



Multisolving for Net Zero in Rural Wales

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Multisolving for Net Zero in Rural Wales

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Executive Summary

The *Multisolving for Net Zero in Rural Wales* responsive research project explores how climate action can be designed to deliver multiple social, economic, cultural, and environmental benefits for rural communities. The research draws on a desk review and 22 interviews with practitioners delivering net zero initiatives that also generate wider co-benefits. Against a backdrop of climate emergency commitments and particular challenges faced in rural areas, the study shows how “multisolving” offers a practical, people-centred approach to achieving net zero while addressing local priorities.

Further detail on the policy and academic context for this work is outlined on pages 2-10 of this report and in a separate ‘Policy Brief’. Full details of the research methods are given on page 11-12. Detailed findings and discussion of key conclusions from these are presented from pages 13 and 43 respectively. The recommendations are summarised within three overarching themes, detailed below, with specific actions for different actors presented in the Policy Brief and explored further from page 49 of this report.

1. People-centred, place-based and inclusive climate action.

To build legitimacy and maintain momentum in challenging political and economic conditions, organisations should anchor climate action in co-benefits that resonate locally, such as improved health, reduced energy insecurity and strengthened cultural and community assets. Multisolving requires deep, embedded partnership with communities, including bilingual and culturally grounded engagement, long-term relationship building, and co-production processes that view lived experience as a core form of expertise, alongside expert knowledge. Organisations should also anticipate rural trade-offs around land, infrastructure, and service provision, using participatory dialogue to navigate tensions and develop fair, feasible solutions.

2. Organisational capacity and skills for multisolving.

Delivering multi-benefit outcomes relies on building long-term organisational capacity rather than focusing solely on short projects. This includes investing in systems thinking, geographical knowledge, facilitation and relational skills, and ensuring staff have the competence and confidence to support collaborative, place-based work. Organisations also need structural enablers - for example, integrator roles, protected collaboration time, and spaces for cross-sector learning - to ensure that partnership working becomes consistent, meaningful and effective.

3. System and funding reform for long-term, integrated change.

Strategic bodies should focus on reshaping locked-in systems, such as waste, transport and energy, so that sustainable choices become the easiest options in daily life. Achieving this requires funding models that support continuity, integration and learning, with reporting approaches that emphasise how projects contribute to wider multisolving outcomes rather than narrow, short-term targets. Planning authorities should embed multisolving principles by requiring development proposals to demonstrate environmental, social, cultural and economic co-benefits and by shifting towards wellbeing centred measures of progress.

Background

Introduction

The ‘Multisolving for Net Zero’ project explored how actions to tackle the climate emergency - working towards ‘net zero’ - can simultaneously generate multiple, complementary benefits including nature recovery and easing the cost-of-living crisis.

In this report we present different exemplars of ‘multisolving’ good practice, outlining how they address greenhouse gas emissions alongside other socio-economic, cultural and environmental challenges, to support a just and inclusive transition. With the aim of enabling multisolving to be scaled-out across rural Wales, we also examine the different enablers to this way of working, including different skills, planning methods, and collaborative approaches that are needed to make these integrated solutions work.

This report is intended for practitioners and decision makers looking to support action on net zero, but who recognise and may be struggling with competing pressures in our current political and economic context. It is also aimed at public bodies in Wales who are explicitly mandated to take an integrated and collaborative approach to tackling net zero, working in synergy with other objectives (and partners), as discussed below in relation to the Well-being of Future Generations Act (2015).

Rationale

There is an urgent need to act on the climate emergency, reflected in Wales’s 2019 declaration (Welsh Government, 2019) and its legally binding pathway to Net Zero by 2050, supported by carbon budgets with statutory milestones and aligned with wider UKCCC advice (CCC 2025). Wales’ progress towards net zero is demonstrated in figure 1.

This commitment to climate also sits within a wider programme for government which includes equally pressing targets around providing sustainable healthcare and services for vulnerable people (Welsh Government 2021). Whilst the Welsh Government acknowledge the need for a coordinated and integrated approach, where addressing the climate emergency is embedded across everything they do (ibid. p.5), to date, science and policy have often worked in a siloed fashion resulting in numerous oversights and conflicts. There is an extensive literature on these issues, particularly with reference to climate justice concerns (University of Strathclyde 2024; Doelman et al. 2019; McMillan et al. 2024; Reay 2020; Ross et al. 2021; Verfürth et al. 2023).

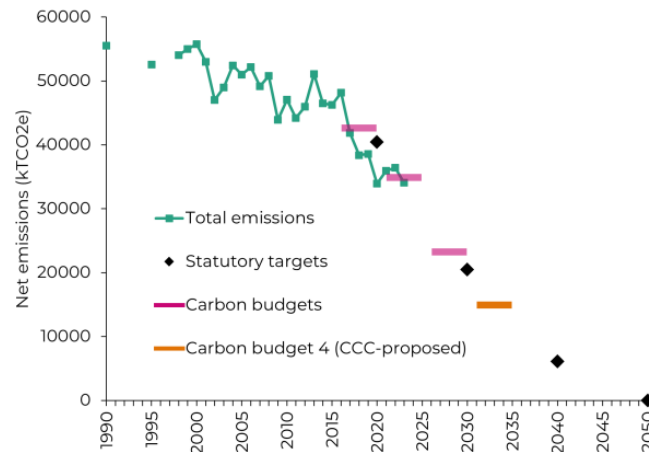


Figure 1: Welsh territorial emissions, targets, and carbon budgets, 1990 to 2050

(<https://research.senedd.wales/research-articles/cars-cows-and-coal-welsh-emissions-from-1990-to-2023/>)

In Wales, several trade-offs are notable, many with notable implications for rural places and communities. For woodland expansion, measures that seek to maximise carbon sequestration as the only criteria for tree species selection can have disbenefits for biodiversity (Jones et al, 2022). Additionally, the landscape changes associated with afforestation may also be alienating and disempowering for rural Welsh communities (Tavner and Prager 2025; Wynne-Jones et al. 2018). Similar tensions arise in large-scale energy projects, where efforts to deliver low-carbon energy can conflict with other environmental objectives (Roddiss et al. 2020), or negativity impact on hosting communities (Cowell et al. 2011; Devine-Wright and Sherry-Brennan 2019). There are also concerns that net zero measures are creating a disproportionate cost burden for rural businesses, whether these are land managers or small businesses and rural entrepreneurs (National Innovation Centre for Rural Enterprise 2021).

Trade-offs like these have eroded good will in Wales, making it hard to engage and motivate rural stakeholders to undertake action on the climate emergency. This has also contributed to perceptions that non-rural priorities dominate decision-making, reinforcing feelings of marginalisation and disempowerment (Follett et al. 2024; MacKenna et al. 2022; Institute of Welsh Affairs 2019). Finding solutions that maximise co-benefits are therefore critical to ensure an integrated approach, but also to support a just transition towards net zero.

In Wales, The Well-being of Future Generations (Wales) Act (2015) has set a global precedent for integrated thinking and is widely regarded as world-leading legislation (Stokes and Smyth 2024). It enshrines sustainable development principles into law, requiring public bodies to consider the long-term impact of decisions and work collectively towards seven well-being goals, shown in Figure 2 (Future Generations Commissioner for Wales n.d.). The principles of collaboration and integration, which underpin multisolving in Wales, are core elements of the “five ways of working” (long-term, prevention, integration, collaboration, involvement) which guide how public bodies are expected to make decisions. However, despite its ambition, progress has been uneven. Audit Wales’ recent review noted that while the Act has raised awareness and driven

some positive change, it is “not driving the system-wide change that was intended,” with significant variation in practice and persistent barriers such as fragmented data, short-term funding cycles, and limited capacity for prevention-focused planning (Audit Wales 2025), p. 4. The Future Generations Commissioner’s 2025 report echoed these concerns, calling for “supercharged actions with multiple benefits” and stronger alignment between policy, budgets, and well-being objectives (p.5).

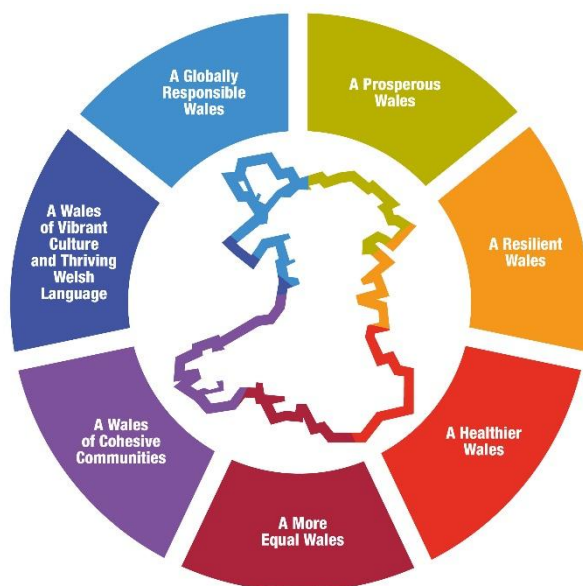


Figure 2: The Seven Well-being Goals (Office for Future Generations Commissioner for Wales).

Taken together, these challenges underscore the need for approaches that move beyond ambition to practical delivery. Although there is a substantial body of literature on potential pathways to achieving net zero, with some specific multisolving proposals for Wales (Wales Net Zero 2035 Challenge Group, 2024), there remains limited insight into how these ambitions can be practically achieved. This gap is evident even where supportive frameworks exist. For example, despite its emphasis on integration, many organisations struggle to embed the principles of the Well-being’ Act in practice (Future Generations Commissioner for Wales 2025). As a result, co-benefits are the exception rather than the rule, while trade-offs emerge more readily.

These challenges are compounded by weaknesses in the evidence base. As will be discussed in more detail later, knowledge on multisolving solutions is either sparse or still emerging in some sectors and dispersed across multiple domains. This fragmentation makes it difficult to integrate insights and identify patterns from recurring, cross-cutting experiences. Furthermore, where win-win strategies have been documented, they are typically concentrated in urban contexts, leaving rural areas underexplored. Our work seeks to address these gaps by contributing evidence that supports more integrated and practical approaches to achieving co-benefits within a rural context.

Literature Review

From Decarbonisation to Multisolving

Multisolving refers to climate strategies that deliver emissions reductions alongside societal benefits such as health, well-being, and economic resilience by designing for synergies and managing trade-offs (Sawin 2024). This approach creates co-benefits often described as “win-win” solutions (Mayrhofer and Gupta 2016). In recent years, systems thinking has gained significant traction across climate and environmental governance, with emerging research demonstrating how systems-based approaches are shaping the design of climate interventions by helping decision-makers to identify leverage points and opportunities for achieving co-benefits (Nguyen et al. 2023; Kirkpatrick et al. 2023). Furthermore, the United Nations argues that when policies are designed, financed, and governed for synergy rather than treating co-benefits as incidental, large gains can be unlocked across sectors (United Nations, 2023).

Rural areas such as Wales, however, face distinctive challenges including dispersed settlements, ageing housing stock, and limited transport and digital infrastructure, which increase the complexity and cost of decarbonisation (Woods et al. 2021; Green et al. 2020; UK100 2021). As such, bespoke, integrated and participatory approaches are critical where infrastructure gaps and demographic pressures risk deepening inequalities (University of Strathclyde 2024; Hale et al. 2022; Green et al. 2020). Against this backdrop, it can be argued that measures offering multiple co-benefits are more likely to be adopted and accepted (Iacobuță et al. 2021; Jennings et al. 2019).

Designing for Co-Benefits and Anticipating Trade-Offs

Trade-offs are an inherent challenge in climate action as noted in the ‘rationale’ section above. However, the literature suggests these risks can be reduced by ways of working that prioritise co-benefits through coordination, systemic thinking, and inclusive engagement.

Breaking down siloed governance is central, with reforms that enable shared data systems and joint monitoring to align decisions across sectors and levels of governance (Lah 2025; United Nations 2023). Embedding climate action within sustainability frameworks such as the Sustainable Development Goals (SDGs) and applying tools like integrated assessment models and scenario planning helps anticipate and manage trade-offs rather than addressing them reactively (Iacobuță et al. 2021). Furthermore, inclusive processes such as deliberative forums and knowledge co-production allow stakeholders to surface potential conflicts early and co-design solutions that reflect local priorities (Lah 2025). However, most research on transformative innovation policy has concentrated on supranational systems, leaving local scales and dynamics comparatively underexplored (McMillan et al. 2024, p.1). Moreover, existing research tends to privilege urban contexts, while rural settings remain comparatively underexplored, despite their significant potential to contribute to net zero transitions (University of Strathclyde 2024; Malcolm et al. 2024; UK100 2021).

Delivering a Just Transition will require comprehensive attention to both the procedure, and the impacts, of decision-making (McCauley and Heffron 2018). Citizen’s Assemblies are often seen as a method of generating public understanding of climate issues and driving a mandate for

political action, particularly when linked to wider public engagement activities (The Centre for Climate Change and Social Transformations 2021). These tend to take place in urban areas and have yet to fully engage with the distinct experience and needs of rural communities. It is imperative that rural communities can actively participate in designing appropriate place-based climate governance, and ensure that a Just Transition is inclusive of rural residents. This requires methods of deliberative democracy that are appropriate and relevant to these communities; recent tests of rurally - relevant methods include climathons (Simmonds et al. 2025), living labs (Cascone et al. 2024) and backcasting (Tschakert and Wheatley 2025).

All of these methods share the common feature of creating opportunities for giving voice to community values and priorities, and working with these as a basis for planning and implementing climate adaptation and mitigation strategies. Verfuërth and colleagues (2023) call for a ‘people-centred approach’, where policymakers at all levels actively engage with people in the development and implementation of policies to reach net zero. Given the scale of behaviour change necessary to achieve net zero targets, designing interventions through participatory public engagement and prioritising fairness and inclusivity is vital. Within Wales, place-based approaches to climate change forefront communities and organisations who recognise the social nature of climate action, and their potential for wider social and economic, as well as environmental community benefits (Yorke et al 2025).

Governance and Finance: Enablers of Integrated Delivery

In order to operationalise multisolving approaches, robust governance frameworks are essential (Iacobaș et al. 2021; Cohen et al. 2021). In Wales, the Well-being of Future Generations (Wales) Act 2015 requires public bodies to work towards integrated economic, social, environmental, and cultural goals, with Public Services Boards (PSBs) established to foster regional collaboration through Well-being Assessments and Plans (Future Generations Commissioner for Wales, n.d.). However, comparative UK studies reveal persistent fragmentation and uneven local capacity, which make it difficult to coordinate action across sectors and slow progress on net zero (Bedford et al. 2023; McMillan et al. 2024; Nolden et al. 2024). While the Act is internationally recognised as a pioneering approach to sustainable governance (Stokes and Smyth, 2024), its impact remains mixed, with critiques highlighting limited enforceability and scope beyond public bodies (Stokes and Smyth 2024; Cummings et al. 2024).

Alongside governance, finance is widely recognised as a critical enabler of integrated delivery. Short-term funding cycles and siloed finance frameworks constrain organisations’ ability to plan for systemic, long-term outcomes, reinforcing fragmented delivery and reactive responses (Audit Wales 2025). These challenges are particularly acute in rural contexts, where capacity and resources are limited and where bespoke solutions require sustained investment rather than project-based grants (Follett et al. 2024; Woods et al. 2021). Scholars emphasise the need for blended finance models and pooled funding streams to overcome these constraints and unlock co-benefits, yet practical guidance on implementing such mechanisms remains sparse (Iacobaș et al. 2021; United Nations 2023).

Taken together, governance and finance form the backbone of multisolving strategies, but their current limitations underscore the need for systemic reforms that align institutional capacity

with durable, cross-sector investment. The literature suggests that where these enablers are strengthened, opportunities for multisolving emerge across a range of sectors, from agri-environment schemes and nature-based solutions to housing, transport, health, and cultural initiatives.

