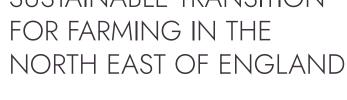
Energy Democracy Project

SUPPORTING A JUST AND SUSTAINABLE TRANSITION FOR FARMING IN THE





ABOUT ENERGY DEMOCRACY PROJECT

Energy Democracy Project (EDP) was established as a company in 2003 to support educational and research activities around climate change. EDP has focused on building support for energy democracy and a just transition in the UK since 2014. EDP focuses on engaging and consulting trade unions, unionised/non-unionised workers and communities in building visions and pathways for a just and rapid climate transition.

ABOUT THE AUTHOR

Dr Helen Coulson is a researcher working across the academic and policy interface in the areas of environmental planning, climate change, food systems and socioenvironmental justice. Just Transition Researcher and Project Coordinator at EDP.

CITATION

The preferred citation is: Coulson, H. (2023) Supporting a Just and Sustainable Transition for Farming in the North East of England. Energy Democracy Project.

ACKNOWLEDGEMENTS

We are grateful to funding and support from Joseph Rowntree Charitable Trust. The Just Transition research project was led by Energy Democracy Project (EDP), with information and input provided by the North of Tyne Combined Authority (NTCA). The content and recommendations of this report reflect the views of the EDP.

This research would not have been possible without the participation of stakeholders from across the agricultural sector that contributed their time through informal conversations, semi-structured interviews and participation in the three workshops. Your insights, ideas and expertise have directly shaped our understanding of the challenges and opportunities facing farming in the region and the recommendations in this report.

EDP are very grateful to staff at the North of Tyne Combined Authority for providing input into the report and support, in particular, Elizabeth Lunn, Leanne Wilson, Lewis Evans, Fraser Serle, Michelle Stone, Emma Patterson, and Alex Black. We would also like to thank staff at Northumberland County Council, North Tyneside Council and Newcastle City Council for providing insights from their local authority area perspective.

The author is also thankful to colleagues at EDP for their feedback and advice on previous drafts of the report, in particular Ben Lennon and his participation in the workshops, and Annie Brooker for her advice and guidance. Finally, the author is grateful to Dr Kirstie O'Neill for providing detailed feedback on an earlier draft of the report - their careful consideration and thoughtful suggestions were invaluable.

CONTENTS

EXECUTIVE SUMMARY	4
1. INTRODUCTION	10
1.1 The Need for a Just Transition for Agriculture	10
1.2 Policy Context: Achieving Net Zero in a Complex Post-Brexit	
Agricultural Landscape in England	10
1.3 Problem Description: The Challenge	12
1.3.1 Climate Change, Biodiversity Loss and Agriculture1.3.2 Achieving Net Zero in Agriculture to Support a Just Transition	12 15
1.5.2 Achieving thei zero in Agriculture to Support a Just transition	15
2. RESEARCH APPROACH	16
3. SETTING THE SCENE	18
3.1 Farming in the North East of England	18
3.2 The Role of the (Expanded) Combined Authority in	
Supporting a Just Transition in Farming	21
4. CITIZEN VOICES: ON JUST AND	
SUSTAINABLE FOOD SYSTEM TRANSITION	22
5. KEY RESULTS	24
THEME 1. Address Uncertainty in the Context of Agricultural Policy Change	24
THEME 2. Support Farmers on their Journey to Net Zero Through the Agricultural Transition	32
THEME 3. Adopt a Place-Based Multifunctional Approach to Land that Balances Land-Based Objectives and Supports 'Multifunctional Farmers'	43
THEME 4. Support a Thriving Tenanted Farming Sector Throughout the Rollout of New Agri-Environmental Schemes	53
THEME 5. Mental Health and Wellbeing Support for the Farming and Broader Rural Community	57
THEME 6. Create Accessible, Flexible Opportunities for People to Learn Agricultural and Land-Based Skills in the Region	62
THEME 7. Facilitate Access to, and Collective Ownership of, Land	72
THEME 8. Support and Encourage Collective and Community-Focused Agroecological Initiatives	83
THEME 9. Nurture the Expansion of Locally Produced Food and Promote the Benefits of Local Food Systems	89
THEME 10. Address Food Insecurity and Environmental Sustainability Together to Ensure Good Food for All	96
THEME 11. Develop a Regional, Place-Based Sustainable Food Systems	
	103
SUMMARY 1	10
LIST OF ABBREVIATIONS 1	13

EXECUTIVE SUMMARY

THE IMPORTANCE OF SUPPORTING A **IUST TRANSITION FOR FARMING**

The future of farming, land management and food production are facing a critical period of transition across the country following the United Kingdom's (UK) exit from the European Union (EU) and the associated Common Agricultural Policy (CAP). The shift from the current regime of subsidies in the form of "Basic Payments" awarded primarily based on size of landholding to the new "public money for public goods" system in England under the Environmental Land Management scheme (ELMs) (Defra, 2020) has been coupled with farmers facing high input costs of feed, fuel and fertiliser in the context of geopolitical turbulence and a cost-of-living crisis.

Agriculture was responsible for 13% of the UK's greenhouse gas (GHG) emissions in 2021 - 55% of the emissions total came from methane, 27% nitrous oxide, and the remaining 18% carbon dioxide (DESNZ, 2023). These emissions, however, are reducing slowly compared to other sectors and the Climate Change Committee (CCC) has recommended a 64% reduction of GHG emissions from the agriculture and land use sector to meet the legallybinding 2050 net zero target in the UK (CCC, 2020). Yet, the CCC recently found that the government's plans for decarbonising agriculture are completely missing or wholly inadequate (CCC, 2022).

In 2020, the North East had a higher percentage of GHG emissions from the agricultural sector (12.15%) as a percentage of total emissions compared to England (excluding London) (10.84%). Across the new North East Mayoral Combined Authority (NEMCA) geographical area,

Northumberland and County Durham had the largest GHG emissions total from agriculture (North East LEP, 2022). Decarbonising the sector is, therefore, crucial in transitioning to a climate-resilient, low-carbon regional economy. This requires supporting farmers, farm workers and land managers to adopt sustainable practices to mitigate and adapt to climate change, whilst maintaining profitability and ensuring sustainable livelihoods.

Taking a 'just transition' approach, the research conducted for this report is grounded in the lived experiences of farmers, farm workers and agricultural **stakeholders**. It revealed the diverse ways the farming sector is currently, and could be in the future, affected by 'sustainability transitions' - highlighting the challenging position of farmers and farm workers in the uncertain policy landscape. Indeed, the idea of 'transition' can feel confusing, messy, disorientating and sometimes threatening for many people involved with farming. Therefore, the research endeavoured to:

- ascertain particular concerns and challenges identified by those already working in the industry, along with those looking to enter the sector and individuals currently studying an agriculture or land-based subject,
- examine how an inclusive, fair and sustainable transition for farming could be supported, and
- explore what a 'just transition' process could entail and look like for the sector in the region based on the experiences and ideas of participants.

MAIN MESSAGES

Several **overarching takeaway messages** emerged from the research in relation to supporting a just transition for farming:

- Agriculture is often side-lined in broader "just transition" discussions, which have tended to focus on energy transitions (see Newell and Mulvaney, 2013); however, a fair and inclusive move to a green economy cannot be accomplished without decarbonising the sector. Greater focus must be placed on supporting a transition to a low-carbon and climate resilient agricultural model. The agricultural transition needs to be flexible and adaptable to enhance societal buy-in from all stakeholders.
- Those involved with farming must be placed at the centre of just transition dialogue and action to drive changes and formulate co-designed strategies and solutions that are grounded on their place-based knowledge, lived experience and the diverse needs of their individual farm businesses. This is crucial to support sustainable food production, nature's recovery and address climate change.
- Shifting farming systems to lower carbon models is challenging and prone to disagreements because it encompasses a range of issues from farmer livelihoods and occupational identity, land use, ownership and management, rural wellbeing, and sociocultural values of 'eating well' and dietary change. This transition is also occurring in a context of complex food systems in which there are significant imbalances of power, for example, between those who produce our food and the concentrated corporate interests that determine the price. Supporting an inclusive and just transition for agriculture is vitally important as part of broader sustainable food system change.
- Harnessing the knowledge, passion and skills of the farming community to support sustainability transitions is based upon respectful dialogue, inclusive engagement, meaningful collaboration, and crucially, a (re)valuation of the role and work of farmers, farm workers and other agricultural stakeholders. Good quality, decent and secure work is vital to increase equity and strengthen sustainable local food systems.

- Greater recognition of the social dimensions and impacts of sustainability transitions on the agricultural sector and its workers are required. What is being asked of farming in the post-Brexit policy landscape is substantial, and is already creating anxiety and worry for many. Farmers need to develop new business models, retrain or upskill, balance the books in an uncertain policy landscape, and also deal with feelings of ambiguity in relation to (changing) occupational and personal identity. Comprehensive guidance, advice and extension services are needed to support sustainable farming livelihoods.
- relies upon multi-scalar actions (that is, coordinated activities at the local, regional, national and international level), cross-sector collaboration and a multi-actor approach (i.e., workers, consumers, businesses and organisations working together), where collective responsibility is taken to support a sustainable and inclusive transition for agriculture. This can also help to build trust, understanding and credibility in low-carbon transitions.
- Overall, there is no one-size-fitsall 'solution' for promoting a just transition for farming, and effective low-carbon transition pathways emerge from the particular geographical and socio-cultural context that are grounded in diverse place-based settings. The research demonstrates that it is crucial to recognise the differences between various farmers and farm types across the region to ensure that no farmer or farm worker is excluded and that all have equal opportunity to benefit from the agricultural transition.

