland

1. Introduction

For most of the last fifty years, rural policy in Europe has been characterised by a strong, some might say dominant, strand of public policy support for the farm sector (and in some countries the forest sector) and a much weaker and more ephemeral set of policies related to the rest of the rural economy. Today, at EU-level, these correspond to Pillar 1 of the CAP on one hand and Pillar 2 and the parts of the ERDF and ESF and Cohesion funds that contribute to rural areas on the other. But as long ago as 1981, [2] asserted the apparently paradoxical coexistence of “strong agricultures and weak rural economies,” implying that an overly agricultural emphasis in rural policy could be damaging to wider emergent visions of rural development. In that paper, Wibberley introduced many of the key themes that have pre-occupied rural policy analysts since, including environmental damage arising from agriculture, declining farm employment and a lack of effective planning dealing with the non-agricultural rural economy. And as recently as 2021, it has been asserted that little has changed [3]. Some might argue that what we are dealing with in the breakdown of the complex socio-ecological systems of the rural domain are classic wicked problems [4].

2. The role of community level initiative in transition challenges

Since the early 21st century, a significant strand of academic thinking has emerged around sustainability transitions, dominated by the work of Dutch transition practitioners and theorists [5,6]. Increasingly, this body of literature has addressed the climate crisis and the need to secure a transition to renewable energy systems [7], although the emphasis has often been more on sectoral transitions than reducing emissions in all sectors (including consumption) in spatial/geographical entities,

Nonetheless, there are examples of cities rather than rural regions that have been singled out as places where transition management can be practised. Some applications of transition thinking to the farm sector have been undertaken [8] but none to the wider components of the rural economy as a spatial entity.

The main organising concepts for transition theory are the idea of socio-technical landscapes, prevailing regimes and niches [9]. The highest-level entity is the socio-technical landscape. At the meso-level there are technical regimes. At the smallest scale is the niche. Where the socio-technical landscape (or regime) is confronted by problems of unsustainability, niches provide the seedbed of experimental change in which new approaches can be tested before upscaling. This overall package is termed the multi-level perspective. In some cases, transitions clearly take place endogenously through technical innovation; but the relationships between different actors and public policy in upscaling and regime change can be varied. The multi-level perspective is asserted as both a description of reality and a template for influencing positive change.

The transition management approach is not the only lens through which to explore sustainability shifts. A further body of work on sustainability in farming practices developed around the topic of farmer learning [10] which resonates strongly with work on adaptive behaviour in complex socio-ecological systems. Among such initiatives, the Landcare movement in Australia is cited as an exemplar in addressing landscape-scale degradation based around “local groups of people, autonomous and self-reliant, mainly comprised of land users in rural areas, whose primary aims are to tackle land degradation and develop more sustainable land management practices,” [11]. Alongside the transition and social learning approaches, social scientists have used a range of other exploratory lenses in exploring sustainability transitions [12] including those derived from actor network theory and innovation systems thinking and lately the idea of co-production (with common roots to transition theory) has emerged as a further exploratory lens.

The need for transformative/transformational change in rural areas can be argued from at least three perspectives. First, it has been argued that “strong agricultures and weak rural economies” can coexist [1], suggesting that an undue emphasis of rural support on the farm sector may not be wholly desirable. Second, the farm sector is implicated in major damage to the environment in terms of biodiversity loss, water quality and greenhouse gas emissions, and farm policy is often implicated as a major cause of this destruction [13]. There is now compelling evidence that land system changes are a major causal force on compromised planetary boundaries [14]. Third, from an explicitly political science perspective, it has been argued that transformational change to address inequality and market failures which are a direct consequence of capitalist land market development is likely to need a civil society trigger, working either in partnership with the state, in opposition to the state or filling the interstices where market and state have withdrawn [15].

New governance arrangements, often built around community-led local development, are widely seen as essential in delivering positive change. There is a growing body of literature exploring place-based development. Through the work of scholars like [16] place-based approaches to development which often began life as mere policy rhetoric have received overdue scientific attention and a high degree of theoretical validation. This place-based thinking also connects across to new models of collaborative spatial planning in the form of co-production of sustainability [17,18] as well as connecting to a critique of capitalist development, its distributional consequences and its transformational challenges [15].