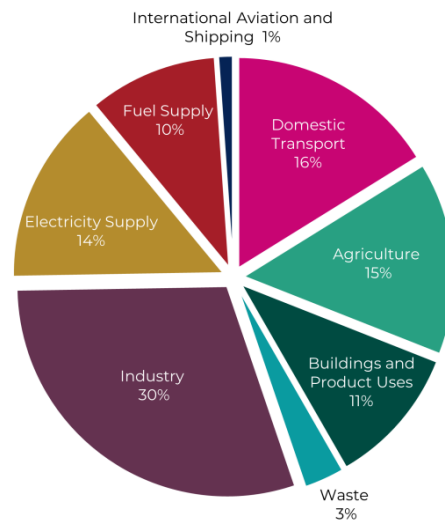


Figure 3: Proportions of Wales' total Greenhouse Gas (GHG) emissions 2023
(<https://research.senedd.wales/research-articles/cars-cows-and-coal-welsh-emissions-from-1990-to-2023/>)

Agri-Environment

Agriculture makes a significant contribution to Wales' GHG emissions (shown in figure 3) and it has been difficult to make progress towards net zero in this sector. Nonetheless, net zero strategies can generate co-benefits such as improved soil health, biodiversity enhancement, and climate resilience through practices like agroecology and ecosystem service-based schemes (Khalil et al. 2024); however, governance siloes have historically hindered such integrated approaches (Wynne-Jones 2013). In Wales, governance innovations and farmer engagement have been central to delivering ecosystem services and carbon benefits while sustaining rural livelihoods, with many farmers emphasising the need to manage food production and environmental care in synergy rather than as separate goals (Wynne-Jones 2014). The forthcoming Sustainable Farming Scheme reflects this shift by aiming to integrate food production with environmental outcomes through actions such as soil health improvement and habitat creation, though its design has prompted some resistance from farmers over economic and practical concerns (Follett et al. 2024). Responding to this, recent research highlights the need to make co-benefits clearer and more tangible for farmers to encourage uptake (McNicol et al. forthcoming).

Nature-Based Solutions

Land offers a significant potential carbon sink in Wales, through sequestration in peatlands and from tree planting and habitat restoration. However it requires targeted planning to ensure that co-benefits can be achieved from such ‘nature-based solutions’ (NbS) to enable biodiversity enhancement and outcomes such as improved water regulation (Jenkins and Walker 2022; Seddon 2022). Welsh studies in particular underscore the importance of integrated land-use strategies that reconcile ecological objectives with social priorities (Jones et al. 2023; Jenkins and Walker 2022), positioning NbS as a key mechanism for simultaneously advancing climate mitigation, ecosystem resilience, and community well-being. However, historically progress has been hampered by fragmented governance, with Welsh Government recognising the need for ‘transformative and systemic change’ by way of the Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill (Welsh Government 2020 p.4), currently progressing through the Senedd’s legislative process. Meanwhile, recent policy developments such as the Climate Strategy for Wales and Nature Recovery Plan recognise the role of NbS, particularly in relation to flooding (Welsh Government 2024; Welsh Government 2016/2020). Despite these advances, persistent shortcomings in Wales’s environmental governance system, such as gaps in evidence, insufficient policy coherence and organisational misalignment, create the kinds of systemic constraints that inhibit the effective planning and scaling of nature-based solutions as credible contributions to both biodiversity recovery and net-zero action (Welsh Government 2025).

Energy, Housing and Transport

Whilst huge progress has been made on decarbonising electricity and fuel supply in Wales, domestic transport and housing remain outstanding challenges, with rural regions facing the biggest difficulties. Community energy initiatives, housing retrofits, and transport decarbonisation are central to net zero strategies, whilst also delivering co-benefits such as improved energy security, reduced fuel poverty, cleaner air, and enhanced health and comfort (Gupta et al. 2025; Woodcock et al. 2022; Ruiz-Valero et al. 2025). Decentralised energy systems and active travel infrastructure foster resilience, citizen participation, and accessibility, while retrofits and low-carbon mobility provide economic gains through lower energy bills, property value improvements, and reduced congestion (Papineau et al. 2024; Timmons et al. 2023; Labucay et al. 2025). At the policy level, these interventions align closely with Wales’s decarbonisation framework, with the Net Zero Wales Carbon Budget 2, for example, identifying locally owned renewable energy, home energy efficiency, and low carbon transport as priority levers for meeting statutory emissions targets (Welsh Government, 2021). In rural Wales, these measures support social equity and community resilience, though challenges remain around tenant engagement and transport connectivity (Morgan et al. 2024; Davies et al. 2025).

Health & Well-being

Net zero strategies deliver health co-benefits through cleaner air, increased physical activity and healthier diets, with systematic reviews estimating significant reductions in mortality and morbidity (Moutet et al. 2025; Wang et al. 2020). Reports from Wales highlight similar opportunities, noting that climate action can reduce chronic disease burdens and health

inequalities while advancing well-being objectives under the Well-being of Future Generations Act, with green and social prescribing illustrating how integrative community based approaches can deliver these co-benefits in practice (Public Health Wales NHS Trust 2023; Public Health Wales 2024; Robinson and Breed 2019; Brown and Aylett 2025). These improvements have the potential to strengthen population health and ease future pressure on the healthcare system, and emerging patient planetary health thinking further argues for embedding sustainability within policy and clinical practice to secure these gains (Redvers 2021). In Wales this orientation is echoed in national policy, with A Healthier Wales promoting a preventative whole system approach and embedding sustainability into the design, coordination and long-term operation of health and social care services (Welsh Government 2021). Yet these ambitions confront persistent rural realities in Wales, where long travel distances, limited transport options and fewer nearby services continue to constrain access to care, with many rural communities reporting that they must fight to retain essential health provision (Llais 2025)

Technology, Infrastructure, and Economic Development

Technological innovation and infrastructure investment underpin net zero transitions, delivering co-benefits such as improved energy efficiency, enhanced resilience, and reduced resource use through smart grids, electrification, and digital connectivity (Al Khaffaf et al. 2024; Munir et al. 2024). Net zero transitions can also stimulate economic development through job creation in renewable energy and efficiency sectors, improved energy security, and innovation in circular economy models (Munir et al. 2024). UK-focused reports note unique challenges and opportunities, with evidence suggesting low-carbon investment can stimulate local economies while requiring careful management of equity and infrastructure trade-offs (Nisbett et al. 2022; The Bevan Foundation 2024; Grantham Foundation 2024). Wales' policy context reinforces these links, emphasising that net zero action can drive “green prosperity” by unlocking new business opportunities, expanding supply chains, and enabling communities to lead on green investment (Welsh Government 2023). Rural regions have been historically marginalised in terms of economic development, but as infrastructure and technology development advance this may even out some previous disparities faced. However, it is argued that fragmented responsibilities, the absence of an overarching action plan, and persistent capacity shortfalls are generating uncertainty for delivery partners and slowing the pace of net zero infrastructure delivery across Wales (The Bevan Foundation 2024).

Education

Wales has been a world leader on sustainability policy with the Well-being of Future Generations Act (2015) and equally in their pioneering approach towards sustainability education, such as the early ‘Global Citizenship and Sustainable Development Curriculum’ in 2002 (Bullen and Whitehead 2005). Education systems support net zero through sustainable campus operations and climate-focused curricula, delivering co-benefits such as reduced emissions and improved climate literacy (Oliveira and Proença, 2025; Aeschbach et al. 2025). In Wales, initiatives like Eco-Schools empower learners to drive environmental change in schools and communities, aligning with the Well-being of Future Generations Act and Curriculum for Wales (Welsh Government 2023; Jones 2023). This reflects a wider emphasis on equipping young people with the knowledge, values and competencies needed to contribute meaningfully to low carbon

futures and to participate in community led sustainability activities. Furthermore, education policy increasingly emphasises creating clear pathways into net zero careers, with schools and colleges collaborating with employers to embed sustainability in curricula and expand vocational training for green skills (Welsh Government 2025). Through this focus on skills, participation and long-term well-being, education is positioned as a central lever for enabling a fair and future prepared transition.

Culture & Welsh Language

Cultural sectors advance net zero by embedding sustainability in heritage conservation and creative practices, offering co-benefits such as reduced resource use and strengthened identity (Loach et al. 2017; Jelinčić and Tišma 2020). In Wales, climate risks threaten heritage tourism and intangible cultural assets, including the Welsh language, as environmental disruption undermines cultural practices and spaces essential for community identity (St Leger 2025). Recent work emphasises the need for a people-centred perspective when addressing climate change and cultural heritage, highlighting that governance and research agendas must integrate local voices and social dimensions to ensure resilience (Forino et al. 2023; Forino et al. 2024). Opportunities lie in integrating language and heritage into climate action through community-led initiatives and narratives that foster engagement, with research showing local discourse and place-based framing enhance participation (Roberts et al. 2020). In the Welsh policy context, Wales is unique in recognising cultural well-being within its statutory definition of sustainable development (Future Generations Commissioner Wales 2025 p.65). Furthermore, culture is understood to support wider policy aims, including contributing to national efforts to tackle the climate emergency (Welsh Government, 2025). Despite this potential, the cultural sector is described as being in a state of crisis following years of underinvestment, leaving its multisolving capacity significantly underutilised (Future Generations Commissioner Wales 2025).

Synthesis

The literature highlights extensive opportunities for multisolving in net zero transitions across sectors such as agri-environment schemes, nature-based solutions, housing retrofits, transport decarbonisation, and cultural initiatives, yet provides limited detail on how these approaches can be implemented effectively. While recurring principles include integrated governance, systemic thinking, and inclusive engagement, operational guidance is sparse, particularly at local scales. This gap is especially significant in rural contexts like Wales, where infrastructure deficits, demographic pressures, and fragmented governance increase complexity and risk exacerbating inequalities. Enablers identified include shared data systems, embedding climate action within sustainability frameworks, and participatory processes to anticipate trade-offs, as well as access to flexible, blended finance mechanisms to overcome siloed and short-term funding streams that constrain integrated delivery. Welsh legislation, notably the Well-being of Future Generations Act, offers a foundation for integrated planning, but evidence suggests uneven impact and limited reach beyond public bodies. Consequently, the question of how to make multisolving work in rural Wales through tailored strategies that align governance innovations with local priorities, capacity-building, and financing models that support long-term, cross-sector collaboration remains central and is the focus of this study.

Methods

The methodology underpinning this project was designed to identify different exemplars of multisolving, to understand where co-benefits are possible, whilst also examining how co-benefits can be effectively facilitated across diverse sectors in rural Wales, with net zero serving as a central but not exclusive objective. A qualitative, iterative, and context-sensitive approach was adopted, combining desk-based research with direct case-study and stakeholder engagement to identify best practices, enablers, barriers, and trade-offs in multisolving initiatives.

The initial phase involved a comprehensive literature search, encompassing a systematic review of grey literature (including reports, policy documents, and evaluations), white literature (peer-reviewed academic sources), and online resources such as organisational websites and digital platforms. This phase aimed to identify a wide range of actors actively engaged in multisolving, particularly those integrating net zero ambitions with other strategic goals. The scope of this research extended beyond Wales to include UK-wide and international examples where they were relevant to learning for the Welsh context. Relevant projects from this phase are listed in table 2 in the 'Findings', to provide exemplars and inspiration for practitioners.

From this foundation, a targeted list of candidate organisations, groups and stakeholders was developed and approached for interview - enabling further exploration of how multisolving could be operationalised. Our selection criteria included being an operational project, rather than in the design phase, although many projects were framed as scoping or pilots. We were also keen to identify projects that could demonstrate tangible outcomes across the co-benefits considered, but we did require quantitative measures of these. Rather, we worked on the basis of benefit having been reported but without specifying what type of benefits (so in some cases net zero benefits are assumed but not evidenced). Net zero could be positioned either as a primary objective or a secondary but significant goal. This enabled the inclusion of organisations with explicit carbon reduction targets as well as those where net zero was embedded more implicitly within broader sustainability or community development agendas.

Organisations were chosen to represent a range of sectors relevant to rural Wales, including energy, housing, transport, conservation, health, tourism, and community enterprise. Geographical diversity was a further consideration, including groups from across the Welsh landscape as well as national bodies that worked all over the country. In selected cases, organisations or projects outside of Wales were included when their models or practices demonstrated relevance to the rural Welsh context.

A series of semi-structured interviews was conducted with key individuals from the selected organisations/projects, summarised in table 1. A total of 22 interviews were conducted. Interviews were conducted in English or Welsh depending on respondents' preference. These interviews were designed to generate rich qualitative insights into how co-benefits were being achieved in practice. Topics explored included the mechanisms and strategies that facilitated multisolving, the role of net zero within organisational missions, and the contextual factors that enabled or constrained progress. Interviewees were also asked to reflect on trade-offs and

tensions inherent in multisolving, such as potential conflicts between biodiversity goals and economic imperatives, or between cultural recovery efforts and carbon efficiency (see appendices for interview schedules).

Interview transcripts were anonymised in accordance with the ethical guidelines agreed for the project (approved by Bangor University College of Science and Engineering AREC, reference 0749), unless interviewees consented to the naming of their project and attribution of interview quotes. Transcripts were analysed thematically. Coding was undertaken by the whole research team, with cross-checking between team members to ensure consistency. The coding process was iterative, allowing for refinement as new insights emerged and ensuring the analysis remained grounded in the lived experiences shared by stakeholders. The code book was developed collectively by the team through this iterative process and then applied systematically to all interviews. The results of this analysis are presented in the findings section of the report, where key patterns, barriers, and examples of best practice are discussed.

Table 1: Overview of interviewees and interview codes given.

Descriptor	Number of interviews	Interview code
Decarbonisation housing partnership/collaborations	2	DH1; DH2
Community enterprises & third sector organisations	5	CE1; CE2; CE3; CE4; CE5
Local authority	2	LA1; LA2
Farming partnership	1	FP1
Protected Landscape (and themed projects within)	2	PL1; PL2
Community transport schemes / projects	3	CT1; CT2; CT3
Schools programme	1	SP1
Eco-tourism partnership	1	ET1
Public Service Boards	1	PSB1
Waste reduction initiative	1	WR1
Government Official/Representative of Government-associated body	2	WG1, WG2
Regional Economic Development Partnership	1	REDP1
Total	22	

Results

To begin, we showcase some of the projects identified through our review process to illustrate what multisolving might involve and the range of co-benefits that can be achieved in a rural context. All of the projects referred to here are delivering tangible outcomes across a range of co-benefits, but they do not always include measurable benefits for net zero.

Table 2 provides a brief overview of projects, with co-benefits highlighted and weblinks provided to enable readers to access further information. Projects are listed under different sector headings depending on their main activity or ‘primary’ objectives. In some instances, this is arbitrarily assigned as many multisolving projects do not start from one objective but begin with a fundamentally integrated set of aspirations.

The range of co-benefits, and differing approaches to multisolving that we uncovered in our research are also showcased in the illustration in figure 4.