THE ROLE OF LOCAL AND **REGIONAL GOVERNMENT**

The research revealed the Combined Authority could play a significant role in supporting the transformative capacity of actors, groups, communities, organisations and institutions to collectively work towards a just food system transition. In particular, the Combined Authority has a vital convening and facilitating role, working with Government, and workers, businesses and communities, whereby policymakers can help to:

- · Minimise the disruption as much as possible for workers and communities and support farmers through a smooth sustainability transition. This includes: 1) investing in the conditions to support quality green job creation and avoiding job losses, and 2) supporting the upskilling and retraining of those employed in the sector for low-carbon, highly-skilled, well-paid agricultural and land-based jobs.
- **Empower citizens as co-creators** of transformative holistic local and regional food system strategies and policies that link localised delivery measures to national environmental and carbon targets, and food security issues. Placing policy priority on food, farming and land use can help create social, environmental and economic 'co-benefits' (i.e., delivering sustainable diets, promoting prosperity in communities and creating a thriving natural environment) and create more synergistic relationships between food system actors and their (rural and urban) communities.
- Support and leverage investment for an inclusive 'net zero' rural stewardship agenda that prioritises food and farming systems as part of a broader sustainable, regional green economy. To pursue spatially balanced and inclusive growth, which 'levels up' prosperity and opportunity, it is important to invest in the region's natural resources, protect the environment, encourage and support rural businesses, and increase the wellbeing and quality of life of rural communities. A holistic approach to investing in the net zero

- rural economy, which is innovative and responsive to supporting a sustainable and just transition that can provide long-term value for money, will help to increase the resilience of the regional economy.
- · Harness the significant potential of a place-based, sustainable and multifunctional approach to land use and management to deliver social, environmental and economic co-benefits that emerge from our natural assets (such as woodland and peatland). This can make an important contribution to the UK's carbon reduction targets, placing the region as a national leader in sustainable land management.
 - o The UK market for 'natural capital' is growing, creating opportunities for investment in environmental projects and nature's recovery, but attention is needed to ensure that 'green investment' benefits the local community, environment and economy. Overall, the quantification of nature and their translation into natural capital and 'ecosystem services' must be carefully considered by farmers, landowners, land managers, policymakers and others, as it is likely to be central to national Government strategy in the foreseeable future via flagship policies such as the 25 Year Environment Plan (Defra, 2018b) and Environmental Improvement Plan (Defra, 2023a).
- · Engage, plan and monitor over the long-term to support a fair transition for farming (and other high-carbon and energy intensive sectors). This is crucial because sustainability transitions are complex processes that happen across long periods of time with different stages and require significant collaboration, partnership working and cross-sector investment. Ongoing research and early assessment of the place-based social and employment impacts of climate policies and actions are needed to support effective action and ensure all citizens benefit from the low-carbon transition.

• Further devolution to create the North East Mayoral Combined Authority provides a significant opportunity to develop a collaborative approach to support inclusive rural prosperity and innovation. As outlined in the devolution deal, the government and NEMCA: "commit to the development of a clear joint plan for rural growth, stewardship and net zero, which recognises the opportunities and

challenges to the rural economy and the major role the North East can play in addressing them" (DLUHC, 2022: 46). Devolution therefore is a unique chance to seize the opportunities that the natural environment, our rural communities and agricultural sector present to support a sustainable, low-carbon and climateresilient regional food system.

SUGGESTED PATHWAYS FORWARD

11 key themes emerged from the research from which overarching recommendations were developed that require attention and action to support a more sustainable, inclusive and fair future for farming in the North East of England region, they are:

Recommendation 1:

Address Uncertainty in a Complex **Policy Landscape** — The transition to a post-Brexit agricultural policy landscape has created significant concern for the farming community across the region, particularly in relation to financial viability. The Combined Authority could help address this uncertainty through collaboratively establishing clear strategies and targeted interventions with relevant partners to support farm businesses in the North East that may be vulnerable to the low-carbon agricultural transition (e.g., high-carbon, high-input sub-sectors such as intensive livestock agriculture).

Recommendation 2:

Support a Just and Sustainable

Transition for Farmers, Farm Workers and Farming Communities — The Combined Authority could support those working in the farming sector on their journey to net zero through the low-carbon transition to adopt more sustainable farming practices. Specifically, the Combined Authority could examine opportunities to co-design comprehensive fully-funded holistic business support packages for farmers, in order to increase resilience and sustainability at the farm-level.

Recommendation 3:

A Place-Based Multifunctional Approach to Land Management —

The Combined Authority could adopt a place-based multifunctional approach to land that balances land-based objectives and supports farmers to deliver multiple functions (i.e., nature restoration, food production and carbon sequestration) that are sensitive to local context and land characteristics

Recommendation 4:

A Flourishing Tenanted Sector -

The Combined Authority could help support a thriving tenanted farming sector through the rollout of new post-Brexit agri-environmental schemes and ensure that tenant voices are heard and actioned upon by local government.

Recommendation 5:

Worker and Community Wellbeing -

The Combined Authority could collaborate with partners to help promote, roll-out and pilot mental health and wellbeing support for the farming and broader rural community, ensuring that mental health services are co-designed by farmers, for farmers to ensure they are appropriate, relevant and accessible.

Recommendation 6:

Education, Skills and Training -

The Combined Authority could support accessible, flexible opportunities for new entrants to learn agricultural and sustainable land-based skills in the region and help upskill existing workers by encouraging peer-to-peer learning and knowledge exchange.

Recommendation 7:

Access to Land - The Combined Authority could facilitate access to, and collective ownership of, land by taking a progressive and facilitative role to support citizens gain access to appropriate land for sustainable food production. They could also help citizens access land to develop collaborative experimental farms to drive innovation that can inform a just transition for farming.

Recommendation 8:

Agroecological Farming Practices and Collective Enterprises - The Combined Authority could support and encourage collective and communityfocused agroecological initiatives to produce nutritious, sustainable food for their local communities and deliver diverse co-benefits.

Recommendation 9:

Localised Food Systems – The Combined Authority could nurture the expansion of locally produced food and promote the benefits of local food systems in order to create new economic opportunities and routes to market for farmers via short supply chains and improve community food security.

Recommendation 10:

Access to Good Food for All - The Combined Authority could promote and co-develop strategies and support action to ensure that everyone can access affordable, sustainably produced, nutritious food.

Recommendation 11:

A Regional Food and Farming

Strategy – The Combined Authority could collaboratively develop a holistic regional place-based sustainable food systems strategy and action plan for the North East region to support a just transition for agriculture and food. It can take bold leadership on food and environmental action so that no one is left behind in the low-carbon policy transition and stronger forms of collaboration between actors, sectors and governance scales emerge.

While the key themes are presented and addressed individually for clarity within the report, in reality they are interconnected. Thus, holistic, collective action and inclusive governance mechanisms at all spatial scales (i.e., local, regional, national and international) are needed to support sustainable and fair farming and food system transitions.

Therefore, the **overall suggestion** underpinning the successful delivery of recommendations 1 to 11 is to take **bold** leadership and prioritise collaboration.

Key Takeaway: Collective action is needed to expand existing and develop new innovative initiatives that take a holistic approach to mitigate the negative impacts of the agricultural transition and amplify the positive opportunities (such as those outlined in this report in relation to expanding sustainable farming, supporting nature's recovery and strengthening local food systems) that can emerge by supporting a fair, inclusive and sustainable transition for farming and the broader rural economy across the region.

Indeed, we appreciate that some of the specific 'actions to consider' under each overarching recommendation outlined in this report may go beyond the direct remit of the Combined Authority. Consequently,

we indicate where particular actions can be either: directly implemented by the Combined Authority, require collaboration with relevant partners or involve influencing government at the broader level.

Indicator	Role of Combined Authority			
IMPLEMENT	Recommended actions that the Combined Authority could implement and work to deliver within their current role and remit.			
COLLABORATE	Recommended actions that require collaboration and the Combined Authority could work closely with relevant partners to deliver such as: local authorities, public sector organisations, local businesses, workers, trade unions, educational institutions and skills providers, the voluntary sector, and citizens.			
INFLUENCE	Recommended actions that involve influencing government and where the Combined Authority could work to shape the national debate.			

FINAL COMMENTS

It is hoped by highlighting the different, but inter-related issues that face the farming sector, and pointing towards possible actions that could be taken within the region to help address them, the complex transition farming is experiencing is better understood by a wider range of people, organisations and policymakers, so that we can proactively and collectively work to mitigate the adverse impacts on the farming community and amplify the opportunities.

We would like to leave the final word to a farmer, who stated the following when asked what they hoped would result from their involvement in the research project and sharing their thoughts on the agricultural transition: "just for people to understand what is going on and recognise all the good work farmers do, producing quality food, literally putting food on the table and looking after the environment [...] most farmers understand that they may have to change certain things, but we need people to listen to what we are saying, policymakers to listen, the general public, everyone. [...] The more people who understand how farming actually works [...] that can only be a good thing in supporting this transition."

We have listened — and are incredibly grateful to everyone who shared their thoughts and experiences with us across the North East region. We hope stakeholders seize the opportunity to drive a sustainable, inclusive and fair transition for farming as part of a broader comprehensive and integrated food systems approach to policy and practice.

1. INTRODUCTION

1.1
THE NEED FOR A
JUST TRANSITION FOR
AGRICULTURE

The future of farming, land management and food production are facing a **critical period of transition** across the country following the United Kingdom's (UK) exit from the European Union (EU) and the associated Common Agricultural Policy (CAP). The shift from the current regime of subsidies to the new "public money for public goods" system under the Environmental Land Management scheme (ELMs) has been coupled with farmers facing high input costs of feed, fuel and fertiliser in the context of geopolitical turbulence and a cost-of-living crisis.

Farmers, farm workers and farming communities are key actors in making sure we reach climate change targets, restore nature and produce food sustainably. Indeed, 71% of the UK's land is managed by farmers and other land managers (Defra, 2022a). However, sustainability transitions are complex, constantly evolving and prone to conflicts, based on people holding different conceptions of what is 'fair' and 'sustainable' in different contexts.

To support a sustainable transition for farming there needs to be better support for farmers to deliver greater climate action and ensure that the benefits are shared more fairly. To ensure this happens, we must plan and support a just and inclusive transition for agriculture to minimise the disruption as much as possible for workers and communities. This is based on both effective national frameworks and regionally tailored plans for sustainable green jobs and skills transitions.