How power is exercised and by whom necessarily frames sustainability transitions. Both in relation to energy transitions [19] and place-based development by civil society actors [16] power is recognised as a multifaceted, multidimensional concept. [19, p. 440] asserts that “broadly speaking, we can think of power dialectically as the (in)capacity of actors to mobilise means to achieve ends.” We can reasonably contend that at certain times and for specific reasons, power relations can change, and it is this element of power that particularly interests [16, ch 6], who seeks to better understand who controls the energy that drives social relations and who can command and manipulate others at local community level to deliver enhanced community wellbeing. However, the overall extent to which local actors have room for manoeuvre, space and capacity to act might reasonably be

questioned, as might the delivery agency to drive the desired direction of travel. The frequent presumption that rural communities tend act cohesively and collaboratively is questioned by many [20], leading to questions of how power is exercised and for whom. Some policy instruments, such as land reform, community empowerment and community-based local development are designed to be empowering and inclusive at community level, but the extent to which such policy instruments can be subverted by local elites is unknown as is their overall impact on societal outcomes.

In complex socio-ecological systems, environmental breakdown itself has become a driver of power and governance shifts [21]. Anthropogenic climate change, biodiversity loss and deteriorating water quantity and quality can be seen as significant disruptive actants. In a rural context, the adverse impacts of modern farming on the environment have shaped power shifts, initially to the state as an arbiter where negative externalities were widely asserted and sometimes enumerated, although the state's power to act has been constrained by vested interests of the farm lobby [22].

A compelling narrative now exists that biodiversity decline can best be arrested by collaborative action at landscape scale and, further, water quality decline is seen as better addressed at catchment scale. Similar arguments have been made about local or regional food systems as exemplars of food system sustainability. Transition towns are heralded as place-based means of effecting the low carbon transition. In all cases, coalitions or partnerships operating at some kind of "local" or sub-regional spatial scale are seen as providing the necessary agency to drive effective sustainability transitions. Set against a predominantly siloed arrangement of policies, the extent to which place-based local households, private sector actors and public sector and communitarian agency can intersect and engage with sectoral policies is likely to be crucial in managing the transition. To date there has been very little focus on how these intersectoral policies are enabled and whether they are likely to be a critical factor in sustainability transitions.

I argue below that communitarian policies can be highly effective means of delivering cross sectoral sustainability transitions at local level but that they remain understudied because of an overly sectoral emphasis in investigations. By moving beyond individualistic (at household or business level) responses, communitarian policies may offer potential for deeper and wider reach in delivering sustainability transitions a potentially cross cutting way. New forms of agency (often partnerships) emerge which reflect attempts to grapple with specific place-based socio-ecological complexes, not simply generic concerns. This may yield new possibilities for sustainability gains but is not necessarily always the case: communitarian responses can also comprise defensive localism [23] and what has been termed a dark side of social innovation can emerge [24]. The question then arises as to what factors are conducive to creating effective sustainability transitions and whether communitarian responses confer any particular advantages.

In this paper, I explore the challenges of sustainability transitions in rural Scotland, the strengths and weaknesses of the current policies and whether or not it is possible to conceive a bundle of policies capable of supporting that transition. In particular, I focus on whether a focus on place-based policy is likely to be more effective in delivering the just transition towards sustainability than is a sectoral policy, using examples from community empowerment policy, energy policy and farm policy. In a world of multilevel governance, deciding how best to steer an increasingly variegated rural economy towards sustainability has proved a deeply challenging task. Following [25, p. 262] "it makes sense to take stock of different approaches and instruments that exist through (historical) analysis of the governance activities employed by actors."

3. The Scottish context

As part of the UK, Scotland's rural policy largely mirrored that of the UK, with agriculturally dominated policy the norm, but with some time-bounded attempts to deliver a more integrated rural policy. Within the UK, the Scottish Government instituted a regional development board in the lightly populated north and west of Scotland in 1965, which remains to this day, albeit with a different name; and, influenced by European Union's social, regional and Pillar 2 of the CAP of the CAP (the so-called Structural Funds), rural Scotland was impacted by concerted time-bounded attempts to deliver more integrated policy support to its rural areas, although such policies disappeared when

the central and Eastern European countries accessed the European Union, drawing structural funds eastwards. Additionally, Scotland has developed its own strong policy agenda relating to empowered local communities, with radical policies enabling for example, community land acquisition and community energy development. In many ways, Scotland can be seen as an advanced case study of policies which support place-based, community-led local development but, as in the rest of Europe, significant tensions arise between support to the farm sector (which receives the lion's share of public support) and more fragmented and lightly funded efforts at supporting cross-sectoral and more integrated place-based development.