Project type	Project description	Typical co-benefits	Example projects
Community transport	Community-run, flexible pre-bookable transport for underserved rural residents – boosts inclusion, lowers car use and emissions, while supporting social and cultural community cohesion.	 £  	O Ddrws i Ddrws Partneriaeth Ogwen community minibus & lift service Yr Orsaf community transport TrydaNi community EV car clubs Hooky Car Club Low Carbon (Oxfordshire)
Active transport	Enabling everyday active travel (walking, cycling) via bike hire/repair, green infrastructure, better access, and peer support, promoting health, cutting car use and emissions, and improving air quality, wellbeing, and community cohesion.	£  	Partneriaeth Ogwen (Beics Ogwen) Forth Valley Climate Action Hub Pen Llŷn Bikes Hub Eco Hub Aber Hope Valley Climate Action's Travelling Light (Peak District)
Education / schools awards	School-based environmental programmes making climate action practical and place-based, promoting energy reduction, sustainable transport, and cutting waste.	    	Gwyrddni Blaenau Gwent Climate Assembly Eco-Schools (Keep Wales Tidy) The Darwin Experience Welsh Government Curriculum

Housing retrofit	Upgrading existing homes (e.g., insulation, improved ventilation, low-carbon heating) to enhance energy efficiency; reduces emissions, lowers bills, and improves wellbeing.	£   	Tai ar y Cyd pattern book for low-carbon homes Tŷ Gwyrddfai decarbonisation hub supporting retrofit skills
Energy (saving measures / community provision)	Projects that cut energy demand and deliver locally owned renewable energy (i.e. community generation, shared infrastructure), lowering costs and returning value to communities. Scope for education and skills training.	£    	Morlais (Anglesey tidal energy) Ynni Ogwen Community Energy Wales Datblygiadau Egri Gwledig (DEG) Ynni Anafon
Biodiversity / landscape protection	Landscape-scale nature recovery and habitat restoration that enhance biodiversity, mitigate flooding, and deliver ecosystem services. often generates economic returns from 'nature-based interventions'.	   	National Peatland Action Programme Woodlands for Wales Local Places for Nature Cambrian Wildwood Carneddau Landscape Partnership Fferm Ifan
Tourism	Low-impact, locally led tourism linking sites and routes with interpretation and wayfinding, combining trails with digital/print guides to manage access and visitor experience, celebrate cultural and natural heritage, and strengthen rural businesses.	    	Carneddau Landscape Partnership Yr Orsaf Community Tourism EcoAmgueddfa Carbon Neutral Islands (Scotland) North West Highlands Geopark (Scotland)
Health / social care provision	Community-based, preventative and supportive health/social care initiatives that improve access, reduce pressure on clinical services, and strengthen wellbeing.	  	Social Prescribing (Public Health Wales) Asthma + Lung UK (Wales)
Community assets / projects	Community-led assets (spaces, hubs, and shared resources) that build resilience, keep value local, and improve access, through hands-on activities like tool/equipment sharing, repair-and-reuse schemes, and community repair/making workshops.	    	Benthyg Cymru (Libraries of Things) Partneriaeth Ogwen Warp It (Hywel Dda UHB reuse platform) Repair Cafe Wales North Wales Nappy Collective

Skills & employment	Training, apprenticeships and workforce development to build local capacity for net zero delivery (e.g., retrofit, renewables, land management, food production, business management).	   	Tŷ Gwyrddfai Yr Orsaf 'Young People's Enterprise Centre' Llysfasi Net Zero Farm project, Coleg Cambria Tywi Centre Food Partnerships
Rural economy / investment	Finance, enterprise support and regional investment programmes that catalyse decarbonisation-aligned growth and innovation in rural regions.	  	North Wales Growth Deal (Ambition North Wales) Development Bank of Wales https://developmentbank.wales/ South Wales Industrial Cluster North East Wales Industrial Decarbonisation cluster (NEWID) Carneddau Landscape Partnership cultural heritage & place names Gwyrddni Yr Orsaf (community activities) EcoAmgueddfa Benthyg Cymru Gwyrddni Repair Cafes Warp It (Hywel Dda UHB)
Cultural resilience	Projects that protect cultural heritage, sustain language and place-based identity, and strengthen community cohesion.	  	Carneddau Landscape Partnership cultural heritage & place names Gwyrddni Yr Orsaf (community activities) EcoAmgueddfa Benthyg Cymru Gwyrddni Repair Cafes Warp It (Hywel Dda UHB)
Waste reduction / recycling	Initiatives that prevent waste and increase reuse, repair and recycling through circular economy approaches.	  	FareShare Cymru Welsh Veg in Schools Bwyd Sir Gar Bwyd Powys Food: Food for the Planet Food Partnerships
Food security	Creating food partnerships, supporting producers, shortening supply chains and/or increasing access to affordable, nutritious food.	     	FareShare Cymru Welsh Veg in Schools Bwyd Sir Gar Bwyd Powys Food: Food for the Planet Food Partnerships

Table 2: Types of multisolving project and co-benefits.

Legend

	Strengthening and diversifying the rural economy		Supporting social cohesion
	Enhancing ecosystem health / landscape protection (incl. biodiversity, flood mitigation)		Increasing investment in rural community projects and assets
£	Reducing cost of living (food, fuel, travel)		Supporting educational attainment
	Enhancing availability of rural service provision		Strengthening rural food security
	Improving rural public health		Increasing opportunities for skilled employment in rural areas
	Decreasing waste / enhancing recycling		Protecting cultural heritage and ensuring cultural resilience

We now turn to present the findings from our stakeholder interviews to outline how multisolving can be effectively facilitated and operationalised.

1. People and Place-Centred Practice – Enabling ‘Net Zero by Stealth’

A strong theme emerging from our respondents was the need to embed net zero goals within broader, practical objectives. This approach – described in this report as ‘net zero by stealth’ – reflects the reality that leading with carbon targets or using overt net zero language rarely resonates with the public, particularly given recent political backlash against such messaging. Instead, initiatives that began with a people and place-centred approach were consistently seen as more effective in engaging communities.

By foregrounding co-benefits such as warm homes, lower energy costs, mobility access, local employment, and nature recovery, and then linking these benefits to emissions reduction, projects normalised climate-friendly behaviours without explicitly presenting them as climate-first. This strategy made participation feel relevant and achievable, and crucially, helped communities feel involved in the process while avoiding the resistance that often accompanied net zero messaging. As one protected landscapes practitioner explained:

“The broad approach we’ve been taking is a place-based approach... that gives us the framework to really start with local priorities and contexts. It helps build capacity and networks, where people feel like you’re invested within community groups - designing solutions that work for them and with them rather than to them.” [PL1]

For one community enterprise [CE4], a key message was offering co-benefits that appealed to the community while linking them to the net zero goal. One example was their school uniform initiative, which enabled parents to buy second-hand uniforms, reducing waste and promoting sustainability. However, these were not the main drivers for families using the service:

“we received a questionnaire back from one of the schools [...] we were telling them, ‘What you’ve done with the old school uniform, this contributes to tackling climate change. Is this the first time you’ve done something in terms of climate change?’ and a third of them said yes. And I’m sure they hadn’t made the connection, and perhaps hadn’t even thought about taking action on climate change before. So [...] through completing one activity, it contributes towards net zero.” [CE4]

This example shows how small, practical actions can normalise climate-friendly behaviour without overtly framing it as climate action.

A different community enterprise [CE3] adopted a similar people-focused approach through climate assemblies held in rural areas, where communities came together to discuss and plan local responses to climate change:

“We never really went like well, what projects can have the biggest carbon reduction? That wasn’t really on the agenda, it was more about what can we do locally - community-based projects that people either thought they could bring their skills to, or wanted to develop skills in that field.” [CE3]

From these discussions, projects were tailored to local needs. For example, their food-growing project combined environmental benefits with tackling food poverty.

People-based strategies have also been applied in the green private sector. A car-sharing platform [CT1] conducted a poll with users about their priorities, and the results reflected a familiar trend:

“What's important to them is the price. And second is the availability. The environmental factors were fairly low down the list. [So] we've reduced the price fairly significantly. [...] You don't necessarily have to be motivated by climate change or net zero. We're just creating a service that is so good and affordable that it makes sense.” [CT1]

This exemplifies net zero by stealth in practice: making low-carbon choices the most convenient and attractive option, thereby fostering incremental behavioural change among a traditionally private car-dependent public.

A local authority partnership [LA2] also noted that net zero messaging often fails to engage:

“If you talk to people about net zero, for quite a lot of people, it's a turn off straight away... They're too busy dealing with healthcare.” [LA2]

To overcome this, the local authority partnership focused on linking climate action to everyday concerns like food and health, and on sharing practical examples:

“We share examples of things that have worked in our area... Sometimes it's only worked because somebody else was already trying to do it and you just helped them get over that last hurdle.” [LA2]

This approach reflects a place-based model of behaviour change, building on existing motivation and providing targeted support.

For a local authority [LA1], their pilot scheme needed to frame climate action around practical benefits for farmers, rather than focusing solely on messaging around carbon reduction goals. Their approach thus highlighted tangible gains such as improved farm economics and resource efficiency:

“If you're reducing methane, you're creating an income stream for the farmer as well as reducing inputs.” [LA1]

This reflects net zero by stealth: embedding climate objectives within solutions that make sense locally, and to a community that have historically been sceptical of carbon reduction objectives. By presenting opportunities that align with farmers' priorities, such as income generation and operational improvements, the Council demonstrated how climate action could be positioned as a practical and desirable choice.

A waste reduction initiative [WR1] began as a way to improve access to everyday items affordably but over time began to lead with a climate-driven approach to align with funder priorities. The co-benefits provided flexibility, enabling projects to emphasise cost savings or sustainability depending on context – leading with the most appropriate message for the specific audience, that is net zero benefits for funders and convenience and cost benefits for the public.

The evidence gathered for this report strongly suggests that ‘net zero by stealth’, combined with people and place-centred strategies, is highly effective in driving behaviour change and advancing net zero goals. Rather than leading with carbon targets or technical language,

successful initiatives embed climate objectives within practical, locally relevant priorities. This approach makes climate action feel easier, not a sacrifice, while also ensuring that the action is rooted in local engagement and ownership. Understanding community needs, tailoring solutions to local strengths, and co-producing interventions fosters trust and participation, which in the long term can encourage behaviour change to emerge naturally within these rural communities.

As a Welsh Government representative summed up:

“Climate engagement is more effective when an emphasis is placed on explaining the co-benefits, and how climate action can also address other priorities in people’s lives.” [WG1]

2. Capacities for Integration: Systems thinking, Geographical knowledge and Partnerships

Alongside a clear preference for working from the starting point of people in place, this report notes three dominant approaches to understand and deliver multisolving. These can be understood as a ‘capacity triad’ addressing the ‘what, where and who’ of multisolving:

- **Systems thinking** - the ability (or supported access to expertise) to conceptualise cross-sectoral interactions, anticipate co-benefits, and foresee trade-offs.
- **Geographical knowledge** - place based understanding that visualise opportunities and help anchor abstract goals in specific communities and landscapes.
- **Partnerships** - relational competencies for convening diverse stakeholders, eliciting priorities, and constructing workable compromises to deliver on plans designed using the above approaches.

Systems Thinking

‘Systems thinking’ is increasingly popularised in the literature on sustainability transitions (Voulvoulis et al., 2022) and in our interviews, a Welsh Government representative advocated a systems-based approach to policy, which looked beyond individual-centred drivers of change to consider the wider ‘systems’ in which we are all embedded:

“System-based approaches help us better understand trade-offs and minimise unnecessary costs and helps to maximise the benefits, so it looks at the how the whole system operates... how everything interacts and then the interactions between one policy area and another is really important.” [WG1]

This approach was manifest in many organisations interviewed for this report, where their ethos was rooted in tackling the systemic causes and results of multiple challenges, such as carbon reduction, cost-of-living, circular economy, and well-being, simultaneously. For example, a representative from the World Wide Fund for Nature noted that bringing about transformational change, that incorporates the environment and socio-economic justice, will require systemic changes where a broad understanding of interrelated factors is required to deliver multiple benefits. They described that this approach: *“might unlock something that’s different, that goes from being business as usual or doing better, to something that is about higher-level change...”* - reflecting the substantive design work involved in systems thinking. They described how this

has given them a very different starting point for their project, which had co-benefits for net zero but was not designed to have that sole impact.

“[In this catchment] - we’ve done huge amounts of work looking at the role of the financial system in driving unsustainable [farming], which is arguably the biggest causes of biodiversity, water quality, impact on the [river]... We’re not looking at it from a carbon perspective.”

But in looking at the whole system, they are working to replace polluting and high greenhouse gas fertilisers with seaweed-based alternatives that can also stimulate new forms of business in an area where coastal enterprises are struggling and largely suffer negative impacts from upstream businesses. So, their work has sought to rework the relationships and opportunities in that space, finding win-wins for practitioners, but also achieving broader and deeper transformations.

Whilst prioritising place-based approaches that work from community understandings and needs – as discussed in the preceding section – systems thinking compliments and augments the work of the organisations interviewed by providing a set of design principles and a way of problem-solving to rethink current structures and relations and refigure them to deliver differently.

Acting on this understanding of interconnectedness is often an organisational challenge, which many interviewees were successfully addressing. For example, a protected landscapes project [PL1] highlighted the importance of both governance structures to internalise their ‘systems’ thinking approach, and associated capacities that enable them to plan and design projects to incorporate this. They have a board of experts that supports decision-making, who act as a sounding board on the development of different projects. They noted that to do ‘systems’ thinking in project design it is important that you have access to the whole array of expertise to help realise the interconnections and impacts of different actions. For example, acting within a protected landscape requires them to ensure that there is an overriding vision of how the area will evolve, working with the local development plan, to address fuel poverty and access to resources for low-income residents, alongside environmental and cultural protections. Expertise is needed, therefore, across these different elements. However, as will be discussed below and in more detail in section 3, different types of knowledge, from formal expertise to lived experience, must be balanced to enable engagement.

Geographical knowledge

Systems thinking can, however, seem very abstract. To counter this, interviewees stressed the need for approaches that incorporated geographical knowledge. This could include place-based understandings from lived experience and local routines, but also extended to include insights on how systems operated across and within specific geographies, using spatially referenced data, mapping, and modelling to reveal patterns and interdependencies. This meant drawing on local knowledge, as discussed in the preceding section, but also integrating locally relevant datasets and spatial expertise to understand how infrastructures, flows, and networks interact at different scales. For instance, the recent Climate Change Risk Assessment carried out by Public Service Boards (PSB) embedded place-based understanding of risk to develop spatially-informed mitigation strategies. Rather than talk in abstracted terms, the PSBs were grounding their planning in landscapes and issues that residents would recognise and find meaningful. Equally, interviewees noted how rural communities express a connection to place,

and an awareness of environmental changes in their local area. A third sector organisation project [CE2] actively engaged with this place-based knowledge, and operationalised it in their efforts at multisolving, so that an otherwise abstract ‘systems’ plan was rooted in named landscape features, local livelihoods and lived experiences that people could associate with:

“Whether people have lived here or they’ve moved here... people are connected... and will have seen the changes. So connecting it back to place, whether that’s an ecosystem or a community. When you dig a bit deeper that gets conversations going, it gets people thinking, it helps create, you know, the past, the present and the future vision.” [CE2]

Others talked about the importance of mapping out connections spatially to enable effective design of co-benefits across a system. One local authority coupled this with revision to planning frameworks to ensure that multisolving projects would not meet planning barriers down the line, which was otherwise often reported as a challenge.

“There are different opportunities that we face as a rural economy that wouldn’t be the same elsewhere. When you map - even just repowering of wind farms and how you look to tackle housing energy networks... you know, we don’t have those anchor loads that an urban conurbation would have. So how do you group these things together with public sector buildings as anchor loads and unlock wider potential, and these have been mapped through the process of developing local energy plan.” [LA1]

Here, planning energy generation in a way that can meet the distinctive geography of rural needs was an important step that led to new ways of problem solving and guided the discussion of opportunities so different teams within local government could see where to collaborate.

However, this approach can be difficult to use to its full advantage when working with other organisations who do not take a similar approach. A protected landscape project [PL1] noted:

“The difficulty is that a lot of focus within the public sector is on internal operational emissions within public organisations. But we’re trying to make the case that the emissions we have direct ownership control of are just a very small subset... a lot of our energy is on trying to persuade and coordinate different groups of partners... to put the jigsaw pieces together across different areas...” [PL1]

What the interviewee describes here, is the potential of looking at wider scope 3 category, emissions (World Resources Institute and World Business Council for Sustainable Development, 2011) where they need to work with others to effect change across a landscape. This pushes organisations not only to work together (as discussed in more detail in the next section) but to think in a grounded systematic way about the drivers behind different emissions to ensure that their actions can be aligned.

Partnerships

Acting on ‘the what’ and ‘the where’, then requires effective partnerships with organisations who have diverse capacities, resources, audiences, and powers. It also requires a common understanding of the systemic challenges shared by partners, and the benefits of a concerted approach towards multisolving. Cross-sector partnerships were seen as essential to embed projects across agendas (housing, energy, health, culture, regional economic development), but also to pool resources and broaden support, (benefits that can also be gained from networks, as discussed later).

Yet interviewees also warned of partnership fatigue and coordination costs, especially where roles are unclear or reporting demands multiply. The most productive partnerships employed considered connections, purposeful agendas, and structured knowledge sharing. Clarity regarding the partnership's purpose, and clear strategies for distinctly utilising the skills and capacity of all partners, was necessary to maximise the benefit of the partnership, and maintain buy-in.

For example, one community transport scheme used the innovative partnership model of 'Climate Action Hubs' to drive action on net zero objectives. Collaborative arrangements with local councils enabled an effective division of labour, with authorities focusing on infrastructure delivery while the transport scheme sought to drive behaviour change and community engagement, ensuring that structural investments are reinforced by social adoption. Further links with schools and the NHS served to promote active travel and its wider public health benefits. Here, different actors and institutions brought different strengths and capacities to deliver on outcomes in the partnership.

Another example, Gwynedd's decarbonisation hub Ty Gwyrddfai, is the result of a powerful collaborative partnership of Adra housing association, Bangor University, Grwp Llandrillo Menai, Saint Gobain, and 12 private sector sponsors. The partnership was fundamental to the establishment of the centre and generated clear benefits for all parties. Throughout this partnership, public and private sector partners benefited economically, while individuals became more skilled and active in the business of property building, maintenance and retrofitting to achieve higher energy efficiency. Partnerships like these tended to be notable for bringing together members from across sectors, with different powers, capacities and objectives, with members collaborating to achieve shared goals.