In this report, we present findings that emerged as part of a two year 'just transition' research project which examined the future of farming in the context of significant sustainability and post-Brexit policy changes. Focusing on this crucial sector enabled an in-depth examination of an industry that is intimately interconnected with a range of society's 'grand challenges' (such as climate change and food security). The project was led by the Energy Democracy Project (EDP) using the North of Tyne Combined Authority (NTCA) region as a case study area.

Drawing on a range of consultation methods including in-depth stakeholder interviews (n=25), three participatory workshops (n=15), and a citizen's survey (n=82) which provided opportunities to learn directly from farming stakeholders' perspective, expertise and experience, the report proposes recommendations and possible pathways forward to the Combined Authority and, where relevant, other key stakeholders in relation to the tangible actions that can be taken to support a fair low-carbon transition for farming and the workers, businesses and communities that rely on this sector.

1.2
POLICY CONTEXT:
ACHIEVING NET ZERO
IN A COMPLEX POSTBREXIT AGRICULTURAL
POLICY LANDSCAPE IN
ENGLAND

UK farming and land use face unprecedented challenges following the exit of the UK from the EU and the related CAP, which has led to the **biggest transformation of agriculture in 70 years** with the roll out of new policy and regulatory frameworks after Brexit. As agriculture is a devolved policy matter, the nations of the UK are developing their own approaches to agricultural policy — in England, Brexit is being used as an opportunity to structurally change agricultural policy to incentivise a shift in farming practices toward more environmentally-friendly ways (Defra, 2020). This has also occurred in the context of

multiple geopolitical challenges and global 'shocks' including the Covid-19 pandemic and the war in Ukraine.

The Agriculture Act 2020 provides the legislative framework for the replacement of current agricultural support arrangements such as the Basic Payment Scheme (BPS)¹ with new approaches to farm payments and land management based on the principle of "public money for public goods".

In particular, the Agricultural Transition Plan 2021 to 2024 (Defra, 2020) sets out the changes that will be made to agricultural policy, where farmers will be

¹ BPS is the largest rural payment scheme providing financial support to the farming industry. Basic Payment is based on land area. Certain animal and public health, welfare and environmental standards must be met (known as cross-compliance). Farms must farm at least 5 ha of land to qualify for Direct Payments, meaning many small farms are not eligible. Recipients of the largest amounts are typically farms with large land areas.

paid to produce 'public goods' such as improving the environment and animal welfare, and reducing carbon emissions

- i.e., those ecosystem services that are not normally paid for in the marketplace.

Key Takeaway: The low carbon 'agricultural transition' remains a real opportunity to find common ground amongst all who care about farming and the environment, because we know that maintaining the status quo is not an option given the multiple ecological and social crises we face — from climate change to the rising cost-of-living and food insecurity.

The National Farmers' Union (NFU) — which represents more than 46,000 farming and growing businesses — has already set a goal for agriculture to achieve net zero by 2040 in England and Wales.

It has also outlined why it considers agriculture to be part of the solution to climate change (NFU, 2019) and articulated that collaboration with local authorities is "essential for farmers and growers across the North East if they are to successfully produce sustainable food, support the local rural economy and promote their net zero

ambitions" (NFU, 2021a: 2).

The transition to Post-Brexit Environmental Land Management schemes (ELMs) must be managed very carefully to ensure that the culture and economy of rural communities endure in the context of the phasing out of Direct Payments — currently paid through the BPS. Indeed, there are gradual reductions being made to BPS payments in England from 2021 to 2027². Over this 'transition period', all farms will see some reduction to their payments, although those who receive the highest payments will see bigger reductions initially. It is stated that this "will free up funds to invest in public goods" (Defra, 2018a: 3).

The bulk of the outgoing CAP subsidies were in the form of "Basic Payments" awarded based on size of landholding and therefore heavily weighted towards the biggest landowners who least need subsidy, rather than smaller farming enterprises. Of the total payments under the CAP in 2016

for England, £1.65 billion of payments were made across 85,000 farms and almost 50% was given to 10% of farms (receiving more than £45,610 each), while the bottom 20% of recipients received just 2% of the total payments (getting less than £2,580 each). 33% of farms received less than £5,000 each (Defra, 2018a).

In terms of the eligibility criteria under CAP, farms must be at least 5 hectares (ha) to qualify for Direct Payments, meaning many small farms are not eligible (Defra, 2018a), despite providing a range of multifunctional benefits for the environment and local communities (LWA, 2017). Therefore,

a fairer agricultural payment system is needed that works for farms of all sizes across the country that properly values and rewards farmers for the crucial role they play in the transition to climate-friendly, sustainable agriculture and land use.

Research has estimated that the number of full-time UK farm businesses will decrease by 20% by 2030 as a consequence of the phasing out of **Direct Payments** – compared with a decline of just 4% in the previous decade (Clarke, 2021). This reflects the fact that subsidies are often the difference between survival or closure for farming businesses. For example, in 2018, the Department for Environment, Food & Rural Affairs (Defra) estimated that 42% of farms would be insolvent without Direct Payments (i.e., they have costs exceeding their revenue) and so unable to survive without subsidies (Defra, 2018a).

This is particularly worrying for the region, as Direct Payments were equivalent to 98% of Farm Business Income³ (FBI) of all farms in the North East of England over the period of 2014/15 to 2016/17, the highest of any region (compared to 61% for all farm types across England over the same period). This high reliance on Direct Payments is due to farm characteristics, such as a high proportion of Grazing Livestock and tenant farms, rather than the location itself (Defra, 2018a: 5). Indeed, over the same period, Direct Payments were equivalent to 83% of FBI for tenanted farms, more than all other landownership groups (Defra, 2018a). Therefore, the removal of Direct Payments may mean that it will become increasingly difficult for some sub-

² From 2024, BPS in England will be replaced by 'delinked payments' (which remove the link between payment and the land) and made between 2024-27, but the payment amount will decrease each year as progressive reductions are applied. After 2027, these payments will stop completely (RPA and Defra, 2023).

³ FBI is a measure of net profit, calculated as Farm Business Outputs (Revenue) minus Farm Business Inputs (Costs). Between 2014/15 to 2016/17 the average profit for all farms was £37,000 (Defra, 2018a).

sectors of farming in particular regions and tenancy/landownership groups to remain economically viable in the future, and this could result in some farmers exiting the sector altogether. This will have social and economic costs (i.e., job losses) that will be felt unevenly across the UK given the diverse geography of farming.

Key Takeaway: The repeated message from farmers across the region that participated in our research was loud and clear — financial sustainability is a prerequisite for environmental sustainability: "we need to get a good return from what we are producing" (dairy farmer). And as an upland farmer stated: "people talk about environmental sustainability, well to have a sustainable environment in the farming world it has got to

It was revealed in January 2023 that just 224 farmers received payment last year under the Government's post-Brexit Sustainable Farming Incentive (SFI) — which is the 'entry-level' ELM scheme that is meant to encourage sustainable farming practices and to reward farmers for looking after the health of their soil and support on-farm emissions reduction. To put this into context, approximately 102,000 farmers were given

be financially sustainable as well as

environmentally".

Basic Payments last year (the equivalent to the previous EU subsidy), meaning only 0.2% of those who received basic payments were awarded money from the new SFI scheme (Horton and Harvey, 2023). This low uptake indicates an initial lack of confidence in the new schemes.

Despite Defra outlining the importance of "co-design" of new policy throughout the agricultural transition (Defra, 2020: 6), there was a significant perception from farming participants that their input is not being actioned. For example, one upland farmer shared their experience of being involved with trials to inform new subsidy schemes: "we took part in the pilot, the original pilot to trial some of the systems that may work within ELMs and SFI, and basically all of the feedback that we fed back in has been dismissed, unfortunately". Experiences such as this reinforces feelings of disempowerment and points towards the importance of transparency and clear communication between Defra and the farming community about how their input was used and decisions were reached.

All the issues discussed in this section, underline the urgent need to plan for a just transition for farming, and understand how support and action can be effectively delivered at the local and regional scale to ensure that farming in the North East of England works for people, climate and nature.

1.3 PROBLEM DESCRIPTION: THE CHALLENGE

1.3.1 Climate Change, Biodiversity Loss and Agriculture Agriculture was responsible for **13% of the UK's greenhouse gas (GHG) emissions** in 2021, mainly through methane and nitrous oxide from grazing livestock and fertilisers (see Table 1). Across the agricultural sector, 55% of the 2021 emissions total came from methane, 27% nitrous oxide, and the remaining 18% were carbon dioxide (DESNZ, 2023).

These emissions, however, are reducing slowly compared to other sectors. The UK

Government's independent climate advisors – the Climate Change Committee (CCC)⁴ has **recommended a 64% reduction of GHG emissions from the agriculture and land use sector** to meet the legally-binding 2050 net zero target in the UK (CCC, 2020). Yet, the CCC recently found that its plans for decarbonising agriculture are completely missing or wholly inadequate (CCC, 2022).

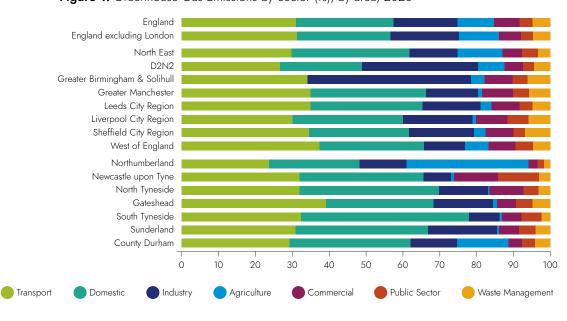
Table 1: Greenhouse Gas Emissions of Agriculture

Carbon dioxide (CO ₂)	A major GHG, but agriculture is only responsible for around 2% of UK CO ₂ emissions. These are mainly through the use of energy and fuel, which can be reduced by improving efficiency, and by generating energy from renewable sources on-farm.
Methane (CH ₄)	A more potent GHG than CO ₂ , particularly over short timescales. Agriculture is responsible for almost half of the UK's total CH ₄ emissions. The majority of CH ₄ emissions from agriculture are due to grazing livestock (largely from enteric fermentation). The UK's Committee on Climate Change has suggested a minimum reduction of 37% in methane levels from farming by 2050.
Nitrous Oxide (N ₂ O)	The most potent GHG that agriculture emits, having a warming effect that is around 300 times stronger than CO ₂ . Agriculture emits 69% of the UK total. It is mainly produced from the application of nitrogen fertilisers and livestock manures.