The Scottish Government has also been regarded as an exemplar in recognising the climate crisis and designing policies to reduce emissions, but with one or two notable exceptions in island communities, these policies have been sectoral rather than spatial. Few countries have been able to develop effective policies for emissions reductions in the farm sector and Scotland is no exception. Further, having a farm sector where ruminant livestock production is a major component of the national farm creates particular problems of high emissions. Additionally, high levels of car ownership, commuting and a preponderance of energy-inefficient, traditional stone buildings mean that the per capita climate footprint of the average rural resident is much higher than that of his/her urban counterpart. This implies a need for a deeper transition in rural areas.

3.1. Policy silos in Scottish rural policy

Policy silos are by no means a particular feature of Scottish policy. At UK level, prior to EU accession and for the duration of UK membership of the European Union, indirect and direct income support to farmers has been a dominant means of public policy support for rural areas in spite of a massively declining number of farms and fewer households directly dependent on the land. There has been a constant struggle in Scotland and elsewhere to combat agricultural exceptionalism [26].

3.1.1. Agriculture

The majority of contemporary farm support in Scotland takes the form of direct income payments. This remains unchanged from when the time when Scotland was part of the EU and there has been a reluctance to alter the policy means to address the growing climate and biodiversity crises. Even when the so called second pillar of the CAP was instituted to cover rural development in the period of EU membership, the majority of the Pillar 2 funds were allocated to farmers rather than other rural development actors. In particular, payments for farmers in less favoured areas have been made from within the Pillar 2 budget, even when these payments are *de facto* direct income support supplements. Other support from the Pillar 2 funds was allocated to agri-environment schemes, woodland creation and community-led local development. Only a minor proportion of Pillar 2 funds actually went to non-farm rural actors.

There has been some policy action to address agri-environmental problems. The earliest initiatives to address such issues at landscape scale were the designated Environmentally Sensitive Areas (ESAs) which, from the late 1980s, addressed specific ecological and landscape concerns, from calcareous montane grasslands in Breadalbane mountains to wet semi-natural grasslands in the south-west of Scotland. [27, p. 224] described them as “the first serious attempt to establish wide-ranging, multi-objective policy measures for a rural development in which farming continues to hold centre stage.” Subsequently, ESAs were replaced by a wide-ranging environmental stewardship scheme which offered area-specific menus of voluntary measures for environmental improvements but were not limited to designated ESAs. The implementation in ESA measures and subsequently the more widely available schemes were individualistic approaches in single businesses rather than coherent landscape-scale interventions, even though the lack of contiguous habitat enhancement was recognised as a major barrier to the success of such schemes.

3.1.2. Farm forestry

Until 1987, forestry policy in the UK was almost completely separate from farm policy. In 1987, the UK government started to offer grants for diversification and grants for farm afforestation, which involved a supplementary payment to farmers who entered into afforestation over and above forestry grants. Farmers were compensated for income loss over ten or fifteen years, with the longer period of support where broadleaves were planted. Historically, most farms in Scotland were tenanted and owner occupancy only increased in the 20th century. Tenant farmers had no right to plant trees nor even to manage individual trees in field boundaries, with trees being very much identified as landowner's property and responsibility. There is no tradition of active farm woodland management, other than the grazing of ruminant animals and often outwintering under open broadleaved woodland as a form of low-intensity, biodiversity-rich silvopastorism, similar to the *dehesa* system of southern Spain [28].

The uptake of farm woodland grants was slow, and an idiosyncratic subset of farmers responded to the incentives offered, including part-time farmers, retired farmers and larger farmers with existing woodland [29]. Subsequent studies of farmer engagement with woodland creation have revealed many obstacles [30] even though there was widespread recognition of the multiple environment service benefits from biodiversity to carbon sequestration. The resultant pattern of forestry in Scotland and the UK is one of large-scale corporate forest management, state forestry based on similar production forestry models, mixed forestry on traditional large landholdings (estates) and small-scale neglected woodlands which are often relics from pre-industrial woodland management. The individualistic engagement of a minority of farmers and the design of the grant system which made it impossible for farmers to meet the tree density requirements if they developed silvopastoral systems, meant that the scheme was not conducive to landscape-level upscaling which might have enhanced biodiversity and landscape quality and increased carbon sequestration.