Our interviews suggest that councils and public sector actors / organisations have an important institutional remit where they are expected to lead and co-ordinate but also exemplify good practice. They also have resources, infrastructure, contractors and service provision to co-ordinate (such as farms, vehicles, and buildings), creating an opportunity for innovation. For example, a local authority project [LA1], exemplifies how a place-based integrated systems approach can be operationalised through partnerships, using their position to instigate working partnerships with diverse actors:

"Much our involvement was enabling that proof of concept and support commercialisation but not necessarily as an investment partner... We've got a role to lead by example in terms of how we manage our own assets. But then how can we facilitate other things to happen locally either through funding ourselves to invest in that or where can we put in policies and practises... or work with the regulators... unlocking or facilitating action in different ways." [LA1]

In Wales, a protected landscape partnership [PL1] has a similar role, emphasising the importance of identifying and working with actors who have relevant capacities and responsibilities:

"Public bodies have control and influence on shaping, innovating partnerships and networking, but also involving and communicating with communities... that is the much larger proportion of the emissions that we can tackle." [PL1]

In both these examples, addressing their 'scope 3' emissions (World Resources Institute and World Business Council for Sustainable Development, 2011) was an important institutional

driver, which was shared with other public bodies, but here we see how a singular net zero objective has then prompted an inherently integrated and collaborative approach to working.

The funding and expansion of Local Food Partnerships (LFP) across Wales, which LA2 are part of, demonstrate a new approach to place-based governance, rooted in systems thinking and partnerships. However, in these instances partners have their own primary objectives, such as improving public health, tackling food poverty, or addressing net zero through shorter supply chains and/or dietary and land use change. These other concerns can be operationalised to serve as an opening point for recommending actions that support multisolving. This can also facilitate the ‘net zero by stealth’ approach, discussed in section 1.

LA2 described actively developing infrastructure, business relationships and new land use practices that supported multisolving. Given that the challenge of climate change requires both mitigation and adaptation, the work of LFPs in strengthening Wales’ food security exemplifies the role of partnerships in forging powerful and transformational relationships across organisations who may have disparate primary motivations but share common perspectives, which can be operationalised to drive further change. What these projects share is key ‘visionary’ individuals and/or organisations who come to the fore as brokers – or ‘superconnectors’ (Lee et al. 2020) who are able to bring relevant actors together, as we return to in later sections.

Cross sector partnerships such as those discussed above have the ability to strengthen community action legitimacy, for instance some of the projects facilitated by a community enterprise have explicit governance connections to their community councils. Whilst other interviews pointed to the potential benefits of working with larger institutions: “such as Transport for Wales, maybe Bangor University, who knows, there is potential, I think, to open up discussions and go, this is the service, how could it fit in with what you do?” [CT1] - this was to both scale-out and validate their approaches (here for community transport) amongst a wider population. The benefits for larger or less connected organisations of working with community embedded partners in terms of gaining legitimacy has already been discussed in section 1, demonstrating that benefits to partnership working extend in multiple directions.

In summary, partnerships enable diverse actors to align resources, capacities and agendas to achieve multiple benefits, often greater than the sum of their parts. They are key to fostering both legitimacy and innovation and together with systems thinking and geographical knowledge enable the potential of multisolving to be fully realised.

3. Intangible and Physical Enablers for Multisolving

Effective multisolving relies on a combination of intangible and physical enablers that create the conditions for collaboration and shared action. These include skilled facilitation and engagement, time and trust, and appropriate spaces for dialogue and action, all of which shape how communities and institutions work together to achieve multiple benefits.

Facilitated conversations emerged as an important enabler of the people-centred approach to multisolving already discussed. Communities often resist projects when they are perceived as imposed from the outside; however, creating a process that allows people to engage on their own terms, aligned with their priorities and needs, can lead to stronger support and

commitment for multisolving projects. A community enterprise described this challenge from a practical perspective:

“How do we get the message out there, how do we do it in ways that aren’t preaching, in ways that continue to engage people, people who are outside the movement, people who maybe hadn’t thought before that they could get involved in a group about pickling, about exchanging school uniforms, about growing potatoes, about community transport or energy retrofitting houses...?” [CE3].

Research participants identified skilled facilitation as key to addressing this challenge, creating spaces where people felt their input was valued, thus unlocking a willingness to engage. For example, a different community enterprise [CE5] described how questions could be framed to draw on people’s lived experiences rather than their specific knowledge of the field, creating a level playing field on which to start conversations. Such an approach enabled people to highlight what mattered to them and what their community already possessed to meet those needs, leading to engagement and the desire to participate. This approach aligns closely with the principles of asset-based community development, which focuses on identifying and leveraging existing strengths, skills, and resources within a community to promote sustainable development and positive change (Tajuddin et al. 2025). Skilled facilitation, as described here, is key to unlocking this understanding and mobilising community action.

However, this participatory approach can sometimes clash with activist tendencies, as individuals driven by enthusiasm and commitment are often eager to implement their own solutions which may be at odds with fostering collective decision-making. This was expressed by a community enterprise who said:

“We’ve got a great team. The challenge with that great team is that many of them are activists and activists want to act. And we’re asking them not to act. We’re asking them to speak to people about what they want to do and encourage those people to act, and that’s been really challenging because, say, if someone’s really keen on zero waste, but here they are working in a community that hasn’t prioritised waste. It’s really difficult for that member of staff there not to try and create a waste project [...]”. [CE3].

The net zero benefit is not the sole objective; rather, it is the facilitation process itself that is foregrounded in the knowledge that the process itself will deliver multiple benefits, which are more likely, due to the engagement process, to be successful. To realise this, a facilitative space must be created and maintained, allowing communities to generate their own initiatives. It is assumed that locally driven solutions are more likely to achieve multisolving outcomes. In contrast, externally prescribed net zero interventions may be easier to implement without community involvement, but they are less likely to deliver multiple benefits and may struggle to be accepted by communities. Providing training for staff on how to create a supportive environment and facilitate effective conversations is therefore seen as crucial.

Creative methods were also used to foster engagement, where future visioning could help navigate often politicised areas of debate. School-based initiatives for example, not only encouraged fresh perspectives and alternative approaches but also aimed to empower young people by ensuring their voices were heard, as one participant explained:

“It’s giving them the knowledge to go and grow up... It might be that they become fully engrossed in doing environmental stuff or they might just keep that background info in their mind always,

which is brilliant, isn't it? But it's ensuring that also that they know that their voice is being heard is a big thing". [SP1].

The need to engage individuals and communities in facilitated conversations was true also at a macro governmental level, where consultation could otherwise be perceived as a tick box exercise where decisions were a foregone conclusion. Ongoing conversations were seen as a means of mitigating such judgment, particularly in relation to marginalised groups, as explained in the context of the Welsh Government here:

"Beyond government consultations on individual policies and programmes, we also deliver outreach engagement within our communities to understand the barriers they're facing, and the tools and support needed to empower them to develop their own place-based solutions. Engagement can also help build public understanding on climate change issues, so works hand in hand with climate communications". [WG1]

Participants also highlighted time as a key enabling factor, expressed through varied perspectives. For example, a community enterprise described how the realisation of co-benefits often happened slowly, and organically, over an extended period. It was common for communities to be motivated initially by the possibility of saving money, however, as the project progressed, they became aware of other co-benefits, as explained in their own words here:

"What tends to happen is then you start having more conversations and they go, there's also an environmental benefit here, isn't there? And they have to sell that too if they want to raise money. So they start selling that and then at some point they'll also have a realisation of how it's brought people together [...]. And, you know, all these connections start happening. So over time the benefits accrue and become obvious to the participants even though you know they started off purely thinking about how can we make some money." [CE3].

This suggests that people's motivations may also be expanded over time, with the realisation that their actions can lead to multiple benefits. As discussed already, skilled facilitation is crucial in terms of holding space for this transformative process to play out:

"I think it's about being there, being consistent and actually sometimes you have to wait for people... Because I think you can go in a bit all guns blazing. 'We're going to do this'. And some people are like 'Oh well, no. Like, we're just happy...' Actually, if you build that trust and you know, I've been there for four years now. It's just showing up being like, oh, we can help you with this...building that trust." [CE5].

Other respondents also coupled time with trust, indeed with one respondent alluding to the "the pace of trust". This emphasises that trust is not something that can be rushed, and does not always align with project schedules and targets as suggested in the context of an active travel project below:

"[...] the changes come from having conversations. So you know we do bike fixing workshops and you can have conversations with them then and actually your end goal in two years is to get people off their car and onto bikes. But that takes two or three years because you have to have those conversations. You have to be there, you have to do it slowly. But if you've only got funding for 12 months or 24 months, you can't do it that way." [CE5].

We can conclude therefore, that where funders recognise the need for time, and provide funding over extended periods, co-benefits are far more likely to be realised and embraced. However,

short funding cycles are still prevalent, as discussed in the following section, and their stop/start nature often undermines the trust building process. Some organisations succeeded in addressing this issue of continuity by anchoring projects within longstanding community organisations, where projects had more traction with communities, as an element of trust had already been established – referred to as one respondent as having a “track record” [CE5]. However, some organisations were dealing with less favourable ‘track records’ relating to how they were perceived by communities in the past, and as such were consciously trying to work in a much more engaged and open way, as one protected landscapes representative explained:

“[...] I think there’s a tendency for us to produce a plan, engage people, consult them, but then defend it. And I think we’re trying to shift a lot away from that and kind of... giving up the power that we have by engaging closer with communities and trying to bring them on board. And I think a lot of the teams are being quite a lot more open”. [PL1].

Similarly, other national organisations were conscious that they may be perceived as parachuting in, and as such had safeguards in place to *“mitigate against some of those kind [of] issues that you might incur when you start working in a place as an outside organisation”* [CE2]. It is evident from these insights that facilitation and engagement techniques demand time and play a crucial role in building trust - a prerequisite for effective multisolving.

As well as different techniques for bringing people together, the need for a physical space for such conversations to happen, such as community hubs, was also highlighted by respondents, particularly those working within community settings. Space was also needed to trial different approaches around food growing, community energy use or exchange of items (ie. library of things), and to showcase projects with multiple benefits.

Many community enterprises saw this as an opportunity to convert otherwise empty buildings, giving them a new purpose, and regenerating the high street in the process. However, the emphasis was not on the physical structure, but on the conversations happening within, as explained by one respondent:

“But buildings, at the end of the day, it’s just property. The important thing is what we want to do in them... So it’s not a question of buying an empty building, and we then think about what to do with it. It’s always something that contributes to our well-being or food projects, the work we do with young people, children and young people, or with skills and the circular economy”. [CE4]

These findings suggest that both tangible enablers such as space as well as intangible enablers including facilitation and engagement, time and trust, are not merely supportive but essential for multisolving. Investing in developing facilitation and engagement capacity, allocating sufficient time to build trust, and creating spaces for discussion and action, may significantly enhance collaborative problem-solving outcomes.

4. Finance

To enable the type of approaches outlined thus far to facilitate multisolving, adequate and appropriately designed funding was emphasised as a key factor. Yet respondents noted clear patterns in the availability and sources of funding, which were not meeting their needs:

“For the most part it is grant funding for all of our climate mission.” [PL1]

“I've been working in the voluntary sector since the '80s, and this hasn't changed, everyone saying, ‘We want long-term funding.’ And we still want long-term funding. It's really difficult to plan for the time it takes to do things... with funding that runs from one to three years.” [CE4]

Whilst some projects and organisations were exploring linkages to wider income streams through business and private enterprise, limitations were noted. For example, one community transport service provider discussed how they were dependent on grants for the majority of its income, with only 15% from user fees [CT2]. Whilst this allowed them to prioritise community benefit over profit, it came at the cost of financial stability and meant they were locked into a grant funding cycle that was typical of many operating in this space.

The restrictions of short-term competitive ‘project’ funding are widely acknowledged in the third and public sectors. This includes difficulties with staff retention and building capacity and relationships within communities to deliver relevant outcomes (Welsh Government Marine and Fisheries Division, Strategic Evidence Unit for Environment and Rural Affairs 2022). These problems equally apply to the delivery of multisolving, with the types of place-based working discussed in this report being clearly reliant on longer-term embedded approaches that foster trust and meaningful connections over time, to allow communities to determine the most effective focus for action and problem solving.

“The big issue is funding that lasts long enough to ensure that it gets enough time to root itself in the community... because so many funding pots...we had some for three months. You need to find money then to keep it going...” [WR1]

As outlined in previous sections, repeat funding on any one project is very rare, but when organisations have had such successes (for example, where one community project moved from the hosting of Climate Assemblies to the delivery of the visions set out [CE3]) there was a clear benefit to the slow pace of working that unfolded, with deeper rooted changes starting to manifest as a consequence. Without this type of continuity, organisations outlined that they were not able to plan effectively to ensure delivery of their goals into the future, and for communities the ‘project’ style of funding meant that things were too disjointed with resultant impacts on the commitment and confidence people had in different initiatives.

“[Longer term funding would mean] we can plan more effectively and work to ensure that our communities get the maximum benefit from that because otherwise it's a stop, start, push, pull thing all the time.” [CT3]

Equally, it was argued that short-term funding cycles have constrained action on issues that were perceived as less immediate and more long-term, such as the nature crisis. Such limitations then had obvious impacts on the ability of organisations to achieve effective multisolving, as some considerations were not effectively addressed or incorporated.

“In practice, budgets for nature-related work are often reduced in favour of more immediate pressures... that's the department that's usually going to lose out... Staff turnover is quite high because everyone's working on annual contracts. There's no looking to the future at all... people just look to the end of the year. They depend on grants.” [WG2]

Multisolving requires a long-term vision, but funding frameworks do not seem to be geared to support this. Whilst there is potential for consistency in Welsh Government's Programme for Government in its formal alignment with the statutory well-being framework (Stokes and Smyth, 2024), organisations contended that there were different priorities they needed to respond to in

funding opportunities year on year, which led to a constant reworking and reframing of proposals to suit, when sometimes they just needed to continue to keep doing the same things.

“...strategic targets change, they change nearly every year, certainly in terms of our work.” [WR1]

Short-termism in funding can also make a long-term vision hard to operationalise as there is no guaranteed funding to deliver on all the proposed elements, and that can then mean it is hard to engage others with your proposals, as some stakeholders noted:

“At times that can be quite difficult to be able to realise what the management plan sets out because it is a very ambitious plan for the future... And there's sometimes a lot of external criticism of setting up this long-term vision without having action plans to deliver... funding constraints mean that we have to fill the gaps...” [PL1]

Equally, the prevalence of single-issue or siloed funding was raised as a major concern working against multisolving, which requires a more holistic approach. Here it was argued that funds were normally focused on one problem, like net zero or poverty, and did not incentivise approaches that sought to tackle problems in synergy. This meant that the design of projects was not taking an integrated approach or encouraging a wider array of outcomes to be reported. As discussed in previous sections, this then worked directly counter to the way that many communities were envisaging the issues they faced.

“External investment tends to focus on single outcomes, offering little incentive to deliver local co-benefits. There is a strong view that greater investment in communities would enable more effective, place-based interventions that deliver multiple benefits simultaneously.” [WG2]

Several organisations discussed how they purposely worked around this limitation, with their core mission and governance focused on achieving integrated outcomes enabling them to move beyond shortcomings in funding and ‘stitch together’ relevant projects or just deliver multiple benefits despite the funding frame.

“Our achilles heel is obviously our funding constraints... at times that can push us in different directions than we need to go to achieve the system changes that are needed. Having said so, we are internally trying to improve how we look at wider co-benefits for projects... I think we'll try and make use of opportunistic funding where we can... to achieve the work that we want to do.” [PL1]

This strategy of workarounds was echoed by many interviewees across the third and public sectors:

“We're often funded to work in that small part of it and then you need to get four or five funding sources to do the holistic piece, which is very challenging.” [LA1]

“It's not really the integrated approach... we have to adapt and be opportunistic... You know it's a bit of a dance...” [CE2]

While collaborative approaches were considered fruitful to support multisolving, some organisations were concerned that the competitive nature of grant funding could work against building these relationships. However, others acknowledged that limited financial resources could prompt organisations to share capacities, expertise, and skills to complete work effectively. There was a recognition among participants that resources were stretched across the sector, and that achieving outcomes often required making the most of what is available.

This demonstrates how resource constraints can act as both a challenge and a catalyst for partnership-based approaches, encouraging innovation, mutual support, and the efficient use of existing organisational capacities.