Across the NTCA region, in Northumberland (the local authority area with the largest share of agricultural activity), the total GHG emissions generated from agriculture was 745.8 kt CO2e⁵, in Newcastle it was 11.3 kt CO₂e and 4.3 kt CO₂e in North Tyneside (based on 2021 data). However, Northumberland is the only area with significant negative Land Use, Land-Use Change and Forestry (LULUCF) emissions (-390.4 kt CO₂e), primarily from forestry (NAEI, 2021).

As Figure 1 highlights, in 2020, the North East had higher percentages of GHG emissions from the agricultural, domestic and public sector compared to England (excluding London) and across the new North East Mayoral Combined Authority (NEMCA) geographical area, Northumberland and County Durham had the largest GHG emissions total from agriculture.

Figure 1: Greenhouse Gas Emissions by Sector (%), by area, 2020



Source: North East LEP (2022)

⁵ Kilotonnes of carbon dioxide equivalent.

Intensified agriculture since the 1950s, driven by high inputs of fertiliser and pesticides, have also had **devastating impacts on nature**. The State of Nature 2019 report (Hayhow et al., 2019) identified agricultural transformation (linked to the intensification of land management and increased productivity) as the most important driver of UK biodiversity loss over the past 45 years. Biodiversity has continued to decrease and the UK is now "one of the most nature-depleted countries in the world", with 15 percent of UK species threatened with extinction (House of Commons Environmental Audit Committee, 2021).

The recent State of Nature 2023 report, outlined that "nature-friendly farming needs to be implemented at a much wider scale to halt and reverse the decline in farmland nature" (Burns et al., 2023: 6), whereby a combination of technological advancements, use of agro-chemicals and changing agricultural policy has reduced the capacity of farmed landscapes to support wildlife, resulting in widespread biodiversity loss. For instance, it is stated that in the UK, farmland birds have declined on average by 58% between 1970-2020.

Given these impacts on nature, the UK Government and devolved administrations have developed various initiatives commonly referred to as "agri-environment schemes" that require land managers, including farmers, to implement environmentally beneficial management and to demonstrate good environmental practice on their land.

In England, the 'Countryside Stewardship' agri-environment scheme funds land management to increase biodiversity, improve habitat condition, expand woodland, improve air and water quality and support natural flood management; around 1.6 million ha of land are managed under this scheme. New agri-environment schemes have also been introduced in England post-Brexit under ELMs, including Landscape Recovery which is designed to support large-scale projects for environmental and climate benefits. In 2020, the total area of land in higher-level or targeted agrienvironmental agreements in the UK was 3.6 million ha - 1.9 million ha in England (equivalent to 20.7% of agricultural land) (JNCC, 2021).

Farmers play a vital role not only supporting the change need to tackle climate change by reducing GHG emissions but also to restore wildlife on farmland. Increasing the uptake of agri-environment schemes amongst farmers and other landowners is therefore crucial to deliver nature recovery from farm-level to a landscape-scale (Brotherton, 2023). The Environmental Improvement Plan (Defra, 2023a) set the aim for **65-80% of landowners and farmers to adopt nature-friendly farming on at least 10-15% of their land by 2030**.

Key Takeaway: The biodiversity crisis raises questions about how our food is produced and leads to broader conversations about land use, nature recovery and public goods.

Climate change, with increasingly extreme weather, poses particular risks to farmland and the long-term viability of rural farming communities. Indeed, climate change is the biggest medium- to long-term risk to the UK's domestic food production (Defra, 2021).

Farmers and farm workers are then at the 'coal face' of a changing environment, in which climate change directly affects their livelihoods. However, they are also uniquely placed to help address the climate and biodiversity crises by delivering decarbonisation and restoring wildlife and ecosystems. For this to be a just process, it must reflect, and take account of, different local contexts and proceed in a way that is fair, collaborative and inclusive, where all farmers, farm workers and land managers are empowered and supported to address climate change on their farms and to produce healthy, sustainable and affordable food.

⁶ There are two main types of agri-environment scheme in the UK: 1) Entry-level type has a simple set of prescriptions providing basic environmental protection and enhancement, where the whole farm area may contribute to the indicator; 2) Higher-level or targeted schemes that protect or restore land, focusing on parts of the farm or land-holding that are of high environmental/biodiversity value or potential.

1.3.2 Achieving Net Zero in Agriculture to Support a Just Transition

Recent academic research on decarbonisation suggests that

overwhelming focus has been placed on technically complex "net-zero industrial megaprojects" in foundation industries (i.e., chemicals, cement, ceramics, metals, glass and paper) in urbanised areas such as the Humber and Merseyside (Sovacool et al., 2023). Moreover, the majority of 'just transition' (see Box 1) research has tended to concentrate on energy transitions (see Newell and Mulvaney, 2013). Directing attention towards agriculture and other landbased sectors helps to address some of this sectoral and spatial imbalance.

Indeed, agriculture is often side-lined in broader "just transition" discussions; however, a fair and inclusive green transition to a low carbon economy cannot be accomplished without decarbonising the sector and supporting farmers, farm workers and land managers adopt sustainable practices to mitigate and adapt to climate change, whilst maintaining profitability. It remains unclear, however, what a just agricultural transition looks like and how to achieve it. Therefore, it is crucial that focus is placed on ensuring the benefits of sustainability transitions can be shared more fairly and that the negative impacts are minimised, whilst paying attention to placebased context.

BOX 1: WHAT IS A 'JUST TRANSITION'?

lust transition is a place-based approach that puts the experiences, knowledge and solutions of impacted workers and communities at the centre. It is based on meaningful social dialogue and seeks to implement bold, collective and rapid action to address interconnected social, environmental and economic inequalities in the context of a climate crisis. A just transition requires remaining mindful to the detrimental impact of past industrial transitions, which can foster a sense of scepticism, distrust or fear that the term 'transition' implies job losses. Investing in the creation of quality green jobs and green skills development of citizens can help people find new secure, well-paid work in low-carbon industries.

There is now clear consensus that worker and community voices need to be heard for low carbon transitions to be achievable and have broad societal buy-in, with the 2015 Paris Agreement outlining "the imperative of just transition of the workforce and the creation of decent work and quality jobs need to be considered in planning action on climate" (UN, 2015). Therefore, a key priority is to ensure that farmers and farm workers in the North East are consulted on what they think about the possibilities of a transition to a low carbon economy, the implications for their working lives and communities, and also what a 'just transition' should entail for the farming sector.

Key Takeaway: There are multiple, interconnected challenges facing the farming sector, whereby policy decisions and actions that contribute to net zero and nature restoration will directly affect farmers, farm workers, land managers, rural communities and other impacted groups, who need to be able to respond and plan appropriately in a sector where longterm investment is vital. Supporting a just transition for agriculture requires collective responsibility - individual farmers should not bear the brunt of transitioning toward low-carbon and climate resilient models alone.

Involving a broad range of organisations, groups, communities and individuals such as owner-occupier and tenant farmers, those who work in the agricultural sector, and also future new entrants is a key priority, while recognising the unequal power that some people have compared to others. For instance, larger, conventional farmers can be more vocal and better represented through well-resourced associations compared to smaller-scale farmers engaged with 'alternative' farming models. So, ensuring that a diverse range of agricultural actors are included in transition planning is vital to ensure broad societal buy-in and that appropriate solutions for the low-carbon transition are developed based on people's different lived experiences.

This is crucial because shifting farming systems to lower carbon models that address climate change, restore nature biodiversity and ensure food security is **challenging and highly prone to disagreements** because it encompasses a range of issues from farmer livelihoods and occupational identity, land ownership and management, rural wellbeing and socio-cultural values of 'eating well' and dietary change (Lang, 2020).

Moreover, large-scale protests in France (Chiarello and Libert, 2019), the Netherlands (Schaart, 2019) and India (Bhatia and Katakam, 2021) provide clear examples of the need to ensure the social dimensions of agricultural transitions are better integrated and perceptions of what is 'just' in relation to agricultural policy changes are understood. Indeed, supporting a **just transition in agriculture** will mean that workers and communities that might otherwise resist climate action can become powerful **advocates for change**.

Responsibility for the transition to sustainable farming cannot be left exclusively to farmers and farm workers who are already contending with food systems⁷ that do not fairly reward them for their work. Therefore, collective responsibility is crucial to support a just transition for agriculture and land use — and robust support from local, regional and national government is required to facilitate this process.

The main objective of this report is to help inform regional policy making on farming and food systems through:

- understanding workers' positions on the role of agriculture in helping to meet net zero,
- exploring how agricultural workers' can be more effectively engaged in processes to support an inclusive low carbon transition, and
- examining what support is required to help farmers adopt nature-friendly, sustainable farming practices and deliver 'public goods'.

2. RESEARCH APPROACH

The research that informs this report was part of a broader two-year collaborative initiative between the Energy Democracy Project and the North of Tyne Combined Authority that examined the opportunities and challenges of supporting a just and inclusive transition to a green, sustainable economy across the region. Two 'high-carbon' sectors — farming and construction — were chosen as case study sectors to explore in-depth through a place-based just transition approach. This enabled a deeper understanding of the particular issues facing these diverse industries in a regional context.

Several data collection methods were utilised to examine how to support a just transition for farming:

 A literature review of research papers and analysis of agricultural and agri-environmental policy and official statistics was conducted to provide the foundation for the research to ensure an informed approach.