3.1.3. Water quality

Although agriculture is implicated as a major source of water pollution and of biodiversity loss, the interventions to avert such environmental damage and loss have been modest and largely ineffectual. Diffuse pollution has proved difficult to assess. Much of the ineffectiveness is attributable to the predominantly voluntaristic engagement with these environment concerns, which are replicated with regard to agri-climate policy. In some river catchments where nitrate and phosphate pollution have been particularly damaging, Nitrate Vulnerable Zones (NVZs) were established as obligatory means to reduce nutrient runoff. The obligatory Nutrient Action Plans represent the strongest evidence of compulsory impositions on farmers to reduce nitrate emissions to ensure compliance with the EU's Water Framework Directive. For example, farmers were limited as to when they could apply slurry or farmyard manure and were obligated to undertake nutrient budgeting. [31] give evidence of some reductions in N runoff in the Eden catchment in Fife as a result of policy interventions but a worsening of phosphate pollution. [32] offer evidence that 20 years of nitrate reduction policies on the Ythan catchment in north-east Scotland produced a small reduction in nitrate runoff, but that there are still frequent exceedances at monitoring stations. They [32] conclude (p.1) that "groundwater nitrate was found to remain elevated across the catchment area and appeared to be highly sensitive to agricultural practices and meteorological forcing."

The introduction of NVZs was strongly contested by the farming community. In the case of diffuse pollution, it is often difficult to pinpoint sources, but intensive arable farming is implicated as a major source of exceedances, even where nutrient plans have been implemented. In some cases, supplementary environmental measures such as buffer strips were encouraged by area-based schemes resulting in both water quality and ecological enhancement. The reluctance of some farmers to engage was also evident. [33] identify three groups of farmers: those "multifunctionalists" that embrace the measures; these that are apathetic; and those that actively resist them. Unlike most agri-environmental measures, NVZs have been consistent and have remained with mandatory components, but even with such compulsion, securing the desired water quality improvements remains challenging [32].

3.1.4. Renewable energy

Renewable electricity policy emerged around the turn of the millennium as a national level and Europe-level response to the climate crisis and, more recently in most cases, to issues of energy security. In Scotland, community-owned renewable energy developments have proceeded faster than anywhere else in the UK, but community owners remain minor partners in an energy supply system dominated by multinational actors. After nearly fifty years in the public sector in the UK, electricity was privatised in the 1980s and after privatisation acquired a highly concentrated ownership structure. However, the new regulatory structures also created opportunities for new entrants and cooperative forms of ownership emerged in the mid-1990s, building on prior Scandinavian experience. The incentive structure in the UK has evolved from major electricity providers producing their own renewables or purchasing others levered by Renewable Obligation Certificates. These were supplanted by Feed-in Tariffs (FiTs), for smaller scale producers in the early 2000s. According to [35] the emergence of a community energy sector “was enabled only by what seemed a chance convergence of enabling institutional frameworks spanning land use planning, energy, and public policy domains.”

Scottish community energy developments were supported by a third sector body Community Energy Scotland, which was established by a north of Scotland regional development agency which had a social remit. The earliest community energy schemes were isolated off grid communities, often small islands, but as new technologies developed and institutional arrangements offered support, so a wider community of place engaged with community renewable electricity developments. Two types of community body were used. Although the earliest UK community scheme was a cooperative, the dominant model in Scotland was the development trust, where a local development trust developed the production facilities as a wholly owned subsidiary and used revenue to support a wide range of community development activity. Over time, the cooperative structure – a community benefit society or “bencom” - has become more widely used. Under this model, capital is normally provided by shareholders who receive interest on their investment but the bencom commits some of its revenue to local community projects.

Because of widespread opposition to onshore wind in the UK, developers first voluntarily and subsequently under government direction offered community benefit payments of up to £5000 per MW of power installed. In some communities with large-scale commercial wind farms, the transfer of such funds to community groups can provide funding far in excess of that coming from municipal interventions. However, community ownership remains by far the most lucrative option generating far larger sums than community benefit funds. More recently, the Scottish Government has recommended that 50% of developers of commercial onshore wind energy offer a community shareholding, which obligates the community to raise the capital but gives them a proportionate share of the revenue.

At no time did renewable electricity policy specifically encourage community renewables, in spite of the evidence that the injection of the proceeds of community renewable energy had a hugely beneficial impact on rural development in small island communities such as Gigha and Westray and on larger remote islands such as Lewis and North and South Uist as well as in many mainland communities. For a time, the idea of a higher-level public support for community renewables was considered at UK level but then quietly dropped, in spite of compelling evidence of the transformative effects of their revenue streams in remoter and often relatively disadvantaged communities. The protagonists of community energy have long been advocates of community-based rural development and have long argued for more benign and redistributive economic structures associated with energy production.