Whilst there was a clear reliance on grant funding across the stakeholders we engaged with, there were also clear efforts amongst some actors to mobilise private sector funding. In most cases this required careful brokering to ensure multisolving was effective, with for example government grants used as a starting point to bring diverse partnerships together which could then move forward with elements of private finance. This was the case for Ty Gwyrddfai, which drew on the Shared Prosperity Fund at the outset, but as the project developed - working with Adra housing association - they were able to borrow private finance to support their retrofit housing decarbonisation work. Similarly, a local authority were able to use public funds to initiate experimental collaborations over the use of biomethane - this was replaced by a private company which currently operationalises the buying and selling of this novel energy source.

As discussed in relation to partnerships, the key point was to consider what capacities are needed to deliver on a multisolving project and bringing in private sector actors and finance where they are relevant to system transformations. Private sector collaborations can be very important to scale out and normalise actions that support net zero. Equally, the address of many challenges identified (for housing, energy, transport and food provision) do require transformations in current supply chains and associated relationships. Whilst there are many instances where the delivery of public good is better supported by charitable, social enterprise or government funds, tackling many of our net zero challenges requires mainstream shifts in purchasing and provisioning arrangements, which necessitate collaboration with industry and business. The challenge for genuine multisolving is to ensure that systems design and a place-based intelligence can inform the approach taken.

Funding was implicitly tied to reporting requirements and many of the challenges with siloed funding were discussed in terms of restrictive or unhelpful reporting frameworks. However, as discussed, many of the projects considered were simply delivering above and beyond what they were required to do by funders as they realised that the holistic approach of multisolving worked better for the people they were working with and aligned with their core strategic vision as an organisation. Achieving more outputs than was needed to report on was not, therefore, an issue, and many organisations discussed work they were doing internally to ensure that co-benefits could be captured to ensure learning – even if not for external funders. This involved various discussions of co-benefit ‘matrices’ or recording of ‘nested’ outputs [PL1 and CE2]. However, others did report that co-benefits did not get tracked if funding wasn’t there to acknowledge them:

“What our funders will generally want to see - did you deliver that project? How much did it cost? How much CO2 are you saving? You know, something along those lines. Then you've got to move on to the next project because there's only the money to deliver that project.” [CE3]

This interviewee then went on on to connect to another key issue:

“No one's gonna pay you to do the longitudinal evaluation work, particularly on stuff that's quite qualitative, not quantitative based. These kind of soft measures, they're difficult to measure.” [CE3]

This comment connects to a widespread frustration from interviewees - that they felt they were not capturing meaningful metrics to demonstrate the true outcomes of their projects. This is discussed further in the section below on accountability.

Finally, in the current context of budget cuts and the changing political priorities, delivering on net zero is becoming much harder, particularly for public sector organisations. Many organisations noted how they have shifted from the scenario of when the climate emergency was first declared, with allocated budget to respond, to the current experience of retrenchment. In this context many organisations were still thinking explicitly about net zero but asking ‘how can we deliver within a smaller budget?’ Multisolving can help justify spend, given the multiple benefits associated, and the joining-up of resources to create efficiencies in spend across portfolios, but more expansive approaches to accounting and planning are critical to defend this ongoing spend:

“What can we capture that really starts to make it real for people in the development of our business cases? This is the cost. This is the potential return. These are the carbon savings and these are the wider benefits that you could realise and I think getting that to be the norm around how you capture some of those wider benefits... trying to articulate that... what it means in numbers to people.” [LA1].

Many respondents also stressed the importance of making explicit space for costed action, so there was clarity over who was expected to deliver on a particular action to make changes a reality. Otherwise, there was a danger of net zero not actually landing as a responsibility in anyone’s portfolio of work and falling down the cracks, or being such an aspirational, high-level element that tangible delivery plans were not set out and actioned.

“How do we make it part of people’s consciousness that it’s not something that someone else over there does...? The Council’s mission was to deliver a carbon neutral [region] where people start well, live well and age well, but then all of the priorities that sat underneath it never captured decarbonisation in any room, and it was like, well, it’s there, isn’t it? Yes, but it’s not in here where any of these people are actually doing work.” [LA1]

Multisolving might make net zero more relevant to a wider array of people and departments, but there is a danger that it isn’t owned by any one at all. So, leadership and clear planning are still required with the allocated funding a means of ensuring that.

5. Accountability, Capturing Evidence, and the Policy–Practice Gap

Capturing the diverse and interconnected impacts of multisolving initiatives was a key priority. Many organisations reflected positively on the need to develop an effective evidence-base for their activities. In many instances, this evidence was being captured as much for internal accountability as it was to report to external funders and auditors, with several organisations demonstrating how integrating objectives was central to their core ‘mission’.

Drivers like the Well-being of Future Generations Act (2015) were clearly important, and referenced by most interviewees, but this was not seen as something that had forced a particular way of working for many – rather as providing a useful facilitating framework that enabled them to justify the way they were already trying to work.

“Without a doubt... the fact we can fall back on that regularly and say no, what we're delivering is the Well-being of Future Generations Act. This is exactly what we do and you know we can map against those very easy, set of goals...” [CE3]

Demonstrating impact wouldn't necessarily require a costed value, although this was clearly helpful when possible. Simply being able to evidence that a benefit was present and demonstrating robust science behind that when relevant (e.g. the efficacy of alternative seaweed fertilisers), was as important as any economic measure. Overall, there was a clear sense that evidencing their work was useful and important to organisations but there were some clear challenges noted.

In broad terms, many organisations worried that they were not monitoring and reporting the right things. Connecting to this, interviewees described a persistent policy–practice divide, where high-level principles were widely endorsed (notably ‘integration’ and ‘collaboration’ from the WFG ‘WoWs’), but operational guidance and support for delivery remained patchy, leading to “principles without pathways”. For example, while policy resources on the WFG often specified expected outputs, they provided less clarity on the “how” of collaborative delivery. Addressing this procedural dimension was therefore critical to ensure that the sharing of resources and best practice could be effectively translated into practical outcomes.

“You can take from that that it has to be done. The only issue is, they don't tell us how. So [we all have our] own way of doing it. And I think it would have been much easier if they'd told us how... a bit more guidance and a blueprint.” [PSB1]

Interviewees felt that the way they were being encouraged to report on their actions was compounding this issue, as the focus remained on measures of impact that did not help them to demonstrate how effective working was being operationalised.

“I suppose there's issues in that there's quite a far disconnect between the project initiatives that we do and the impact that we have and then how they're then reflected within those reporting mechanisms moving forward...” [PL1]

Required reporting (by funders/auditors) tended to be linked to outputs, rather than processes or ways of working. Interviewees felt that reporting on processes might be a better means of encouraging multisolving and developing learning. For example, recording levels of spend and numbers of attendees at events, or other instances of interaction, are commonly reported impacts in community working. But many interviewees argued that there needed to be more attention to processes and ‘soft’ outcomes (such as building trust, cohesion, confidence). Whilst this learning might be happening internally for some organisations, for others there was a worry they weren't able to give it enough time and reflection.

Equally, it was argued that the benefit of some activities went beyond standard measures, such as levels of waste reduction, to give a specific example. For this organisation, the value to the community of repairing an item and bringing it into wider use in the community was more than just reporting this one item had been reused and was potentially saving others from buying new items. The whole culture of sharing and associated shift in our attitudes towards consumption was a (currently) unmeasured co-benefit:

“Welsh Government's Beyond Recycling strategy recognises the value of this kind of thing. But there's still work to be done to look at how we measure and what the targets are, especially with the repair and reuse side of things... How do we measure and recognise that?... We're trying to

work at the moment on something like how do we measure a certain success and how do we roll it out and change behaviours?” [WR1]

Other projects discussed similar issues in their own areas of work, affirming that whilst wider interconnected benefits and accompanying ways of working were lauded, actual reporting can be very narrow:

“The funders recognise the value of the multiple benefits associated with the programme and fund it to this effect, however their reporting tends to concentrate on outputs... Soft-benefits, which are often the co-benefits, are difficult to measure... [It is] very quantitative.” [SP1]

Other organisations stressed that whilst they were committed to a holistic vision at a strategic level, to evidence and report their activities they were having to go back into silos but then working out how to bring that back to a coherent monitoring approach that connected across those different evidence pieces.

“We have to think integrated and strategically but then operationalising that sometimes needs to go into back into the silos or the specific in the evidence. And then we have to take that learning back up into the bigger picture... We have had to spend quite a lot of time internally thinking all this through... So how are we integrating those findings for impact... it becomes less about quantification and it becomes more about outcomes and relationships and potential...” [CE2]

This siloed way of working on evidence could then exacerbate divided thinking within organisations, as some interviewees noted, but also then reflected on how they were attempting to tackle that challenge.

“Internally, it's hard to manage all of that and we work in a very matrix way internally... we all need to reconvene in certain ways.” [CE2]

On a very practical level, it was stressed that monitoring was resource intensive, so whilst many organisations were critical of narrow reporting parameters and aspired to demonstrate the full breadth of impacts that they were initiating, there was an acknowledgement that collating such evidence was sometimes beyond the capacity and expertise of the organisations in question. Gathering specialist technical evidence for carbon auditing was a particular challenge in the net zero space but equally demands for a large array of data from funders/auditors was difficult for smaller organisations. In these cases, whilst a clear template (e.g. for a benefits register) was appreciated, flexibility in how this was then used was equally important.

“Multiple benefits are embedded into project delivery through the use of defined reporting metrics [...] Monitoring and reporting processes are designed to ensure that co-benefits are realised. However, there is recognition that such processes can be resource-intensive and may be challenging for smaller organisations. Flexibility in reporting approaches has therefore been important.” [REDP1]

In particular, it was acknowledged that many projects were working with stakeholders who were themselves very busy and under multiple pressures, so making further demands through reporting requirements was far from ideal.

“I’m conscious of teachers being... they’ve got so much to do, we don’t want to start bombarding them with more stuff. So if we can build it in a really simple way that they we then capture that data that that would be pretty good.” [SP1]

Realistic monitoring expectations were therefore important and a ‘light touch’ approach applauded once confidence had been established with funders, or simply to reflect the realities of delivering on some smaller funding pots.

“...It's quite light monitoring and I think we deserve that now. Because initially, the monitoring was really strict by the Welsh Government with Communities First. But what we've proven is, trust us.” [CE1]

The practicalities of monitoring are, therefore, an important consideration to be balanced alongside stakeholders’ desires to document meaningful changes arising from their work. Ultimately, the issue seems to be ensuring that useful evidence is captured which demonstrates not only what projects are doing but how they are achieving change.

This prompts reflection on the anticipated uses and strategic value of the evidence generated by these projects. Evidence is often gathered to demonstrate accountability. For funders and investors, evidence supports their decision-making so they can be more confident of the different outcomes generated. With several projects there was a frustration that the recording of co-benefits had only just started to mature sufficiently to support wider investor confidence. One Protected Landscape Project [PL2] discussed a specific issue they had faced as follows:

“One of the challenges [we have] faced in the past is the lack of robust, site-specific evidence for some [particular] co-benefits. While many of the co-benefits delivered by the programme are well evidenced, there are some co-benefits where the empirical data to substantiate them remains limited. This evidence gap has tangible consequences: it restricts [our] ability to engage key stakeholders... As a result, [the project] risks missing out on significant opportunities to scale its impact through shared investment and mutual benefit framing.”

It is also recognised that evidence is needed to inform the development and implementation of future projects. Responding to this challenge PL2 have launched a dedicated monitoring team to support standardised data collection. This investment will enable them to engage more effectively with external partners by offering credible, shared data that can inform joint planning and funding - plugging existing evidence gaps but also strengthening their legitimacy, accountability, and capacity to deliver multi-benefit outcomes at scale.

This experience was echoed by others working at the interface of public-private investment, who outlined that *“decision-making is supported by a developing evidence base, which is used both to justify calculated risks and to inform strategies for risk mitigation.”* [REDP1].

Evidence was not only underpinning investments but also being used to inform policies. Here, interviewees highlighted the role of evidence as a means to avoid trade-offs for example in undertaking ‘integrated impact assessments’ for different WG policies. Or, by providing a platform upon which multisolving strategies could subsequently be built by establishing the conditions under which integrated, cross-sectoral solutions became more feasible.

Equally, there was a role for evidence underpinning standards that organisations could contribute to - like the 2023 Welsh Housing Quality Standards, to drive measurable progress on new builds and retrofit of properties. These standards were the main driver for establishing one case study project, providing an opportunity to work creatively and dynamically to link multiple goals around decarbonisation and the local economy.

Yet, given the emphasis on place-based working, it was also acknowledged that much of the evidence base would highlight significant local variations *“reinforcing the need for a place-based approach to maximise co-benefits and minimise trade-offs.”* [WG1]

Showing how evidence is being used in policy making was also an area of tension, with WG acknowledging that it can be a drawn-out process, and evidence from projects might not lead to immediate changes:

“It’s important to ensure feedback loops are built into the engagement process so that people understand what happened as a result. Managing expectations from the outset is also important, such as explaining that policies can’t always be delivered immediately, and for a number of practical reasons, can take time to implement.” [WG1].

Overall, the evidence points to the importance of developing monitoring approaches that are proportionate and centred on documenting how change is achieved in practice. Ensuring that such evidence is accessible and transferable across organisations and with funders and policy makers can help bridge the persistent policy–practice gap by supporting more informed, anticipatory planning. In this way, impact data becomes not only an accountability tool but a practical resource for designing future multisolving interventions.

6. Leadership, Vision and Networks

This section examines the contribution of leadership to the pursuit of net zero co-benefits. Our data showed that effective leaders could communicate a multisolving vision and demonstrate the capacity to bring together diverse stakeholders towards collective action. Furthermore, we found that leadership could be enacted at different levels. Below, the qualities and practices of individual leaders are discussed initially, followed by organisational leadership, policy-level leadership, and finally the ways in which weak leadership can impede multisolving.

Respondents frequently attributed progress to individual leaders who were able to keep sight of the bigger picture across sectors and who possessed the capacities and skills examined in earlier sections, including the effective use of systems thinking and relational, people-centred approaches. Additionally, in some instances experience of working at local and national government level and a track record of developing significant funding applications enabled stronger and more coordinated coalitions. For example, where public, private and educational sectors came together on an innovative cross-sectoral response to turn the closing down of a key employer into an opportunity for significant sustainable re-generation. This illustrates how individual leadership can unlock multisolving by aligning economic, social and environmental benefits within a single intervention.

Alongside these practical competencies, such individuals were also characterised as key visionaries who could articulate and sustain a compelling direction of travel. One respondent, for example, attributed the success of a particular community organisation to the composition of its Board at a specific point in time, noting the foresight and ambition of those involved: *“You know, just people with vision”*. [CE1]

Such examples highlight the role of visionary leadership in recognising what is possible, instilling a sense of ambition, and putting the necessary foundations in place for multisolving approaches to develop.

Another common feature among leaders is an understanding of the benefits of working collaboratively, and as such they invest time and energy in building networks at various levels. A number of community organisations talk about connecting people within communities, but also about establishing networks of communities not only to share knowledge and resources (as discussed in previous sections), but also to take a more regional approach. These forms of networked leadership are crucial for multisolving, as they enable solutions to be scaled and shared across localities.

Some interviewees referred to ‘superconnected’ people, those perceived to have significant cultural capital on which to draw. One example illustrates how personal connections can be utilised, where trust has already been established:

“Those connections do have a tangible impact, so you know a recent large solar project that we helped make happen wouldn't have happened without what I would call a friendship between myself and somebody who's been doing lots of them in south Wales. I could call on them [and] have a chat about who they use for legals [...] Have you got a template document for heads of terms we can use? You know, all that sort of stuff?” [CE3].

This indicates how social capital and informal networks can accelerate practical problem-solving, an important enabler of multisolving in resource-constrained contexts.

Organisations can also act in a leadership capacity when brokering relationships and advocating for communities. One community enterprise described their role in setting up a new partnership to include an international corporation. They described the need to “draw them into meetings” and the challenge of getting specific partners to engage, noting the necessity of being proactive and investing both time and effort into brokering relationships:

“But we're the ones who have to push the agenda, getting [partner] to realise, there's a benefit in this for you. But we're the ones that have to do the shouting. You know, we've been shouting about this initiative since... Something that's so obvious to us [...] it's us that have to put the jigsaw together”. [CE1]

This highlights how organisational leadership can act as a strategic connector, aligning different interests to achieve multiple outcomes simultaneously.

Within local authorities and NPAs, organisational leadership can instead be more akin to ‘leading by example’ while still relying heavily on bringing the right people into play. However, this is not easy within the current economic climate and governance landscape, as was illustrated by an English Local Authority:

“Now moving forward, as budgets get tighter and without clear policy at a national level for some of the areas, how much can [we] be an outlier in what we are doing and how do we make the case for wider interventions? How do we increasingly look to a suite of things rather than public sector ways of working with siloed budgets or siloed delivery?” [LA1]

This points to how multisolving offers scope for a more integrated way of working, even within the constraints for siloed operations.