- A survey for citizens within the North of Tyne region on "Supporting a Sustainable Agricultural Sector" placed on the Commonplace platform was completed by 82 people.
- 25 semi-structured interviews were conducted with a range of stakeholders from farming organisations, groups, and networks, farmers and farm workers, environmental and conservation charities, and skills providers to examine the challenges and opportunities facing the sector and what a 'just transition' for the region would require based on their situated knowledge and diverse experiences. Interviews lasted 60-120 minutes. The interview topic guide and participant information sheet were emailed to the participant before the interview to ensure stakeholders had adequate time to consider their involvement and the issues to be discussed. The interviews were conducted by phone, online (via Zoom) and in-person, depending on the

⁷ The 'food system' incorporates all aspects of production, processing, transport, preparation, consumption and disposal of food

participant's preference and logistical requirements, and recorded with participants' consent. The recordings were transcribed, coded and analysed using an inductive approach (where the data is used as a basis for the coding framework) and findings organised into key themes. Anonymity has been used by removing personal identifiers, and where appropriate, the use of pseudonyms within the report.

Three online participatory workshops were ran in March and April 2023 via Zoom. Participants were invited to attend the workshops through a range of channels - the NTCA website and Commonplace platform, social media, via farming organisations and industry bodies, such as the National Farmers' Union, Tenant Farmers' Association, and Land Workers' Alliance, and also recruited via key stakeholders. The group of 15 participants included farm managers, tenant farmers, owneroccupier farmers, farm workers, casual/ seasonal workers, smallholders, new entrants, and agricultural college students. The participants comprised of 5 women and 10 men, from a range of age groups (18 to 65+). Participants worked on or managed smallholdings or farms of varying size (i.e., <5 ha to 400+ ha) in both the uplands and lowlands, across a variety of sectors including, livestock, dairy, arable and horticulture. Participants had a diversity of experiences of engaging with agricultural production.

The workshops were 1 hour and 30 minutes in length; they consisted of a brief welcome and introduction, then a 10-minute presentation which provided an overview of the project and research to 'set the scene' for participants. Breakout group discussions took place to examine four key themes and questions that were formulated based on the literature review and initial stakeholder interview findings. The four questions discussed were:

- 1. Sustainability: In the context of the current agricultural transition, what are the challenges and opportunities of developing resilient, sustainable farming and food systems in the region?
- 2. Government support: Based on your experience, what support can local government and the Combined Authority provide to farm businesses and the farming community to ensure that they are sustainable and thrive?
- 3. **Skills and knowledge:** What training, support and knowledge exchange opportunities do farmers and growers require to develop their skills for the future?
- 4. Farming as a career: How do we encourage and support people from non-farming backgrounds into the agricultural sector?

The workshops were participant-led, with small group discussion following the 'World Café' model, which involved informal conversations where participants explored the issue or question in small groups with the help of a discussion host. The workshops were audio recorded and transcribed for analysis. The recordings were deleted once transcription was completed. Findings were organised into key themes. All information was anonymised - specific quotes are demarcated in the report based on the general information (i.e., sector and role etc.) provided in the workshop sign-up form. All participants were paid £30 for their time.

The research is qualitative; therefore, while it provides detailed insights and robust findings, it should not be understood to be fully representative of the farming community. Given that 'just transition' is both a process and an outcome, continual engagement, dialogue and collaboration are required to develop inclusive, place-based strategies to nurture a fair transition for farming across the region.

3.SETTING THE SCENE

3.1 FARMING IN THE NORTH EAST OF ENGLAND In the context of the North East of England, agriculture has several specific characteristics. For instance, the proportion of farms greater than 100 ha is higher than any other region, which may be due to the number of large landed estates. Furthermore, there is a high proportion of tenanted farmed land (29%) compared

to other regions, with Northumberland having the highest percentage of tenanted farms in England (Defra, 2022a; see Box 2). Across the new NEMCA geography, the majority of farm holdings and farmed land area is within Northumberland and County Durham (Table 2).

Table 2: Key Statistics for Commercial Agricultural Holdings in 2021, by Local Authority

Local Authority (within NEMCA)	Number of Holdings	Total Farmed Area (hectares)	Total Agricultural Labour
County Durham	1,669	146,007	3,636
Northumberland	1,925	381,672	5,031
Newcastle	22	1,865	71
North Tyneside	14	978	36
South Tyneside	17	991	32
Sunderland	38	3,829	86
Gateshead	70	3,988	136
NEMCA Total	3,755	539,330	9,028

Source: (Defra, 2023b)

Across the current NTCA region, to the west in the upland areas there is significant hill farming (particularly sheep and cattle) and as you proceed eastwards to the North Sea coast of Northumberland in the lowlands (i.e., lower, flatter land), arable agriculture is common and there is also finishing of beef cattle.

Agricultural land is classified into five grades – Grade 1 is best quality and Grade 5 is poorest quality. Grade 5 and 4 tend to be concentrated to the west of the North East region, while Grade 3 (a and b) and some pockets of Grade 2 are more prevalent in the east surrounding significant urban areas (see Figure 2).

As analysis by CPRE (2022a) has shown, the 'Best and Most Versatile' (BMV) agricultural land (i.e., Grades 1, 2 and 3a) in England is not spread evenly throughout the country;

moreover, while the top regions for the proportion of BMV are the East of England, East Midlands and Yorkshire and the Humber, the North East has witnessed one of the highest proportions (1.63%) of BMV farmland lost to development.

It is stressed that maintaining agricultural capacity to deliver significant levels of domestic food production is critical to support sustainable food systems.

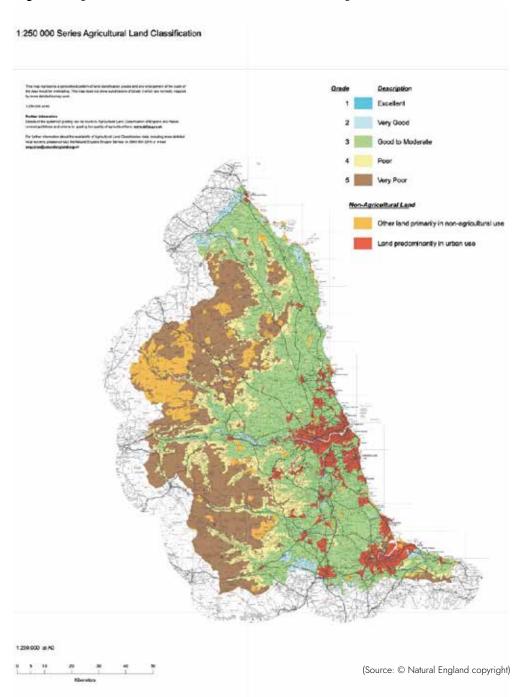
There is a high proportion of Less Favoured Areas (LFA) across Northumberland and North Pennines. LFAs were established in 1975 as a means to provide support to mountainous and hill farming areas. Within the LFA, there are the Severely Disadvantaged Areas (SDA) and the Disadvantaged Areas (DA). The SDA are more environmentally challenging areas and largely upland in character. **Farms within**

⁸ The Planning System's 'Best and Most Versatile' (BMV) classification is given to agricultural land that is regarded as the most valuable in terms of food producing potential. Land is identified as BMV (either Grade 1, 2, or 3a; there are six grades altogether 1, 2, 3a, 3b, 4, and 5) using the Agricultural Land Classification (ALC) (CPRE, 2022a).

the LFA boundaries are often referred to as 'upland farms'. Agricultural activity has largely shaped the upland landscape, even though these are areas where natural characteristics such as geology, altitude and climate make it more difficult for farmers

to compete. Historically, hill farmers have carried out management of these areas, predominately through sheep and cattle grazing (Defra, 2023b).

Figure 2: Agricultural Land Classification for the North East Region



The North East contains many areas of environmental importance with a range of protected landscapes and networks of natural assets°. For instance, Northumberland National Park, designated in 1956, makes up around 21% of the area of Northumberland and is the most sparsely populated English national park.

More than three-quarters of
Northumberland National Park is farmed
– mainly sheep and cattle production.
There are 256 farms within, or partly
within, the Park boundary. These farms
tend to be larger than the national average

for hill farms, however, the size varies with the terrain. In the Cheviots, the average farm size is 1,205 ha whereas the average size of the Hadrian's Wall farms is 293 ha. Half of the farmed land is owned by four landowners: Northumberland Estates, the Ministry of Defence, Lilburn Estates, and College Valley Estates. There are also a range of smaller estates. Therefore, many farms are worked by tenants and often these tenancies have been passed down through families for generations (Northumberland National Park, 2023).

BOX 2: CONTEXT: KEY AGRICULTURAL FIGURES (SOURCE: DEFRA, 2022A)

• In 2021, the UK agricultural industry was made up of 216,000 farm holdings. The Utilised Agricultural Area¹⁰ was 17.2 million ha of land, 71% of the UK land total.

How does average farm size vary in England?

- The average farm size in England was 85ha, however, farms in the North East had the largest average farm size of 137 ha.
- The proportion of farms greater than 100 ha is higher in the North East than any other region, which may be due to the number of large estates in some parts of the North East.
- Farm type is also a factor, as there is a **high proportion of Less Favoured Area (LFA) farms** (where production conditions are difficult) in the North East, which tend to be larger because of the grazing area required. There are fewer dairy farms, which tend to be smaller in area.

How many farms are owner occupied and how many are tenanted?

- In England, in 2021, the majority of farms (54%) are owner occupied, followed by 31% mixed tenure (owning and renting the land that they farm) and 14% wholly tenanted. For the remaining 1%, tenancy was undeclared.
- In the North East, 22% of holdings (935) were wholly tenanted, accounting for 29% of the farmed area in the North East.

How many people are employed within agriculture?