3.1.5. Community led local development (CLLD)

Community led local development (CLLD) emerged from experimental practices initiated by some municipalities in the 1980s in two main geographical contexts: in urban regeneration projects to give a voice and influence to disadvantaged communities and in remote rural communities where top-down policies had often failed to yield any significant trickle-down beneficial effects. At

European level, CLLD was formalised in the LEADER initiative which began in the early 1990s as a radical experimental departure from prior models of disbursing structural funds through highly structured large-scale projects. It hinged around area-based local partnerships as delivery agents animating and supporting small-scale and community-led developments. After the first experimental period, it was mainstreamed in the Rural Development Programme and a set of guiding principles was asserted.

LEADER has since been seen as a flagship project for bottom-up community development and the general principles were reinforced in the Cork 2 declaration, but [36] makes the case for a rebooting of LEADER to try to recapture some of the innovation and creativity which were hallmarks of the more successful local action groups delivering LEADER at a local level. The scheme has been criticised as being vulnerable to capture by local elites and making the assumption that there is local capacity to act [20]. Further, the European Court of Auditors [37] have raised questions about the integrity of the scheme's *modus operandi*. [38] have been critical regarding the ability of LEADER to break down conventional ways of delivering policy support arguing that "the bottom-up approach and support for social innovations and local actions are being challenged and arguably threatened, only retaining their influence when clearly targeted by multi-level governance structures." In Scotland, since Brexit, the principles of CLLD have been ostensibly retained and a municipally funded scheme has replaced the EU version. This municipalisation of LEADER at a time of declining income to municipalities makes it highly susceptible to capture and use for their purposes. For a critique of the LEADER scheme in a Scottish context see [39].

3. Discussion: reflections on policy failure and success in sustainability transitions

In this section I draw out some key points that emerge from the forgoing examples. That rural communities need to effect a major transformation to meet climate and biodiversity targets is widely acknowledged. How to effect this transformation in inclusive, just and cost-effective ways that avoid threatening the wellbeing of rural people is rather less clear.

Rural policy has frequently been conflated with farm policy, with the mistaken assumption that supporting the farm sector is a guarantor of rural prosperity. The disproportionate share of farm policy supporting direct income payments with limited conditionalities with respect to climate and biodiversity reflects the continued power of the productivist farm lobby and illustrates its ability to slow down the needed changes to remediate biodiversity, improve water quality and reduce greenhouse gas emissions from the sector. Because many policies are still silo-delivered there is limited capacity to think of cross-sectoral sustainability transitions, such as area-based agri-environment schemes, farm forestry, carbon management etc. Further, energy policy is framed only in terms of energy not rural development outcomes. Water policy is articulated in terms of Water Framework Directive obligations and does not embrace the wider potentialities of stacking ecosystem services at catchment level.

It is a mistake to view the farm sector as homogenous with respect to engagement with environmental policy. There is a subset of environmentally engaged farmers who will adopt items from the menus of rural development programmes. There is also a smaller subset of farmers which, independently of any supportive policy means, is practicing regenerative farming, with carbon sequestration, biodiversity enhancement and water quality improvements at the heart of their actions. This suggests (in transition theory terms) a heterogeneity of niches, but an absence of any particularly promising niche development that is likely to be upscaled or capable of upscaling. There is an obvious reason: the farm sector is rife with externalities - some positive and some negative. Within a market system any upscaling of regenerative practices is likely to be contingent on taxing negative externalities and rewarding positive externalities as well as a set of practices of adaptive management attuned to particular land use systems. The state of the art of environmental economics is far short of mapping the spatiality of non-market costs and benefits and there are major technical challenges in effective monitoring. Farmers' attitudes and perhaps wealth will be a more decisive determining factor in environmental engagement and the "normal" transition management

set of events is subverted by the degree of heterogeneity of values and other social characteristics within the farm sector.

So how well does the transition management model stand up to scrutiny using the case of rural land use change in Scotland and how well does it expose the potentialities of area-based community level action a vehicle for driving sustainability gains? Niche developments in collaborative management have arisen and some have been regarded as rather successful, often in the case of water management in the wake of failures of other more top-down policy means in delivering positive change. Niche developments at the individual land management unit (still presumably niches in TM terms) may be of less salience than institutional and social innovations in collaborative management, because individual land managers actions cannot create regime-level landscape impacts. By drawing together the concept of adaptive management from ecology and social learning from extension studies, it is possible to posit some kind of spatial entity (such a river catchment or group of communities) as a setting from this learning and the mix of social and human capital that catalyses it.