Leadership can also be expressed at a policy level, where the declaration of a climate emergency by local authorities, alongside a post-COVID emphasis on addressing temporary

accommodation and homelessness, encourages organisations to embark on more ambitious projects, as seen within the context of carbon-neutral housing for example. Such policy signals can create enabling conditions for multisolving by legitimising integrated, cross-sector approaches.

However, poor leadership can conversely hinder multisolving and the subsequent realisation of co-benefits. If leaders are slow to respond, it can leave practitioners waiting and create uncertainty. One regional economic development partnership described how high-level policy decisions have historically created uncertainty in the sector and delayed investment. This demonstrates how delays at higher levels can stall action across entire systems, limiting opportunities to achieve co-benefits.

Leadership therefore emerges as a multi-layered phenomenon that operates through the actions of individual leaders, the strategic positioning of organisations and the enabling role of policy. Across these levels, trust, embeddedness and strong networks are shown to be central to mobilising collective action and securing community participation towards achieving net zero co-benefits. At the same time, the findings highlight that weak or slow leadership can create uncertainty and stall progress, underscoring the need for coherent, place sensitive and well-connected leadership to support multisolving and the realisation of co-benefits.

7. Inclusion, Identity and Belonging

Through our interviews, inclusive and culturally sensitive engagement emerged as a further foundational co-benefit principle for successful net zero initiatives. Rather than treating inclusion and identity as secondary considerations, projects that embedded rural cultures and Welsh language sensitively into their design were consistently seen as more effective in building trust and participation. However, this approach towards inclusion went beyond ‘culture’ alone: technology, structural inequalities, and perceived stigmas, were all issues which respondents brought up consistently during discussions. Together, these insights revealed that inclusion is not a peripheral issue but a crucial factor in the overall success of net zero strategies in rural communities.

Language and inclusion

One key cultural factor often highlighted by respondents was the importance of treating the Welsh language with sensitivity and ensuring parity with English in rural Welsh projects. This is particularly critical in certain rural communities where Welsh is the majority language. Respondents emphasised that the practical use of Welsh, alongside its respectful and inclusive treatment, was imperative to foster engagement, promote inclusion, and ultimately increase participation in these initiatives. One respondent, a schools programme, demonstrated the negative impact early linguistic exclusion could create:

“So [Programme] came into Wales, OK? And then [Local Authority] didn't like it because it was all in English because [Organisation] was doing it in [English city]”. [SP1]

This is a historic issue, but it shows how the lack of Welsh provision prevented schools in Welsh-speaking areas from taking part in net zero initiatives. Indeed, uptake of the programme remains lower in some areas than in other rural areas as a result.

However, things have improved, with perceptible results in engagement:

“[Now] all the live lessons are offered in Welsh or English. That's a really important aspect. Something we are praised on”. [SP1]

Another organisation perceptively recognised from the outset the need to have a fluent officer in certain key Welsh-speaking areas. This officer also identified the need to develop Welsh terminology around processes and supported groups to choose software companies who were able to provide a bilingual platform for their activities. Working in this way not only ensured equal access from a language perspective, but also helped communities feel they were part of the transition process:

One of the things I think is interesting, especially in terms of my role, is the linguistic side of the technology, ensuring bilingual access to [Organisation name] platforms. So, I think that's quite an important factor. And a lot of the projects in the more Welsh communities have chosen software that ... offers platforms that uses both languages. [WR1]

In a public sector context, the Welsh language is a permanent priority for a partnership working across many objectives including climate issues, essentially meaning that their response to climate action is seen through a culturally appropriate lens:

“[F]rom the outset, in the first well-being plan, supporting and promoting the Welsh language was a specific objective. This time [...] it's not an objective. It's a permanent priority. So it's central to everything we do. So the Welsh language will never change, but the three, four well-being objectives will probably change, depending on what the well-being assessments tell us”. [PSB1]

Setting the Welsh language as a permanent priority means that all actions, including those targeting net zero objectives, consider not only the impact upon, but the opportunities for promoting the Welsh language. As a result, these opportunities to promote the Welsh language through net zero actions are more likely to be identified and not missed, while trade-offs to the language are more likely to be avoided.

Underlying these various efforts is a commitment to social value and local resilience. For example, many community organisations illustrated how strengthening the local economy and assisting with employment not only supported net zero objectives but also supported cultural resilience:

“Language is the obvious one, because what we're doing by strengthening the local supply chain and our own workforce is by default [we're] strengthening the Welsh language.” [DH1]

These examples point to clear opportunities for replication and scaling, ensuring that inclusion, identity, and belonging remain central to climate action strategies.

Technology – inclusive and exclusionary

Technology was another key issue as it offered both opportunities and risks for inclusion. A car sharing scheme exemplified this duality: its app simplified access, enabling residents to book vehicles and manage memberships digitally:

“So what a user can do is they can download the app, they can book the car and then they can use the app to unlock the car, to lock it, and everything is done through that medium”. [CT1]

This model helped overcome geographic barriers and supported wider participation in sustainable transport initiatives. However, reliance on high-tech solutions can create new exclusions. Older generations, people without smartphones, or those unfamiliar with electric vehicles potentially struggled to engage. Regional coordinators mitigated these challenges through training and support, but geographic constraints in remote areas remained a limiting factor. As the interviewee explained:

“People [who] aren't as comfortable with modern technology, may not have a smartphone, may find the electric vehicles intimidating... regional coordinators have that really close relationship with those members where they can give them inductions, training and be really supportive.” [CT1]

Moreover, in very rural or remote areas, the practicality of car clubs was debated. Users generally needed to live near the shared vehicle's location for convenience, which limited accessibility and could undermine efforts to achieve full rural inclusion and this sense of 'belonging'. These challenges show how structural issues, such as rural isolation and poverty, an aging population, and limited access to modern technology, underscore the complexity of achieving inclusion and engagement in rural areas, and explains why normalising net zero objectives within these contexts remains a particularly difficult task.

Beyond language and technology, inclusion strategies increasingly prioritise marginalised groups to ensure a just transition towards net zero. National and local bodies recognised that rural communities, lower-income households, and minority ethnic groups all face disproportionate challenges and risk being left behind. As a Welsh Government representative noted:

“Our strategy is to put more emphasis on engaging with those groups that are likely to be disadvantaged or not in a position to reap the benefits of change.” [WG1]

Equally, they recognised the need for inclusion in order to ensure a just transition, realising that it is often the marginalised groups who are most likely to be left behind. Furthermore, there was a recognition that rural communities could be seen in this way, and so there was a specific drive to engage with rural communities and understand the challenges faced within a rural context.

“So our strategy is to prioritise engagement with marginalised groups, lower income households and people with underlying health conditions who are typically at higher risk from climate change.” [WG1]

Problems around stigma

Certain respondents experienced other challenges around stigma that impacted inclusion. For example, two community transport enterprises discussed the difficulty in engaging with their communities due to perceptions regarding their service: being seen as “charities” made certain sections of society reluctant to get involved, even though the benefits extended beyond financial or social support:

“[The problem regarding] inclusion [is] changing people's attitudes of, “It's not for me. It's for disabled people. It's for poor people.” [...] People haven't considered that the service is there for

them too. If their daughter can't take them, if their usual network isn't available, then [we] can take you. [...] it's often an issue of what part of society do we serve? Well, everybody.”. [CT2].

These attitudes arguably risked creating a class divide in terms of inclusion and engagement, where working-class people were more likely to use the services but less likely to volunteer, while middle-class people were often the ones running them but were not usually users themselves. As a result, projects risked being perceived as services for disadvantaged citizens, rather than as community enterprises that benefited everyone, a perception that needs to be challenged if inclusion is to increase, and thus participation and impact are to grow.

Meanwhile, other projects demonstrated creative approaches to tackling stigma and broadening participation. While engaging with the public, a climate group in Scotland noticed gender inclusion issues regarding their active travel hub:

“The hub became an interface for the public so they could come and get advice about journey planning. [...] And what we noticed in the first couple of years was it's very male focused”. [CT3]

Consequently, the hub made targeted adaptations to its practices to encourage greater gender equality, by introducing more practical applications that would appeal to female users, and thus encourage greater participation:

“So we tried to tailor our offerings to be more inclusive of women. ... we had a sister project that was about connecting people to food, [creating] an online digital food system where people could shop online from a local landscape and collect it from the hub, which inadvertently increased our female numbers by about 100%”. [CT3]

The findings demonstrate that inclusion, identity, and belonging are not peripheral considerations but essential co-benefits for successful net zero initiatives in rural Wales. Projects that embed cultural sensitivity, alongside strategies to address structural inequalities and technological barriers consistently achieve higher engagement and trust. Inclusive practices, such as bilingual provision, gender-responsive design, and targeted outreach to marginalised groups, foster participation and normalise climate action within rural contexts. These approaches strengthen social value and local resilience, creating synergies between cultural sustainability and environmental goals. By prioritising inclusion as a core principle, net zero projects can overcome geographic and social challenges, ensuring a just transition that benefits all communities while accelerating progress toward national climate objectives.

8. Emotions, Motivation, and Normalisation in Net Zero Co-Benefits

The evidence collated for this report demonstrates that emotional dynamics can play an important role in sustaining participation in multisolving approaches for net zero. Beyond technical solutions, participants consistently reported that feelings of hope, pride, and collective efficacy among their core audience underpinned engagement. Visible small wins achieved within the community could also help embed new carbon-friendly behaviours as social norms. Furthermore, the very act of socialisation in a climate-framed capacity, the transmitting of positive emotions, and the feeling of ‘being part of something bigger’ was repeatedly showed to have an energising effect on participants, fostering enthusiasm and long-term commitment to the cause.

One exemplar of this dynamic, a national programme, framed themselves as a grassroots social movement, embodying new mindsets to establish new norms. The networked element of the organisation was fundamental to the idea of being part of something more, where communities came together to affect change. This made people feel less alone, and that their actions could make a difference. In this sense, it could be seen as empowering:

“I think there's a belief from everyone in the organisation that action at a grassroots level and within communities is where we can really make a difference and make a difference in terms of the big things like our impact on the planet, but also on things like the cost of living and bringing people together, tackling loneliness and creating a society that is more equal in terms of accessing things”. [WR1]

A different community organisation commented on the often-isolating feelings exhibited from their participants when the realities and difficulties surrounding climate change were discussed on an individual level:

“We heard repeatedly during our assemblies that people felt that they were at home alone, feeling bad about climate change and about the impact that was going to have for future generations and feeling like they were the only people who thought that” [CE3]

This was in significant contrast to the emotional impact the climate assemblies had in creating a feeling of togetherness within the community, and the feeling of being part of something bigger:

“when they came together in a big room and they realised there were other people. Well, that was liberating and gave them hope and optimism for a future that they previously didn't think that they had. So, bringing people together is really important.” [CE3]

This feeling of being part of something bigger was also noted by a third sector partnership project [CE2], who contrasted this with the negative messaging that often has the opposite effect on engagement:

“People want a vision, often at a very local level, whether that's a catchment or a region that they feel they're part of, that they can feel that they're building something better rather than doom and gloom [...] they really value us being able to connect them into a bigger picture of something that's happening and create that wider narrative”. [CE2]

Some net zero or carbon-active projects, particularly when dealing with niche subject matter, can have difficulty in connecting emotionally with a wider audience. From the outset PL2 identified that it was facing a complex set of challenges in communicating the value of habitat restoration to a largely indifferent or disconnected public. Much of their work takes place in remote, privately owned landscapes, making it physically inaccessible to many and difficult to visualise or relate to. This remoteness, combined with the technical nature of restoration science created a communication challenge that risked undermining public buy-in:

“Often we're getting excited about moss, not like cuddly animals in a woodland! So the sell is slightly harder [and] you're often spending [...] millions of pounds of taxpayers' money in areas they can't even see what you're up to [...]”

PL2 approached this challenge at a strategic level, where engagement and communications planning included embedding the Programme in its bilingual context by ensuring Welsh terminology was adopted, using bilingual education materials for schools and bringing added

cultural value through interpretation of the work. Furthermore, sustained relationship building and partnership co-design was enacted by establishing all-Wales partnership groups at many levels from practitioner to strategic groups that meet regularly. A high bar for accountability to the Welsh tax-paying public was also established through the onwads reporting of delivery through the 'activity layers' on a bilingual data portal as well as the detailed annual reporting posted on their website.

As part of its work, landowners and land managers were identified by PL2 as key stakeholders as they face a range of historic and current challenges in relation to their land. Many of the farmers that they collaborated with have inherited land-use practices shaped by past subsidies that encouraged drainage and more intensive grazing. Reversing these behaviours - embedded in family memory and livelihood models - required sensitive, non-blaming dialogue and clear benefits:

“Often you're telling them to do something that they have been taught for generations the opposite... we come along saying do the opposite of that... there's history behind it and you've got behaviours to change.”

PL2 realised that it was important to address this misconception of blaming farmers for the collective community demand for resources in past generations, and as part of their response created bilingual resources placing current actions in context that were distributed both widely and to targeted audiences. Furthermore, flagship sites, featuring accessible infrastructure such as boardwalks and car parks, allowed the public - including those with mobility challenges - to see restoration in action. Farmer engagement days at these sites also proved transformative, helping landowners understand the science and see the work firsthand:

“So [...] we ran a farmers' day, and we got farmers down to come and see the work... They couldn't believe what was going on. And [...] it sort of changed their perspective.” Emotions are vital for sustaining participation and fostering meaningful engagement in multisolving. The feelings of hope, pride, and belonging discussed here seem to counter the isolation, powerlessness, and despair often felt regarding climate change, and foster collective action, thereby turning climate anxiety into optimism. These emotional drivers help normalise sustainable behaviours, embed them into social norms, and drive further change. Effective strategies therefore combine technical solutions with inclusive communication that builds trust, connection, and shared vision with a hitherto sceptical and apathetic general public.

9. Risk, Experimentation, and Learning Cultures

This section explores how effective multisolving is often associated with organisations' willingness to experiment, accept calibrated risks, and learn openly. Respondents contrasted such cultures with risk averse settings, where historic funding arrangements and associated reporting locked actors into siloed routines, suppressing collaborative innovation. Propensity to take risks can vary across sectors, likely due to such factors. However, there appears to be a desire by some to move towards a culture that is more comfortable relinquishing some control.

For example, some community and third-sector organisations have been able to access philanthropic or less prescriptive funding, supporting experimental approaches and accepting that change and measurable outcomes may take time. There is a sense that this flexibility and

extended timeline is more conducive to multisolving, as it allows co-benefits to materialise over time, rather than having to have been identified from the outset. The issue of time is echoed in other contexts where successive funding, or long-term funding at a significant level, have allowed organisation to take on projects that may have otherwise have been deemed too risky.

There is however an acknowledgement that more flexible and responsive approaches, often seen as bedfellows of experimentation and learning, may be easier for smaller organisations who, due to their size, are able to be more agile and fleet of foot in response to community need. Meanwhile, larger organisations which have traditionally been more tightly bound by rules and regulations are looking to employ new approaches that enable a more visionary, integrated and responsive approaches. For example, one Protected Landscape respondent [PL1] described how their ambitious vision carried inherent risk, as they had to proceed without full funding in place to deliver every aspect of their vision. In practice, this meant treating the overall vision like a jigsaw puzzle: using existing funding to deliver certain pieces of the jigsaw with an awareness of how it contributed towards the overall picture. Despite a recognition that this approach may deter others from participating in the absence of a clearly defined and resourced route to success, there appears to be a desired shift towards this way of working.

Despite these shifts, entrenched organisational norms often persist, particularly in the public sector, where statutory duties take precedence over discretionary collaboration, as described by a community organisation below:

“I just often get a sense that the public sector doesn't want to know about our work because it makes their job more difficult. You know it's not business as usual. It's easier for them not to... I could tell you a long story about a piece of consultation work that I delivered to a local authority, that in essence provided them with the framework to deliver something... from the high level the steering group, the cabinet members and all that were very keen. But once it got down to the offices just you could just see, you know, we only do this, this is what we do. Trying to see something in the whole in a broad approach just wasn't possible.” [CE3].

Established organisational norms often meant that individuals were reluctant to relinquish control and to consider issues that typically fell outside the scope of their usual responsibilities with organisations. Many respondents expressed frustration in this regard.