- In England, in 2021, 297,400 people were employed in the agricultural sector. Of those employed, 60% (179,000) were either farmers, business partners, directors, or spouses. The remaining were farm workers comprising 36% of employees (106,000) and 4% farm managers (11,800).
- Agriculture has an **ageing workforce**. In 2016¹¹, over a third of all farm holders in England were over the age of 65 years, just 3% of holders were aged less than 35 years.
- In 2016, the majority of farm holders in England were male (84%) and only 16% were female.

What was England's Total Income from Farming and how did the contribution by Region vary in 2020?

In 2020, after deductions for wages, rent, interest and asset depreciation and taking subsidy contributions into account, the total income from farming in England was £3.6bn, with the South West contributing the most (19%) and the **North East the least (4%)**.

⁹ There are also two Areas of Outstanding Natural Beauty (AONBs) – Northumberland Coast AONB (consisting of 2.6% of Northumberland's total area) and North Pennines AONB (approximately two-thirds of it located in the North East).

¹⁰ The Utilised Agricultural Area includes arable and horticultural crops, uncropped arable land, land for outdoor pigs, temporary and permanent grassland and community rough grazing. Since 2000, it has remained between 17 and 18 million ha.

¹¹ Information on the age and gender of farm holders is captured less frequently than other aspects. The most up to date data available is from 2016.

3.2
THE ROLE OF THE
(EXPANDED) COMBINED
AUTHORITY IN
SUPPORTING A JUST
TRANSITION IN FARMING

While responsibility for agricultural policy is aligned with the devolved national context, the Combined Authority and Local Authorities have a key enabling and convening role to play in supporting a sustainable and resilient food and farming system at the local and regional level. This requires strong political will and a bold, long-term, strategic approach working with local communities to deliver transformational change across the region. If acted upon, this policy focus has the potential to position the Combined Authority as a creative innovator at the regional scale to build the cultural, social and economic capacities needed to address multiple sustainability challenges in the farming system and beyond.

Northumberland County Council (NCC) are already on their way to developing a comprehensive strategy to support a thriving farming sector in the county following their Future of Farming in Northumberland Inquiry in 2022 (NCC and NU, 2022). The Inquiry highlighted that greater clarity in navigating the complex land management policy landscape is needed to support farmers and land managers to achieve a sustainable balance between food production and wider environmental benefits. Indeed, local authorities have an important role to play in supporting a contextual, place-based just transition approach to agriculture and drive investment into rural economies.

The Combined Authority is committed to decarbonisation and mitigating the impacts of climate change — and has ambitions of becoming a **national leader in its pursuit** of net zero emissions and the creation of new green jobs (NTCA, 2022). The NTCA has three overall cross-cutting priorities:

- Net Zero Transition "Ensuring our whole programme supports carbon reduction, clean growth and a new generation of jobs";
- Inclusive Economy "Ensuring our work is underpinned by people, communities and inclusive economic growth";
- Innovation in Recovery "Ensuring our businesses, people and places can adapt, recover and thrive postpandemic" (NTCA, 2022: 10).

Yet, supporting a just transition in the region will require stronger emphasis on farming, food and land with planned further devolution across the North East given that Northumberland and County Durham have significant GHG emission totals from agriculture (as discussed in section 1.3.1), in addition to agriculture being a major land use in those local authority areas, and it being socially and culturally important to many rural communities.

This report asserts future expanded devolution to create the larger NEMCA in May 2024 (DLUHC, 2022) provides an opportune moment to centralise the fundamental role of farming and food systems to citizen wellbeing and prioritise regional rural economies (particularly in Northumberland and County Durham) in local governance frameworks as avenues for investment. Therefore, this report calls attention to the opportunities a 'just transition' perspective can bring to building capacity, resilience, inclusion and equity in the regional governance of farming (and broader food) sustainability transitions to maximise the region's ability to transition towards a green economy and reach net

Overall, the NEMCA has a significant opportunity to invest in and fully harness the potential of rural economies across the region to ensure that a more collaborative region emerges in the years to come that builds community wealth, creates good-quality secure jobs and develops the skills of citizens to contribute to a transformative rural transition and sustainable food system. A coordinated, holistic approach at the regional level is therefore crucial to deliver the multiple co-benefits that can emerge from placing policy focus on sustainable, healthy and fair food and farming systems.

4. CITIZEN VOICES: ON JUST AND SUSTAINABLE FOOD SYSTEM TRANSITION

We asked citizens via a survey on the Commonplace platform what actions they wanted to see from the Combined Authority with the aim of strengthening the understanding of how we can build more sustainable food and farming systems. We highlight a range of responses below to showcase the diverse views expressed by citizens that focus on the changes required in both food production and consumption. We posed the question:

What actions would you like to see the North of Tyne Combined Authority take to support sustainable food and farming systems in our region?

"Work with the people already working on these issues on the ground; set up meaningful task forces which include the strengths that community groups can offer; fund innovative ways to convert harmful waste products. Above all, work with farmers as equals in a genuinely supportive way - many have been confused and made anxious by all the recent changes being announced and expected of them; the majority of Northumberland's farmers cherish the environment they work in and are justly proud of the stock they breed."

"Work with Northumberland County Council, the NFU and central government to develop a single forum for engaging with the farming community and community groups to develop sustainable farming systems, to include the recent ELM subsidy scheme."

"Peri-urban farming, agroforestry, organic growing and permaculture principles."

"Sell locally as much as possible to reduce transport. Encourage diversity in terms of range of food produced. Advertise local products in urban communities." "Funding, advocacy, consultation with farmers across the area. There are very different challenges even within Northumberland between the farms in the north east of the county which have more arable potential with those farms in the Uplands/ North Pennines."

"Ensure that farming and the wider rural economy gets proper recognition in the NE devolution deal. The NE LEP has always ignored it and I fear that this will carry over into the new era."

"Consumer education is of key importance as farmers and suppliers will respond to customer influence."

"Take more actions to support sustainable food and farming systems by helping people to access land, especially under-utilised public land to develop food growing enterprises; prioritise local sustainable food in food procurement policies and contracts; improve access to food and green spaces; encourage more conversations on sustainable food and farming; make sustainable food systems a priority in local government."

"Develop local branding i.e., the equivalent of 'Cumberland sausages' or 'Melton Mowbray pork pies'."

"More information about support available to farmers to make choices based on moving to net zero."

"Financial incentives to encourage farmers to move away from meat and dairy farming. Partner with organisations such as Viva to provide practical help and support to farmers wishing to move to plant-based farming. Reduce and ultimately remove meat and dairy from local authority meal provision, i.e., schools, care homes etc."

"Support the farmers to use less/no pesticides and farm more sustainably."

"Education on how to become greener and sustainable please."

"Join forces with local growers/ producers so that communities can buy locally, offer educational support to farmers so that they are able to make the changes needed to become more eco-friendly, support with costs so that the community can buy healthier food." "Be realistic and keep an awareness that most of us will continue to eat meat and dairy. I don't understand the concept of food waste and feel if everybody does not take the same view we're not going to get anywhere. Must keep at least EU environmental standards - but we won't!"

"Create more opportunities and spaces for local growers to sell their produce. Encourage supermarkets to source and promote local, seasonal produce. Encourage large kitchens e.g., schools, hospitals to source ingredients locally. Help producers abandon intensive production methods. Support and encourage innovative food production e.g., stacked greenhouses for salad and veg production. Stop the proliferation of fast-food outlets, fast food is not environmentally sound and produces vast amounts of litter."

"Support education and provide better transport and housing for seasonal workers."

"Better support for farmers and less red tape."

"1) No longer grow arable crops that are fed to animals 2) A decision about whether raising animals in the uplands is either good or bad for the environment 3) Put aside sentimentality about farming communities 4) Encourage dietary change in line with the NHS healthy plate or the 2019 Lancet 'diet for the planet' report."

"Business support for farmers, schemes to unlock land for those wishing to join the sector, create agriculture/ horticulture training and education offer at all levels (FE, HE, apprenticeships)." "Informing farmers, food producers and land owners of what funding, initiatives and ways of diversifying are available. Sharing best practice."

"Invest in the local food market. If the market is not there the farmer cannot invest in improving infrastructure to reduce impact on the environment."

"Reduce costs a lot of the independent suppliers or farm shops are always good but are so much more expensive and can be harder to get to."

"Support promotion of locally produced food & local food chains. Provide business development support for innovation and diversification. Educate the farming sector in the net zero challenge for their businesses. Incentivise reduction of plastic use in farm businesses. Sponsor research into replacement land uses for the uplands if red meat production is to reduce. Provide relevant funding to make farm dwellings more energy efficient (given that other Government schemes are not suited to remote sandstone dwellings). Fund improvements in bio-diversity, particularly on upland grassland areas."

"Support new businesses within value chains for nutrient dense local food producers and manufacturers adding value to food products, particularly those sold directly to consumers and local businesses. Help build awareness on locally grown nutrient dense food products with consumers and local businesses."

"Support community pantries and lunch clubs - free support to volunteer bodies for training e.g., food hygiene - support more community gardens, allotments etc. Engage more with farmers to diversify and return to local produce."

5. KEY RESULTS

THEME 1. ADDRESS UNCERTAINTY IN THE CONTEXT OF AGRICULTURAL POLICY CHANGE Summary: The post-Brexit Agricultural Policy Transition in England – which has ushered in a new complex policy framework (Defra, 2020) – poses significant opportunities and challenges for those employed in farming, and new agri-environmental policy will have uneven impacts across various subsectors of the industry. Participants stated that confidence is fundamental in farming and farmers require greater certainty and clear guidance to make viable business planning possible. Participants outlined that the introduction of the new Environment Land Management Scheme has been slow, complex, often lacking detail which impedes effective business planning, and not accessible for many, particularly smaller, farmers and growers. Moreover, it was reported that at the national level communication and support for farmers has been poor. It is vital that farmers and farm workers are supported to switch to more sustainable, lower-carbon farming practices and land use - and this will only happen with the

knowledge, skills, creativity and energy of farmers through co-designed strategies and initiatives that are ambitious and fullyfunded to match the scale of the socioenvironmental challenges we face. Recent research has highlighted that many farms in the region do not have a formal written business plan and also are reluctant to access some form of external support and advice (NICRE, 2022). Therefore, bespoke business advice for farming enterprises at the local level, who have previously been under-represented in terms of the business support available to them, is required to help farm enterprises adapt, be more resilient and sustainable.