In Scotland, hobby farmers co-exist alongside agricultural corporations, mainstream family farms, regenerative farmers and relict subsistence units. Sometimes one type of landowner/land manager predominates in an area, but often there can be many different types of landowner. One emergent category is the so-called “green laird”: a rich private landowner who buys land with the intention of capturing carbon or biodiversity credits by specific land management practices for carbon or biodiversity gain over its current land use system. This process is happening on a significant scale and has caused great concern to the community land movement which sees a contrast between their collaborative place making towards sustainability and the more individualistic efforts of green lairds connecting to nascent green financial instruments. This heterogeneity of actors suggests that transition pathways towards sustainability in the land use sector are not determined by the mainstreaming of a single promising niche development but a diversity of actions by different actors with very different socio- ecological consequences. The regulatory powers of government can mediate these processes but to date, the Scottish Government like many other governments is keen to see private sector money delivering these environmental public goods at the same time as actively promoting community-based land reform.

Place-based policy which cuts across sectors has been part of European policy for at least forty years, initially driven by integrated development programmes but latterly more influenced by more local LEADER Action Groups. Integration was evident in earlier rounds of Structural funds programming where applicants were obligated to design programmes which cut across the different funds. However, integration across the EUs structural funds has proved problematic, with a tendency for Scottish rural areas to miss out on Social and Regional Development Funds after the accession of Central and Eastern European states to the EU, when in the past there was much more of an attempt to build coherent and linked regional programmes.

There are few areas where area-based policies have been able to shape adaption pathways in farming in that most area-based policies offer only discretionary measures to drive change and most actions come with associated high transaction costs of applying for funds. One exception to this is the Nitrate Vulnerable Zones which impose catchment-level obligations on farmers to reduce emissions of nitrates. In some cases, additional layers of support for such transitions have been provided with EU LIFE schemes to encourage adoption of agri-environmental measures which would make it easier to attain WFD targets [33]. In spite of the mandatory requirements of nutrient management plans, progress remains slow, influenced at least in part by the persistence of such high levels of direct income support for the farming community as well as by the biogeochemical complexities of measuring and then resolving diffuse pollution.

Within the catchment management field, there is some evidence that catchment management partnerships have proved reasonably effective in creating the means for water quality enhancement [40], especially in catchments where salmonid fisheries are important and where agrarian interests are less entrenched. However, [41] conclude that “nearly twenty years after the WFD was implemented across the EU, widespread research has shown that catchment management at the local,

sub-catchment scale remains dominated by traditional, top-down approaches which exclude local communities from any meaningful participation in catchment management.” This resonates with the findings of [42] who have highlighted community empowerment as a key leverage point for successful area-based conservation projects. In some areas, river trusts do seem to have been rather more empowering. [43] conclude that “the (West Country Rivers) Trust has facilitated local empowerment through its communitarian approach” and highlight the development of a multilayered mapping approach that scopes out where land use practices conflict with environmental goals and the use of a payment for environmental services (PES) approach, funded by a water company, to facilitate water quality, biodiversity and other environmental improvements.

In renewable energy some island communities have established new institutional arrangements that mesh with policy imperatives. Danish islands such as Samsø and Bornholm provide bounded territories in which to pursue energy transitions. Orkney had early engagement with wind energy including community-led initiatives on its outlying islands and in Orkney there is a wide-ranging partnership to effect an energy transition with academic, public sector and third sector membership. Orkney has extremely high potential for tidal energy production as well as high wind energy capability. With Samsø, Orkney has been a partner in a Horizon 2020 smart energy project SMILE [44]. Institutional and technical innovation are focussed on enhancing the transition.

In energy policy, the chance coincidence of regulatory change, the existence of an NGO supporting community renewables in the Highlands and Islands of Scotland and communities of place and interest pursuing the transition to renewable electricity production created a springboard for community energy activities in Scotland, putting community renewables capacity per capita way ahead of the rest of the UK. The income streams have created significant injections into local economies, such as would have been inconceivable by corporate electricity generators.

Policy makers do have choices in defining the agents whom they support, direct and cajole with the carrots sticks and sermons of policy. With some important exceptions, they mostly choose to deal with businesses rather than community bodies or collaborative agency. Early LEADER schemes focussed on community groups, though many LEADER projects have drifted towards supporting private enterprise, especially farm diversification, effectively prioritising private sector developments over wider rural diversification and community-based effort. Nonetheless in favourable institutional settings where municipalities have ceded power to create genuine partnerships, there are some excellent examples of LEADER driving sustainable food, energy and environmental enhancement. However, some communitarian policy measures are evident with recent farm policy reforms in England favouring collaborative action at landscape scale and NatureScot’s nature recovery grants similarly framed at landscape scale.