To counter these constraints, some organisations actively cultivated learning cultures through networks that shared resources and expertise, reducing isolation and building confidence to pursue unconventional initiatives, as described by a public sector service provider below:

“The network is important, I think, because Wales is the only country I'm aware of where there is a network of communities that come together to set up [the initiative]. It's something quite unique. So we try to make sure that everyone's a part of the network and that everyone gets an opportunity to discuss ideas and learn from each other”. [WR1].

Similarly, organisations working with individual communities aimed to “take that learning, replicate it, scale it, share it, pass it on” [WR1]. By working in a networked way, or as part of a consortia, individuals and groups felt more supported and less isolated, which in turn built confidence to pursue more challenging or unconventional initiatives. As one housing partnership commented:

“Why do this on your own - why ... do the hard jobs on your own when you can do [them] together?” [DH2]

It is acknowledged that working in new ways to achieve co-benefits may not always be easy, however multisolving approaches may help facilitate this transition and by working together and sharing learning and best practice, it is evident that changes can be accelerated across a multitude of contexts.

10) Rural challenges

Respondents across sectors recognised that rural areas faced particular challenges when engaging with the net zero agenda, as summarised in this quote:

“In rural locations there tend to be more infrastructure or practicality barriers associated with making green choices, such as taking public transport and walking or cycling more often. There can also be challenges in terms of the typical type of housing where you live, for example with older properties more difficult to heat and insulate. So we have found that there are different types of barriers depending on where you live”. [WG1]

Some identified specific rural policy gaps as hindering their work, as described by this third sector organisation:

“Looking at other countries that have been successful is having investment in support of that process and we haven't got that in Wales yet. So as a consequence, [project] is kind of a lone voice trying to forge its way forward through kind of ad hoc partnerships and money that can bring in rather than a kind of a clear line of progress, with support all along the way. So we're also working at a national level to try and get the next Welsh Government to have one of those... your industry strategy development.” [CE2].

However, our findings also highlight that many of these challenges can be mitigated or eased by multisolving enablers such as early place-based engagement, facilitated conversations and open learning, to cite but a few examples discussed already. In other words, while rural barriers exist, many are not insurmountable.

Nonetheless, it must be acknowledged that some barriers persist within a rural context; challenges around land use for example have been politicised, whilst issues to do with food and poverty can be very sensitive and personal. In such cases, rather than viewing these challenges as fixed, multisolving can act as a means of softening trade-offs and gradually moving towards resolution.

Despite economic pressures acting as a pressing concern for many, some organisations questioned the usefulness of viewing the world through an economic lens, for example:

“I'm becoming less and less convinced that it is all about the economy. But even though that's probably where we started from in some ways... I think more and more we're seeing that viewing the world through that lens is skewing outcomes away from multisolving approaches”. [CE3]

Perhaps what is significant here is that organisations increasingly recognise that approaching challenges through a single lens, even if that lens is one that prioritises net zero, may not in the very long run be the most effective at reducing carbon emissions. A multisolving lens, which aims to maximise co-benefits and minimise trade-offs – taking a ‘good enough’ approach may lead to a greater capacity for net zero action in the longer term.

Taken together, these insights show the importance of approaches that can work in different situations and respond to what communities need. As rural organisations deal with a range of

pressures, the task ahead is not only to reduce emissions but to create the conditions that help people take part in that transition. For practitioners and policymakers, this means focusing less on one-size-fits-all solutions and more on providing the space, resources and support that allow multisolving approaches to grow in ways that make sense for rural communities.

Conclusions and Recommendations

Conclusions

Our findings clearly demonstrate that multisolving approaches offer an effective means of advancing progress towards net zero. For example, participants clearly stated that support for projects and initiatives with net-zero benefits can be strengthened by framing interventions through health, economic, or cultural lenses that resonate with different audiences. Moreover, they told us that the pursuit of co-benefits encourages ways of working - such as collaboration, integration, involvement, prevention, and long-term thinking - that are widely recognised as conducive to sustainable development practices.

It is evident from these findings that multisolving is a valuable approach for those committed to reducing carbon emissions. However, our analysis shows that several considerations must be addressed for multisolving to be effective, including how communities are involved, how places are understood, and how challenges can be met. These considerations are explored in more detail below. Ultimately, this study shows that multisolving has delivered clear benefits across the projects and experiences reviewed. This discussion aims to distil the key principles that explain these successes. This prepares the ground for practical recommendations, in the final section, for practitioners, organisations and governments working across diverse contexts and at different scales who are keen to reap the benefits of multisolving.

The case for multisolving

Multisolving offers an opportunity to maintain a meaningful and rewarding focus on climate action at a time when political uncertainty is causing some actors to retreat from net zero commitments.

One of the most pressing messages emerging from our findings is that we should not shy away from, or give up on, net zero action, as multisolving offers a practical and constructive way forward by engaging the support of publics in navigating complex challenges. In what follows, we show how multisolving can create a more workable and supportive path towards net zero by strengthening legitimacy and aligning action more closely with the needs of communities.

The literature suggests that co-benefits can enhance acceptance by making climate initiatives more relevant to everyday priorities (Mayrhofer and Gupta 2016; Jennings et al. 2019), and our findings reinforce that these benefits can also help sustain political commitment by reframing climate action as a practical route to improving community well-being, prosperity, and capacity. Participants described multisolving as motivating because it delivers visible gains rather than abstract targets, which is critical for those who may be sceptical of climate agendas. This reinforces evidence that people-centred, place-sensitive approaches are vital for maintaining

legitimacy in rural contexts (Yorke et al. 2025; University of Strathclyde 2024), while adding new insight by showing how multisolving can reassure actors who worry that climate action has become too politically risky.

Furthermore, our findings extend the existing literature by foregrounding the motivational and emotional dimensions of multisolving; aspects that are only indirectly acknowledged in current research. While inclusive governance and participatory processes are recognised as important for anticipating trade-offs (Lah 2025; Iacobuță et al. 2021), less attention has been paid to how multisolving generates positive social experiences that sustain engagement. Green (2025) emphasises that engagement strategies must create spaces for dialogue and mutual understanding, even where disagreement persists, as this is critical for legitimacy in contested rural landscapes. Participants in our study highlighted that climate initiatives which bring tangible community benefits feel rewarding, empowering, and worthwhile, strengthening collective agency and local pride in ways that technical climate framings alone rarely achieve. This aligns with work showing that making value and meaning visible is essential for overcoming rural scepticism (Woods et al. 2021; Green et al. 2020).

Our results go further by illustrating how co-benefit-oriented approaches help reaffirm the relevance of climate action for those who might doubt its validity. Net zero can be pursued by ‘stealth’; instead of leading with climate goals, actions to reduce carbon can be embedded as co-benefits alongside other outcomes that communities value. When climate strategies enhance health, cultural vitality, local capacity, or economic security, they resonate more deeply with rural identities and aspirations, thus reducing resistance. In this way, multisolving acts as a bridge between net zero commitments and everyday well-being, contributing to debates on how to build durable public support for climate action in politically uncertain times.

Considerations for doing multisolving: working with publics

As the advantages of multisolving become clear, it is equally important to attend to the conditions that allow this approach to work effectively in practice. Here we identify and discuss key considerations that organisations, project teams and those working with communities and external partners need to keep in view to ensure multisolving delivers its full potential.

Multisolving works well when it is place-based and people-centred. This approach reflects a wider literature on place-sensitive approaches that prioritise bottom-up processes over top-down interventions. These approaches tend to secure stronger legitimacy and uptake because they align with local priorities and avoid unnecessary trade-offs.

Our cases show that when initiatives are embedded in local networks and supported by trusted convenors, they deliver multiple benefits: ecological gains, stronger governance relationships, and improved social cohesion. This resonates with evidence from hyper-local governance (Treloar et al. 2025) and grassroots stewardship (Jackson and Rondel 2025), which demonstrate how relational trust and partnership working can sustain action beyond political cycles. Similarly, research on deliberative processes and climate assemblies (Roberts et al. 2023) highlights that early engagement and agreed principles create spaces for constructive dialogue, enabling solutions that work across sectors rather than in isolation.

These patterns illustrate the potential for multisolving, where interventions are designed to address interconnected challenges rather than single issues. Cultural research shows that integrating heritage and language can strengthen belonging and trust, creating social foundations for nature recovery while supporting cultural resilience (McFadyen et al. 2025). Our findings connect with this by showing how locally rooted narratives and relationships shape the acceptability and durability of climate action. When governance, ecological restoration, and cultural identity are considered together, the result is not only more inclusive but also more efficient, as resources and efforts deliver overlapping benefits. This reinforces the argument that place-sensitive, participatory approaches are a practical route to multisolving, embedding climate responses within local systems and values while advancing fairness and inclusion.

Inclusion and identity are central to multisolving, not only as an ethical principles but as practical enablers of approaches that deliver multiple benefits. Working with identity markers such as the Welsh language can strengthen belonging and trust, creating social foundations for climate action while supporting cultural resilience.

Roberts et al. (2023) show that bilingual assemblies and attention to cultural heritage foster engagement, while McFadyen et al. (2025) demonstrate how integrating intangible cultural heritage into nature recovery deepens relational ties and mobilises participation. These findings resonate with our cases, where early engagement and trusted facilitators enabled solutions that were locally relevant and avoided unnecessary trade-offs. However, identity is not static. Changing rural demographics and inward migration introduce tensions that require approaches attuned to plural senses of Wales, ensuring that inclusion does not become exclusionary.

However, the data also shows that inclusion in rural communities is more complex than cultural identity alone. Respondents repeatedly highlighted the role of technology, both as an enabler and a barrier, the persistence of structural rural inequalities, and the influence of social and gendered stigmas on participation. These dynamics reveal that culturally sensitive engagement must be accompanied by attention to connectivity, accessibility and the lived realities of rural life. Projects that recognised these intersecting factors, rather than treating them as peripheral, were consistently perceived as more effective in building trust and participation within the Welsh countryside.

This complexity underscores the need for participatory processes capable of navigating diverse and evolving identities while maintaining cultural integrity. Approaches attuned to plural senses of place are better positioned to sustain collaboration in rural areas shaped by demographic change and inward migration. The evidence shows that inclusive and culturally sensitive engagement, combined with attention to the structural inequalities, technological barriers and social dynamics that shape participation, is essential for applying cobenefit- principles effectively within the net zero sphere. Rather than viewing identity or inclusion as obstacles, recognising their dynamic and layered nature enables climate responses that are fair, adaptive and rooted in the lived realities of rural communities. In these contexts, such approaches generate not only participation but also the legitimacy required for climate action to endure.

Different ways of thinking coexist in place-based initiatives and can create both synergies and tensions. Local experience is essential for designing solutions that fit everyday realities, while expert knowledge is needed to understand system interactions and risks.

The most effective outcomes occurred when these perspectives were combined through co-production, allowing local actors to provide ‘situated’ insights (Carlson and Caretta 2021) and shape priorities, whilst technical expertise could provide different scales and forms of knowledge on system interactions and function – coming together to enable decisions on both the desirability and feasibility of actions. This supports research that calls for valuing experiential knowledge alongside scientific abstraction and creating mechanisms for dialogue rather than dominance of one approach (Yeh 2016; Nicolaisen 2024). Our cases also echo evidence that grassroots actors develop deep situated expertise which can inform policy when formal channels exist, but where time was short or partnerships weak, expert framings prevailed and local knowledge was treated as anecdotal (Jackson and Rondel 2025; Wartmann and Cary 2025).

We also found that many effective actions were not labelled as climate actions by communities but were understood through everyday concerns such as health, well-being and economy. Participants rarely separated issues into administrative categories, raising questions about whether expert divisions between climate and non-climate actions are helpful. Engagement was stronger when facilitation respected these framings. This aligns with literature showing that people interpret climate through lived practices rather than global metrics (Yeh 2016; Renouf 2021). It also reflects calls for governance that integrates cultural and ecological values and supports co-created visions for nature recovery (Wartmann and Cary 2025). Overall, our findings suggest that bridging epistemic divides requires governance that honours everyday understandings while creating structured opportunities for expert and lay knowledge to work together, ensuring interventions are both technically robust and socially legitimate.

Multisolving approaches can make net zero actions socially meaningful while addressing structural interdependencies that influence feasibility.

Achieving net zero requires approaches that integrate behavioural change with systemic transformation, recognising that individual choices are shaped by structural conditions. Our findings corroborate that behavioural interventions alone are insufficient when structural conditions constrain choices (Kukowski and Garnett 2024) and that there is a need to reconfigure sociotechnical systems if new patterns of behaviour are to be established (Voulvoulis et al. 2022). This aligns with Watson and Shove’s argument that infrastructures and social practices are recursively intertwined, and that transitions in energy systems (for example) depend on reconfiguring the material arrangements and conventions that sustain everyday life (Watson and Shove 2022).

Our case studies show how to create greater appeal and buy-in for this transition by ensuring that initiatives meet people’s everyday needs and foster a sense of ownership and identification with the emerging activities. Drawing on Watson and Shove’s analysis (2022), we understand that sustainable practices become lasting when infrastructures and expectations of normal provision are reshaped in ways that make new routines viable and meaningful locally.

Furthermore, our case studies exemplify how wider systems changes are being operationalised within rural contexts, including waste management, energy provision, and transport. Historically, these infrastructures have been locked in, limiting flexibility and innovation. However, our empirical examples show how rural communities can redesign systems to promote sustainability, affordability, resilience, and alignment with climate objectives.

Applying multisolving in and across organisations

Given the clear benefits that multisolving has delivered across the projects and experiences we reviewed, there is strong potential to enhance and extend this way of working into a wider range of settings. In this section, we consider how the principles of multisolving can be effectively applied in and across different organisations, reflecting on internal ways of working and approaches to collaboration. We also highlight where there is scope for further engagement with a multisolving approach in currently under-represented contexts.

Multisolving has significant potential to inform how organisations design their internal governance, particularly in relation to integrated planning, monitoring and reporting.

Such an approach can help organisations to navigate external challenges from funding and reporting requirements that are at odds with their own multisolving objectives. The literature highlights the need for integrated approaches that align decisions across sectors and break down siloed ways of working (Lah 2025; Iacobaș et al. 2021); our findings add to this by offering empirically grounded examples of how co-benefits may be achieved in spite of wider conditions that remain short-term and siloed. Participants described how multisolving provides a helpful organising principle for joining up internal strategies, enabling teams to plan, monitor, and evidence their work in ways that reflect the interconnected outcomes they aim to deliver. This is particularly valuable given the external pressures many organisations face from funding and reporting frameworks that remain fragmented and short-term. Key to this is collecting evidence of what has worked previously to inform learning and future planning. Our study adds to these debates by showing how organisations in rural Wales are using multisolving as a practical tool to navigate these constraints.

Multisolving also shapes how organisations work externally through partnerships and networks.

Multisolving does not stop at internal organisational change; it actively influences how organisations connect and collaborate beyond their boundaries. Literature on integrated climate delivery emphasises that external collaboration is essential for overcoming capacity gaps, pooling resources, and coordinating action across systems and scales (United Nations 2023; McMillan et al. 2024). Our participants described partnerships that ranged from deeply place-based collaborations to networks extending beyond local areas to share learning, access specialist expertise, and secure additional capacity. Multisolving strengthens these external relationships by aligning priorities and enabling resource pooling, which helps actors coordinate efforts across sectors such as health, environment, culture, and community development, creating synergies that extend to regional levels and beyond.

At the same time, participants reported challenges that affect the effectiveness of these networks, including short funding cycles, policy gaps that create uncertainty, weak infrastructure such as insufficient grid capacity, and siloed working practices reinforced by entrenched behaviours. These issues often limit the ability of organisations to initiate or sustain collaboration over time. Conversely, positive experiences such as funders adopting long-term support and flexible approaches to outputs, visionary leadership bringing together diverse stakeholders towards collective action, and networks that reduce isolation and build confidence to pursue unconventional initiatives, illustrate how multisolving principles can underpin successful partnerships when conditions enable adaptive and inclusive processes.

These findings show that multisolving is not only about internal integration but also about building relational infrastructure that supports collective action across organisational boundaries. They highlight both the barriers and the enabling factors for strengthening external networks and amplifying impact in resource-constrained and fragmented governance contexts.

Multisolving is required at all levels of governance, yet the ease with which it can be applied varies significantly depending on the scale at which organisations operate.