Key Findings:

- a) Uncertainty over Business Viability
- b) The Role of Livestock Farming
- c) The Future of Upland Farming
- d) Green Jobs for Nature's Recovery

a) Uncertainty over Business Viability

In order to secure a sustainable future for their farm businesses, farmers need policy clarity and clear information to plan and make long-term investments. A lack of clear government leadership and support, a concern over new regulations and bureaucracy, high input costs and uncertainty over future income all contributed to feelings of frustration for farming participants.

The majority of stakeholders outlined **uncertainty** as a major threat to their farming business, particularly the recent significant changes in agricultural policy:

"a lot of my sort of frustration is there seems to be little [national] government leadership, and trying to grow what I would call agri-business." (dairy farmer) "there's a lot of information out there, not all of its easily understandable or making sense for some farmers, possibly overwhelmed, and not reaching some at all [...] for this [transition] to work, farmers need flexibility and to be able to implement the right options for their business [...] and more clarity to plan long-term for their business."

(farming organisation stakeholder)

These extracts highlight that farmers and land managers face a complex, constantly evolving policy landscape and are frequently inundated with a range of information from multiple sources — from the Government to farming unions and other non-governmental organisations offering insights, advice and guidance, which can be overwhelming for those on the ground.

Given the complex policy context and accompanying uncertainty, farms must position themselves to cope with the ongoing implementation of the agricultural transition process, however, research has highlighted that farms can be less likely than other rural businesses to engage in formal business planning (NICRE, 2022), which could amplify the negative impacts across the farming sector.

For instance, a National Innovation Centre for Rural Enterprise (NICRE) (2022) report on Farm Business Performance identified that 62% of farms surveyed did not have a formal written business plan (compared to 56% of other rural businesses). Farms in the North East (68%) were less likely to have a plan than those in other regions surveyed (i.e., the South West and West Midlands) (a total of 529 farms: 129 in the North East and 200 each in the other regions). Only 17% of farms in the North East reported accessing some form of external support and advice during the pandemic, compared to 25% in the South West.

Moreover, a recent Farm Confidence Survey of NFU members revealed **82% of farmers felt that the phasing out of current farm support payments was negatively affecting business confidence** and 55% were concerned about the introduction of ELMs. Also, 88% of respondents felt the soaring price of input costs such as energy, fuel and fertiliser would negatively affect their business (White, 2023).

It was emphasised by participants that some farmers may not remain in the industry as the agricultural policy transition is fully implemented because it will become no longer economically viable for some businesses as income is lost from the phase-out of the Basic Payment Scheme. Some farmers were very concerned about

their incomes and ELMs currently "not being financially viable" (tenant farmer). The fundamental issue articulated by participants is that payment rates (for the SFI and Local Nature Recovery (LNR) and Landscape Recovery (LR) under ELMs) need to be high enough to cover income foregone and the capital costs of transition, recognising the full value of the 'public goods' farmers deliver. If there is not enough support for farmers to transition to lower-impact, sustainable farming practices, it was highlighted by a participant that this "could result in some farmers intensifying production and disengaging with ELMs, which would be a disaster" (environmental stakeholder).

Participants also discussed that the loss of farming businesses could have indirect effects for the many rural local enterprises that are linked to primary agriculture – and crucially, it was stressed that there are no plans for how these cumulative social and economic impacts (such as job losses) should be addressed at the national level (e.g., via a just transition strategy for food and agriculture). Overall, this reflected multiple farmers' perception of a wider lack of transparency on what the government's plans are for the agricultural transition. It was reported by several participants that at the national level communication and support for farmers has been poor in the context of agricultural policy change.

b) The Role of Livestock Farming

The low carbon transition will impact different farmers in diverse ways and some stakeholders emphasised that livestock farmers may require particular focus to ensure that any changes in the nature of their work (i.e., reduced carbon farming) is fully supported and fair. Given the public debate about the impact of dairy and livestock production on GHG emissions, particularly methane, discussions and actions in relation to 'net zero agriculture' must be made in a collaborative, respectful and supportive manner.

Some participants felt there are uncertainties in the medium- to longer-term, with particular possible risks to livestock producers and livestock farm workers and their employment outlook depending on future policy decisions. However, it was emphasised by a stakeholder that there needs to be greater appreciation amongst the public of the distinction between highinput, intensive livestock farming compared to grazing animals on pasture¹². This pointed towards the importance of public education about the climate impacts of different kinds of livestock farming systems, which for one small-scale farmer, related to showing the cobenefits of low-input agroecological livestock farming.

A livestock farmer discussed that they believed that there is a general lack of respectful, open dialogue in relation to livestock agriculture and climate change, particularly where there are discussions of a reduction in meat consumption and the possibilities of "alternative proteins" for future diets. Moreover, as a small-scale livestock farmer deliberated, there are difficult questions that need to asked about particular farming methods, however, there is often little nuance in these debates:

"Most meat producers feel very much hard done by, they feel under attack, and sometimes that attack comes from people who should be allies more than anything else. [...] This comes largely from social media, but I see a lot of livestock farmers who feel under attack from nature conservationists, from a general antimeat feeling because social media doesn't do nuance, and sitting around a table and talking through issues does... [...] but the general discourse that red meat is bad and there not being a recognition of the highquality meat they produce, the role farming can play in landscape and providing access and doing carbon sequestration, all of that stuff seems to be very little recognised."

The tensions and feelings of confrontation are very real for farmers, and discussions and actions in relation to 'net zero agriculture' must be made in a collaborative, respectful and supportive manner. Moreover, the low carbon transition will impact different farmers in diverse ways and stakeholders emphasised that livestock farmers in particular require special focus to make sure the transition is fairer. However, there are undeniably difficult tensions and questions that need to be resolved in relation to the agricultural low-carbon transition.

A recent report by the CCC (2023), which examined the (potential) impacts of net zero on the workforce, identified livestock agriculture as a 'redirect sector' - that is, an industry that will need to restructure towards low-carbon technology, and likely to require a change in skills. It is stated that those currently working in livestock agriculture will experience change in the nature of their work, such as incorporating reduced herd sizes and reduced-carbon farming (e.g., on-farm native woodland creation and management) with changes to farming practices (e.g., livestock diets, fertiliser and pesticide use, manure storage and use). However, there could also potentially be job losses in the sector, depending on how the required shift in land use (and its pace) towards greater woodland creation and peatland restoration occurs.

For example, the livestock sector could lose up to 42,000 jobs across the UK unless livestock farms adapt the nature of their work (CCC, 2023). It is stressed by the CCC that if there is to be an increase in more plant-based foods and a decrease in meat consumption and dairy in the future, livestock farmers and workers would need to be supported to reskill or engage with other aspects of farming and land management. However, it is also emphasised that given that many farm businesses are SMEs, there could be limited capacity for workers to engage in training to access alternative occupations (CCC, 2023).

A further issue raised by participants was that we must not export or "offshore" food production GHG emissions — or externalise negative environmental impacts overseas. As noted by the CCC (2020), if consumers simply switched from relatively lower-carbon UK beef to higher-carbon Brazilian cuts, it will undermine efforts to cut GHG emissions.

As a livestock farmer discussed, they wanted to see protection from unfair competition in trade deals: "allowing cheap imported food from wherever with lower animal and environmental standards [...] will undermine British agriculture". It is clear that such a trade system will undercut efforts taken within the UK to restore nature, sequester carbon and protect high animal welfare standards. Therefore, trade policies and agreements with very strong sustainability standards are needed.

c) The Future of Upland Farming

Farming plays a vital role in shaping the management, appearance, accessibility and economy of the uplands in the UK and they are often areas of high value for the environment and climate, generating many ecosystem services for society. The future of upland farming was discussed by existing farmers as being particularly uncertain across the region and **profitability** was a significant concern.

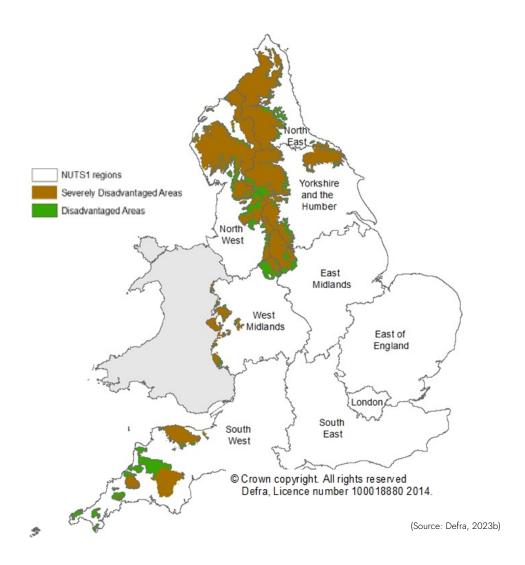
The future of upland farming (see Box 3) was discussed as being particularly uncertain across the region and **profitability** was a significant concern for existing farmers. In particular, interviewees noted that the move to ELMs and the SFI offered little for upland farms and that the income foregone approach could be devastating for upland farmers:

"... I am very worried about the development of ELM where everything is priced on a calculation of compensation for income foregone rather than paying the true value of those public goods that we are producing in the uplands. If it is based on compensation for income foregone it doesn't actually make a net contribution to farm incomes or a contribution to net farming incomes as the direct payments disappear. My biggest fear at the moment is if this doesn't change, just seeing farmers quietly going out of business between now and 2027." (upland farmer)

An upland farmer discussed how they believed that, overall, the Government viewed upland farming in Northumberland as "expendable" (mainly due to it being 'economically marginal') and they considered that the land could be an "easy target" for afforestation or rewilding initiatives, which would see their way of life erased from the landscape.