In spite of an active narrative associated with place-based policy in Scotland which has particular salience for rural areas, policy silos remain. Farm policy at both European and Scottish level remains centred around a productivist ethos which is strongly supported by very active farm unions and agro-industrial interests. [33, p. 1] note that “most agricultural support continues to be largely characterised by market distorting policies that reinforce existing production systems and limit farmers’ ability to adjust to climate change.” Beyond the NVZs and NatureScot funded area projects there is almost nothing that promotes area-based initiatives in biodiversity, water quality and flood control. In spite of modest moves towards an element of co-ownership of renewables by local communities, energy policy remains entirely disconnected from rural development policy in spite of it having been the single most important source of income generation to Scottish community landowners.

The transition management approach adopts a multilevel perspective. Cross-scalar linkages are seen as essential in connecting bottom-up innovation (the niche) and the capacity to effect change at landscape scale. A connection between local actors and higher-level policy aspiration may expedite the transition, but this may lead not to landscape scale changes but a scatter of engaged communities responding to policy initiatives, while other communities, either underpinned by defensive localism or lacking social and human capital relating to sustainability transitions, remain largely unresponsive.

Community-based land reform and community empowerment legislation have together provided a solid foundation stone for community-based activity. The updating of community asset transfer procedures under the Community Empowerment (Scotland) Act 2015 enables a much wider range of community bodies to take control of former public sector assets including land than was the case with earlier legislation. Although the acquisition of large-scale landholdings by communities is largely restricted to the Hebridean islands, the early engagement with renewable energy ownership by such communities has been transformational in creating an income stream for community-based development. To a lesser extent, this has also happened in remotely populated parts of the mainland where the local income from commercial wind farm community benefit schemes can create income streams to third sector groups of hundreds of thousands of pounds per year in specific communities.

4. Conclusion

The mantra of place-based development is rarely matched by appropriate institutional arrangements which cut across the silos of policy and this will remain a fundamental barrier to sustainability transitions which so often require cross-sectoral multi-actor engagement. In cases where challenges to particular socio-ecological systems such as river catchments have enabled collective action, cross-scalar linkages and multi-actor engagement has been possible with some beneficial outcomes. Similarly, in communities that have acquired substantial land assets and engaged with community energy, as well as a variety of other projects to support sustainability transitions, the silos of mainstream policy institutions have been breached by place-based local actors, with hugely beneficial socio-economic and environmental outcomes. While the policy on water quality is framed as a place-based approach, place-based engagement with energy policy was based on opportunism rather than policy framing.

Many observers have noted the general tendency to idealise rural community, assume homogeneity of interest and capacity at community level to engage with the policy “offer”. While such assumptions are rightly seen as naïve [20,45] there do appear to be some contexts in which community empowerment can deliver positive outcomes for collective wellbeing [16]. These positive contexts merit anatomising. In [15’s] terms, the state may have retreated so far and the capacity of private sector has become so weak as to leave spaces for what he terms interstitial transformative change. In other contexts, the empowerment can arise through symbiotic means where public or private agency is willing to build genuine partnerships, to link top-down aspirations and local actor’s predilections, as in the West Country Rivers Trust and the Orkney energy partnership. Hybrid forms [15] comprising symbiotic arrangements between different types of actor, including the third sector) with genuine local empowerment, may be important in predisposing community-led local actions to succeed.

Cross-scale, de-siloed governance may hold the key to enabling effective place-based sustainability transitions. New approaches to place planning favour joined up thinking but collective actors are still often forced to fish in many different funding ponds. [38] have concluded that “in practice, there is no priority for the “new rural paradigm”, which focuses on places instead of sectors, taking a territorial rather than a sectoral approach.” The new rural paradigm is subverted largely by the narrowly focussed policy arrangements bolstering farm incomes. Siloed policy arrangements rather than any lack of an endogenous capacity to act remain the major obstacle.

This review of Scottish institutional arrangements (and wider observations) reveals a mixture of evidence that place-based policy is becoming more important but that vested interests, including those of municipalities and powerful sectoral groups representing agriculture (and sometimes other forms of land use) are able to impede the diffusion of place-based solutions by their own self-interested rent seeking and unwillingness to share or cede power. Nonetheless, there are undoubtedly locations where place-based action has delivered environmental enhancement, emissions reduction, local food production and has acted to meet a major rural social housing crisis. Place-based agency can and has delivered local sustainability transformations.