Community-based organisations in our case studies described multisolving as a natural and intuitive way of working, consistent with literature showing that locally rooted actors tend to approach issues holistically because their daily work is shaped by lived experience, multiple priorities, and close relationships with residents (Treloar et al. 2025). This connects with earlier discussion on epistemologies, where experiential knowledge often cuts across administrative categories and aligns more closely with how communities perceive interconnected social, cultural, and environmental needs. Our findings add to this debate by showing how multisolving emerges organically in these settings, allowing smaller organisations to join up issues such as well-being, access, cultural participation, and environmental outcomes without encountering the structural barriers that can constrain larger institutions.

In contrast, participants described how multisolving becomes more challenging as organisations increase in size and become more institutionalised. The literature on governance and sustainability highlights that formal structures, funding mechanisms, and reporting frameworks often reinforce silos and fragmented delivery, even when policy intentions emphasise integration (Audit Wales 2025; Stokes and Smyth 2024). Despite the Well-being of Future Generations Act calling for integrated and collaborative working, our findings suggest that administrative boundaries and legacy systems continue to hinder cross-sector planning in practice. Our study contributes new empirical insight by identifying where these barriers are being broken down or worked around and provides recommendations in the following section as to how they might be overcome.

Whilst multisolving is highly beneficial in community settings and for area-based management, it should also inform thinking about development planning, where design interventions could be used to achieve co-benefits in line with sustainability goals in Wales.

Our study shows how multisolving can be embedded in development processes to ensure that strategic objectives under the Well-being of Future Generations (Wales) Act, particularly

integration, long-term thinking and collaboration, are actually realised in proposals. This adds novelty by demonstrating a practical mechanism, multisolving, for operationalising statutory sustainability ambitions on a practical level.

This was evidenced across several interventions. The Ty Gwyrddfai hub for example was created through a cross-sector partnership that combined housing, education and private industry to deliver economic benefits, skills development and housing decarbonisation simultaneously. Similarly, Cornwall Council took a waste product from farms to create an alternative fuel source, thus dealing with a waste problem and creating an economic opportunity. In both cases, the multisolving design choices operationalised integrating objectives, planning for long term co-benefits and embedding collaboration in delivery, thus driving WFG Ways of Working.

Whilst the wider literature show that pressures for economic growth can sometimes derail best practice around climate and resource stewardship (Malcolm et al. 2025), our findings strengthen claims that growth and sustainability need not be mutually exclusive (Grantham Foundation 2024). Furthermore, emerging research on alternative definitions of growth, such as growth as community building, bottom-up growth and growth as maintenance or survival, challenges GDP centric paradigms (Cymru Wledig LPIP Rural Wales 2025). In both instances, our research demonstrates that multisolving fosters considered, joined-up thinking by embedding co-benefit evaluation into development planning, helping organisations resist the narrow logic of short-term economic gain. This operational framing of multisolving as a safeguard against siloed growth pressures offers a novel contribution to debates on sustainable development and community-led planning.

Recommendations

This report has sought to explore how net zero actions to tackle climate change – working towards ‘net zero’ – can simultaneously generate multiple, complementary benefits including nature recovery and easing the cost of living crisis. The recommendations below, suitable for a range of stakeholders including Welsh Government; funders; local authorities, health boards, public bodies; anchor institutions; third-sector/community organisations; and others, provide practical guidance on how this may be achieved. Mirroring the structure of the discussion, the recommendations below advocate the adoption of multisolving, set out how it should be approached, and describe how it can be adopted.

The primary audience for each theme is noted below each sub-heading.

People-centered, place-based and inclusive climate action.

(Aimed at practitioners and organisations working at all levels, where strategic organisations also have an enabling role).

1. Don't give up on climate commitments - Anchor Net Zero objectives in co-benefits people value

Within the current political and economic climates, there is a risk that organisations shy away from net zero action. This study provides compelling evidence as to why organisations from government to community level should not give up, but instead double-down in ways that deliver climate action framed by a range of co-benefits that appeal to rural communities. Net zero must be seen as a practical route to improving everyday life rather than an isolated environmental obligation. This means communicating climate measures as opportunities to enhance rural connectivity, strengthen local economies, reduce energy insecurity, improve housing quality, and support cultural and community assets. Practically, organisations should develop messages and plans that foreground these multiple gains and highlight how climate initiatives can address long-standing challenges alongside environmental goals. By consistently presenting net zero as a pathway to wider well-being and resilience, organisations can build broader support, maintain momentum, and make climate action more compelling and relevant across diverse rural contexts.

2. Centre inclusion and identity through embedded community partnership

Organisations adopting a multisolving approach should embed bilingual, culturally grounded, and community led practices from the outset to ensure that solutions are legitimate, inclusive, and contextually rooted. This requires integrating Welsh language and cultural considerations into the design and communication of activities, engaging via trusted facilitators early, and actively planning for the diversity and complexity of identities found across communities in Wales. To avoid ‘parachuting in’ or imposing external agendas, organisations should invest in sustained relationship building, co-production processes, and the mobilisation of local skills, assets, and priorities as drivers of multi-benefit outcomes. Welsh Government can strengthen this approach by structuring funding and expectations around long-term partnership, participatory practice, and the development of bilingual facilitation capacity, thereby ensuring that multisolving initiatives are genuinely embedded and coproduced with the communities they aim to support.

3. Align ‘ways of knowing’ to improve multisolving practice

Organisations should actively bridge expert and community ways of thinking by treating everyday experience as a form of legitimate expertise and creating routine opportunities for both knowledge types to shape decisions. This involves using co-production methods that allow residents to define priorities and offer local insight, while technical specialists provide understandings of system function and interactions. It also means framing climate and development actions in terms that reflect daily rural concerns, and reducing reliance on rigid institutional categories that do not resonate locally. Practically, organisations should embed participatory facilitation, require decision processes to draw on experiential as well as technical evidence, and build governance structures that support dialogue rather than the dominance of any single perspective. This approach ensures that multisolving interventions are meaningful to communities while remaining analytically robust.

4. Anticipate and mitigate against rural trade-offs

Organisations pursuing multisolving should anticipate and directly address rural trade-offs by using place-based dialogue, participatory scenario tools, and sustained engagement to navigate

tensions around land use, infrastructure limitations, and cost and coverage dilemmas. Creative facilitation, alongside simply spending time with people to unpack sensitive issues such as food insecurity, poverty, and politicised land debates, can help reframe problems, surface shared values, and build the relationships needed to gradually soften entrenched trade-offs if it is not possible to remove them altogether. Our findings reinforce that place sensitive, participatory approaches offer a practical route to embedding climate and well-being objectives within local systems while promoting fairness and inclusion. Although rural constraints are real, many can be eased through early engagement, facilitated conversations, and open learning, demonstrating that barriers should not be treated as fixed but as conditions that multisolving processes can progressively reshape through collaborative, locally grounded practice.

Organisational capacity and skills for multisolving.

(Primarily aimed at organisational leadership across all sectors, where Welsh Government and other strategic organisations have enabling responsibilities).

5. Develop capacities not just projects

Organisations should prioritise building enduring internal capacities rather than focusing primarily on the delivery of specific, time limited projects. In practical terms, this requires upfront investment in systems thinking and geographical knowledge alongside thematic expertise, enabling organisations to make informed decisions about what interventions are needed, how they fit with wider aims, and who needs to be involved. These capacities support more integrated responses to complex place-based challenges and reduce reliance on isolated or reactive interventions. Organisations should also embed facilitation and relational skills as core competencies for staff working with communities. This includes the ability to convene partners, support collective sense-making, and sustain participation over time. Treating these skills as fundamental to organisational practice helps ensure consistency in ways of working and supports long term collaboration. To sustain this approach, organisations may require continued access to support and funding that recognises skills development and learning as legitimate and necessary organisational investments.

6. Create, resource and mandate structural enablers for collaboration

Organisations and public sector bodies should explicitly resource and recognise integrative roles that span organisational, sectoral and geographic boundaries. These roles play a critical function in curating partnerships, sharing tools and knowledge, and stewarding learning across teams and places. Intermediary or integrative roles such as these can also be used to connect within public sector settings and across siloed teams, mobilising skills and resources to deliver multiple benefits. To be effective, such roles require protected time, organisational legitimacy and dedicated physical and temporal spaces for collaboration. Where external mandates or reporting requirements encourage joint working in this way, these should be accompanied by investment in coordination capacity to ensure collaboration is meaningful rather than purely procedural. Together, these enablers ensure that collaboration is properly supported - with the roles, spaces, networks and coordination capacity needed to overcome siloed structures, close capacity gaps, pool resources and share knowledge effectively.

System and funding reform for long-term, integrated change.

(Primarily aimed at strategic planning bodies including Welsh Government).

7. Focus on systems change to unlock sustainable everyday practices

Organisations committed to multisolving should take deliberate action to reshape the underlying systems that limit sustainable behaviour, rather than relying on behaviour change measures alone. This requires working with communities to identify the structural barriers they face, using systems approaches to co-produce solutions that are feasible in everyday life, and aligning interventions with the realities of local infrastructure, norms, and expectations. Practically, organisations should invest time in mapping locked-in elements of rural systems such as waste, energy, and transport, and collaborate with communities to redesign these systems so that sustainable, affordable, and resilient practices become the easiest and most meaningful options. By focusing on reconfiguring infrastructures and patterns of provision, and by testing new system arrangements with community partners, organisations can create the conditions in which lasting behavioural change is possible and multisolving outcomes can take hold.

8. Navigate financial limitations through strategic and integrated working

To address the resource and governance barriers created by short-term, siloed funding and single-issue reporting, funders and organisations should prioritise approaches that enable strategic continuity, integration and learning. Funders can support this by moving, where possible, towards multiyear, flexible revenue funding, using co-benefit sensitive metrics that recognise wider social, economic and environmental value, and applying proportionate, lighter touch reporting for small organisations. Even where funding remains short-term, continuity can be strengthened by encouraging applicants to articulate rolling strategies that situate current activity within a longer-term trajectory. At the same time, organisations should embed integrated, co-benefit focused thinking within internal governance, ensuring that individual projects contribute coherently to a wider mission. Key to this are reporting and evaluation processes that gather evidence on multisolving and how it was achieved, not only for accountability but to inform future planning by identifying the mechanisms, practices, and conditions that enable multiple benefits to arise in practice. Maintaining a rolling organisational strategy and using simple, consistent approaches to tracking and communicating co-benefits can help sustain focus, reduce administrative burden and support progress towards longer term, transformative outcomes despite fragmented funding environments.

9. Reframe growth through multisolving in development planning

Development planning in Wales should adopt multisolving as a guiding principle. This requires moving beyond a narrow economic lens and embracing broader definitions of growth, such as growth as community building, bottom-up growth and growth understood as maintenance or survival, so that proposals prioritise long-term well-being over short-term financial gains (Hjort et al. 2025). Integrating multisolving into existing planning processes would enable teams to consider environmental, social, cultural and economic outcomes together, reducing siloed decision making and encouraging a more joined-up view of how development shapes places

over time. Embedding these expectations within day-to-day workflows helps align routine design choices with long-term well-being objectives and promotes more collaborative, preventive and sustainable approaches to development. To achieve this, planning authorities should require proposals to demonstrate co-benefits, routinely test decisions against the WFG Ways of Working, and shift from output-driven indicators of growth towards measures that reflect what communities value.

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Appendices

INTERVIEW SCHEDULE (PRACTITIONERS):

1. Understanding your organisation's role in net zero

- Can you offer an overview of your organisation/named project? Prompt: sector, size, mission, main activities (more on outcomes in next section).
- Can you describe your role and responsibilities within the organisation/project?
- What formal or informal policies or strategies guide your organisation/project's approach to net zero?

2. Exploring co-benefits and multisolving approaches

- Can you please describe the different benefits and co-benefits that have been achieved by your project? Probe: with regards to the net zero driver, was the focus on mitigation (stopping emissions) or adaptation (building resilience)?
- How was this initiative/project conceived? Were net zero co-benefits intentionally designed from the outset, or did they emerge over time? Why did you want to achieve the specific combination of outcomes? Are the benefits achieved in the short or long term?
- Who played a key role in its development? What skills or experiences were most critical and why? Prompt: Understanding of relevant systems and how synergies can be achieved; social skills or awareness of behavioural drivers; position of influence or existing relationships
- Does this activity exist within a rural context? If so, how is this significant? Prompt: More or fewer benefits or trade-offs? Infrastructure? Access to resources?
- What is the legacy of this activity? eg. replicated, led to other initiatives

3. Factors that enable multisolving solutions

- What do you think was key to making your project work? What factors enable and reward the achievement of co-benefits? Is it easy/better to have multiple outcomes in synergy?
- What methods or tools did you use to track impacts (benefits and co-benefits), and what have you learned from this?
- How did governance structures (local or Welsh Government) support or hinder the development of this initiative?

- What funding models, financial barriers, or opportunities shaped this project? Were any innovative financial approaches used?
- What was the role of different stakeholders in these solutions? (eg. government, business, communities)
- To what extent has the Well-being of Future Generations Act been a driver/enabler for this project, both in terms of the 7 Goals and the 5 WoW's? (Prosperous, Resilient, Healthier, More equal, Cohesive communities, Vibrant culture and thriving Welsh language, Globally responsible) (Long-term, Prevention, Integration, Collaboration, Involvement)

4. Challenges and barriers to net zero synergies

- Were there any trade-offs or conflicts associated with this project/activity? eg. economic, cultural, biodiversity. Were they foreseen? How were they justified?
- Have you experienced any challenges around inclusion? (e.g. involvement in design to initial engagement with the project to long-term buy-in, etc.).
- How did you navigate these challenges? Were workarounds or adaptive strategies used? How did you engage stakeholders in overcoming challenges?

5. Opportunities and recommendations for future action

- Do you see further opportunities to integrate net zero efforts with other environmental, social, cultural, or economic goals? Prompt: Within/beyond this project or scaling their work up/out?
- Based on your experience, what specific actions could improve collaboration between sectors to enhance net zero co-benefits?
- Are there any governance structures or decision-making processes that should be improved to support this? What support (e.g., funding, policies, technical assistance) would make multisolving more scalable and practical in day-to-day work?
- If another practitioner were starting a similar project, what's the one key lesson you'd want them to know?
- Are there any specific models, toolkits, or frameworks you've used that you'd recommend for others trying to achieve similar co-benefits?

6. Is there anything else you'd like to add, or any insights we haven't covered that you think are important?

INTERVIEW SCHEDULE (POLICY MAKERS AND 'NON-PROJECT SPECIFIC' STAKEHOLDERS):

1. Understanding your organisation's role in net zero policy

- Can you offer a brief overview of your organisation's objectives and priorities?
- Can you describe your role and responsibilities within your organisation?
- What formal policies or strategies guide your approach to net zero?

2. Understanding how your organisation supports net zero co-benefits

- In what ways do your policies/ strategies/projects support the delivery of net zero while achieving wider benefits (e.g., job creation, biodiversity enhancement, community well-being)?
- How do you ensure that policy frameworks/projects you deliver encourage multisolving approaches, rather than creating silos or unintended trade-offs?
- How many different projects are they involved with? Do they connect across different organisations/communities?
- How does your organisation monitor the impact/outcomes of policies/your projects in terms of the diverse benefits discussed? (Prompt: Do you collect data? What? Do you consider unintended barriers or missed opportunities?).
- Are there specific rural considerations that impact your work on net zero?
- What lessons have been learned about how your policies/projects best enable net zero and wider benefits?

3. Understanding the challenges or barriers to net zero co-benefits

- Are there any barriers that make it difficult to deliver both net zero and wider co-benefits? (Prompt: peoples' priorities(!), regulatory hurdles, lack of coordination, funding constraints.)
- Is it difficult to overcome any trade-offs or conflicts between net zero ambitions and other priorities? (e.g., economic growth, land use, social policy).
- In your experience, do the Wales Future Generations five ways of working (long-term thinking, prevention, integration, collaboration, and involvement) support multisolving approaches in your work?

4. Opportunities and recommendations for future policy action

- Where do you see opportunities to better integrate net zero efforts with wider environmental, social, cultural, or economic goals?

- What levers (e.g., incentives, regulations, public-private partnerships) are most effective in encouraging net zero initiatives that provide multiple benefits?
 - What additional support (e.g., funding mechanisms, policy innovations, capacity-building) would enable more effective multisolving in your area of work?
 - Are there specific governance structures or decision-making processes that need to be improved to support integrated solutions?
 - What policy changes could make it easier for organisations to maximise co-benefits and collaborate in net zero delivery?
 - If you could recommend one key change to improve policy effectiveness in delivering net zero and co-benefits, what would it be?
- 5. Is there anything else you'd like to add or any insights we haven't covered that you think are important?**

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