[46] puzzles over the capacity of communitarian agency to solve problems created by the neoliberal market place. He recognises the substantial gains in environmental sustainability resulting

from communitarian action at local scale in Australian Landcare groups. Many of the problems addressed by Landcare groups are negative externalities imposed on society on society that also impose costs on land managers: eroded soils and salinity reduce crops yields at the same time as imposing wider costs on society as biodiversity is reduced. Where neighbours' actions impose spillover costs on near neighbours, local collective action can be more readily explained. What it points out is that collaborative communitarian action may make sense, not necessarily as a form of resistance and an alternative to market capitalism and its consequences but as a form of amelioration of its negative externalities, particularly where policy failure by the state has left niche opportunities. Where the sustainability challenge is climate change from GHG emissions, declining landscape values or biodiversity loss, the endogenous growth of place-based agency of Landcare type bodies is rather less likely.

Whether such transformational changes towards sustainable development could be delivered at scale by the normal forms of siloed policy is contingent on cross-sectoral coherence in policy design and an ability of multi-sectoral policy coordination to withstand the disruptive agency of well-established and distorting rent seeking from sectoral interests. Estimating public goods and bads which have a high degree of variability over space, designing policies which reflect these public goods and bads and delivering the policies at appropriate spatial scale is central to delivering rural sustainability transitions. The sheer scale of public goods and bads in the rural domain creates particular problems. Stacking of benefits is likely to involve trade-offs between market and non-market services only some of which can be enumerated with any accuracy. Policy means in an ideal world would account for all significant non-market goods and bads, but policy instruments remain blunt and spatially inexact in their modelling capability. Further, historical payments to land managers have been based on income forgone not the non-market positive externality, leaving only modest incentives to farmers.

If there is a shadow at the heart of the carnival of communitarian possibilities for sustainability transitions, it is that place-based collective action can deliver outstanding outcomes in one place but be wholly ineffective in others. Social capital is likely to be an important mediating factor and where human and social capital are weak and overly focussed on defensive localism, transformational opportunities may even be suppressed. The greatest sustainability gains are likely to arise where collective action is necessary because of the characteristics of the socioecological system, where high levels of local social and human capital are present and where higher-level policies are empowering and effectively aligned and give succour to collective action.

What research questions remain unanswered. First, there is a need to reflect on whether the transition management approach can be used to explain transitions in heterogenous sectors such as the rural land use sector. The evidence is not compelling. Second, under what circumstances does communitarian action lead to significant sustainability gains, but conversely, under what circumstances can defensive localism disrupt transitions. Case studies are prone to looking at success stories not failures. Third, how contingent is the capacity to scale up and out beyond the successful place-based project on coupling to public policy? Here the record is unclear with Scotland's community land policy growing out of communitarian action, but LEADER and CLLD projects often losing their communitarian character and becoming subsumed in municipal bureaucracies and priorities.

One final contrarian thought: is communitarian action offered as something of a cop out by governments who struggle because of sclerotic public agency and weak institutional and policy design to deliver the desired outcomes in rural areas in human wellbeing, biodiversity gain, enhanced water quality and greenhouse gas emissions reduction? Communities of place are not characterised by unitary views (Taylor Aiken 2015). Further, communities of interest may cut across communities of place. But the evidence of successful communitarian action in such places as described by [16] suggests that some of those who have critiqued the notion of community, perhaps ground their thoughts too much in theory and not enough in evidence.

Because of their narrow sectoral support and the excessive influence of vested interests, some policies may be easy targets for criticism, but designing joined up policy architecture onto which

communities of place can “hook up” is not easy. Transaction costs of fine-grained policy design are high and the accurate information which is needed to drive the desired shifts in behaviour and land management is often lacking. It is much easier for self-motivated landowners in tune with sustainability imperatives to stack ecosystem services by innovative practice than to design spatially explicit policies to do the same. Likewise, it may be easier for groups, not necessarily representing all the component members of physical communities to come together to address a range of challenges. Healey (2022:196) concludes that “microscale activism based on where we live does bear a transformative potential.” Where that collaborative place-based agency can be directed so the whole socio-ecological context of land use and living space, that transformative potential is surely retained.

Where wicked problems prevail, and solutions are at best challenging and frequently open-ended and uncertain, ceding responsibility to community actors by the local or national state does sometimes occur and has been emphasised in Scottish policy. Such communitarian approaches may provide a fertile seedbed for local niches to develop, the importance of which is posited in transition management theory. However, upscaling of niche-level sustainability improvements, whether initiated by individual or collective action, remains deeply problematic. That there is unambiguous evidence of practical success in some cases of communitarian policy generating transformative changes in sustainability is uncontested, but impacts are highly spatially varied. This should be a signal to policy makers to double down on developing more effective policy means, improving multi-actor governance and enabling place-specific responses by local actors to address the grand societal challenges of the existential threats posed by contemporary unsustainable socio-ecological practices.

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