The uplands cover about 40% of the UK land area and approximately 49% of the UK's agricultural area, using the LFA designation (which includes SDA and DA) as a proxy for upland areas (Clark et al., 2019). Recent figures show that the average Farm Business Income — effectively, net profit — in England for LFA Grazing Livestock Farms was forecast to fall by around two-thirds for the financial year (April 2022 to March 2023) to £16,000 (Defra, 2023c).

• There are a significant number of LFA Grazing Livestock farms across the broader North East region (see the following map). Of the 4,260 total commercial holdings, there are (by farm type): 1,403 Grazing Livestock (LFA), followed by 845 Grazing Livestock (lowland), 765 Cereals, 620 General Cropping, 395 Mixed, 57 Dairy, 54 Specialist Pigs, 42 Specialist Poultry, 49 Unclassified, and 30 Horticulture (Defra, 2023b).



BOX 3: WHAT IS UPLAND FARMING?

There is no formal definition of the 'uplands' in the UK. The term is commonly used to describe areas above the upper limits of enclosed farmland, where climatic conditions (for example, high rainfall, low temperature, short crop season and low soil fertility) and/or altitude affect plant growth and are characterised by dry and wet shrub heath species, blanket bog and other mires, and rough grassland (Clark et al., 2019). The uplands are dominated by livestock farming (cattle and **sheep)** but often face supply chain inefficiencies due to a greater distance to livestock markets, abattoirs and processors. The uplands are at the heart of many of our National Parks, Sites of Special Scientific Interest and designated landscapes (NFU, 2023a).

An upland farmer discussed that if focus is placed on reducing stock numbers to protect nature, then upland farmers need holistic targeted support in the form of, for example, tailored business advice packages, funding for training to move towards nature-friendly farming practices and land management, as well as appropriate farm payments so that they can adapt to new business models based on delivering 'public goods' (i.e., carbon sequestration, wildlife restoration). These are all vital to ensure the financial and social viability of hill farming communities across the Northumberland and North Pennines upland region.

d) Green Jobs for Nature's Recovery

There are significant opportunities to expand 'green' jobs in land-based sectors across the region, particularly in rural areas (i.e., agroforestry, peatland restoration, woodland creation and sustainable farming), however, there is uncertainty about the quantity, quality and accessibility of these jobs both for the existing agricultural workforce and new entrants.

It was discussed by several participants that there is potential to grow decent green jobs in the region related to, for instance, "roles in agroforestry, restoring peatlands, woodland creation and 'nature-friendly farming'" (practitioner, nature charity), which will be crucial to keeping people working the land for "nature's recovery" (see Box 4). Indeed, the CCC (2023: 46) states that agronomists, ecologists and arboriculture officers "tend to earn within, or above, the UK average salary".

BOX 4: WHAT IS NATURE RECOVERY?

By tackling the biodiversity crisis, we can help nature to recover, and also work to secure the multiple health and economic benefits from an enhanced and thriving natural environment. The Nature Recovery Network is a significant commitment in the 25 Year Environment Plan (Defra, 2018b), enacted by the Environment Act 2021 and seeks to address three of the biggest challenges we face: biodiversity loss, climate change, and wellbeing. For more information see: www.local.gov.uk/pas/topics/environment/nature-recovery-local-authorities

The CCC (2023) identified forestry and peatland restoration (see Box 5) as key growth sectors for job creation in a UK net zero workforce. It is noted that achieving the CCC's 'Balanced Pathway' by 2030 could require: 1) between 6,600 and 39,000 new workers to achieve the tree-planting ambition; 2) up to 560 and 2,200 additional jobs for peatland restoration; and 3) 8,300 new jobs for planting hedgerows. Overall, however, it is highlighted by the CCC (2023) that there is much uncertainty in relation to these 'green' job estimates and considerable barriers to finding new workers for these sectors.

BOX 5: PEATLAND RESTORATION IN NORTHUMBERLAND

In Northumberland, the county's upland holds a significant proportion of England's blanket bog, upland heath and upland hay meadows. For instance, within the Northumberland Peat Partnership (NPP) area, there are 142,736 ha of peat bog, a significant proportion 'deep peat', which may exceed 7 metres in depth and are storing millions of tonnes of carbon dating back 10,000 years or more. Working to repair and conserve peatlands keeps carbon in the ground, therefore the NPP states that there are opportunities to work with farmers and landowners to position the county at the forefront of nature recovery by seeking to further improve and expand important habitats. For more information see: www.nwt.org.uk/what-we-do/ projects/northumberland-peatpartnership

It was emphasised by participants that there are **numerous skills** and significant experience that existing farm workers have that could translate very well into other land-based employment (such as forestry or conservation). However, there was a perception by some stakeholders that there may be **cultural barriers** and difficulties in persuading some farmers and workers to move away from conventional methods of farming to 'alternative' sustainable practices or transitioning from agriculture to other land-based occupations.

Recommendation 1:

Address Uncertainty in a Complex **Policy Landscape** – The transition to a post-Brexit agricultural policy landscape has created significant concern for the farming community across the region, particularly in relation to financial viability. The Combined Authority could help address this uncertainty through collaboratively establishing clear strategies and targeted interventions with relevant partners to support farm businesses in the North East that may be vulnerable to the low-carbon agricultural transition (e.g., high-carbon, high-input sub-sectors such as intensive livestock agriculture). Actions the Combined Authority could consider include:

· 1.1: Policy Certainty and Stability: National policy clarity is crucial to ensure a smooth post-Brexit agricultural policy transition. The Combined Authority could play a role in communicating to the **UK** government the importance of a holistic, coherent and integrated approach to post-Brexit agricultural policy development that is responsive to the diverse regional farming geographies of the North East. This is crucial in order to avoid creating unintended consequences through interactions between different national policy areas (such as climate, trade, health etc.) and their spatial impacts.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, UK Government.

Indicator: INFLUENCE¹³

1.2: Establishing a Clear, Integrated Regional Rural

Agenda: NEMCA could commit to work with the farming community over the long term to identify potential impacts, specific opportunities and challenges for the sector across the complex and unique rural environment of the region (including Northumberland, County Durham

and Gateshead), when developing a "clear joint plan for rural growth, stewardship and net zero" (DLUHC, 2022: 46). This can be part of an Inclusive Sustainable Rural Stewardship Agenda that protects and improves the environment and supports sustainable food production.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, UK Government.

Indicator: COLLABORATE

· 1.3: Farm Business Planning **Support:** Given the uneven impact that net zero and new agrienvironmental policies and actions will have across the farming industry, targeted business support and advice is required for sub-sectors that may face significant changes (such as upland farming) in the years to come. Research has found that effective support needs to recognise the particular nature of farming as a business (NICRE, 2022), therefore, the recently launched Northumberland Small Business Service (NSBS)14, which offers a bespoke offering for rural farmers could be expanded region-wide to ensure that all farmers and farm workers have access to appropriate, place-based, independent business planning advice and services.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, training providers, livestock industry trade associations and membership organisations (such as National Sheep Association), Pasture for Life, Centre for Innovation Excellence in Livestock (CIEL), Northern Upland Chain Local Nature Partnership, Northumberland National Park, farming clusters, NFU, TFA, LWA, National Innovation Centre for Rural Enterprise.

Indicator: COLLABORATE

¹³ We appreciate that some of the specific 'actions to consider' may go beyond the direct remit of the Combined Authority. Therefore, in the report we indicate where particular recommended actions can be: directly implemented (IMPLEMENT), require collaboration (COLLABORATE) or involve influencing government at the broader level (INFLUENCE).

NSBS was launched on 12 October 2023 at Alnwick Gardens and offers a range of support including business diagnostic and brokerage services, start up support for those looking to pursue a business idea as well as a package of one-to-one support and workshops to help small businesses grow and be more resilient, the NSBS programme also has a service specifically for farm enterprises.

Recommendation(s) to shape national policy pathways on agriculture and food systems:

- · National Government could:
 - o provide greater policy clarity and ensure that there is clear, accessible information available to all those who require it. It is crucial that policy developments by Defra are translated into clear advice, guidance and extension services to actively support farmers on the ground to interpret, implement and mitigate any negative consequences of the disruption that the agricultural policy transition may create.
 - o create stronger synergies across governmental departments and policies to support joined-up, comprehensive governance of the agricultural transition. For instance,

- Defra can work closely with the Department for Energy Security and Net Zero, Department for Business and Trade, and Department for Science, Innovation and Technology to ensure that there is policy coherence rather than policy disconnects.
- o work in partnership with agricultural and other relevant stakeholders to collaboratively develop a clear, holistic Just Transition Strategy for Agriculture. Inspiration can be taken from the Scottish Government (2023), which has published a 'discussion paper' on land use and agriculture¹⁵ to inform further consultation before a roadmap and just transition plan will be published.

Indicator: INFLUENCE

THEME 2. SUPPORT FARMERS ON THEIR JOURNEY TO NET ZERO THROUGH THE AGRICULTURAL TRANSITION

Summary: Farm businesses and workers require clear, targeted sustainability and business information, advice and support to assist a fair journey to net zero agriculture building on their traditional leadership role in land management and stewardship. Farming is experiencing a significant period of change, with multiple pressures creating a complex landscape for farmers and farm workers to navigate. Farming has a key role to play in supporting nature's recovery, carbon sequestration and addressing climate change, however, tailored support and guidance is required to ensure that actions can be taken at the farm-level to deliver social, economic and environmental sustainability and adapt to a changing climate.

Key Findings:

- a) Greenhouse Gas Baselining and Audits
- b) Opportunities related to 'Natural Capital' and Carbon Sequestration
- c) Supporting Sustainable Farming Practices
 - Financial Viability
 - Regenerative Agriculture
- d) Climate Adaptation Strategies
- e) Low-Carbon Energy for Agriculture

a) Greenhouse Gas Baselining and Audits

Undertaking baseline data collection for greenhouse gas emissions and biodiversity is crucial so that all farms have an accurate picture of their business benchmark to help identify areas for improvement for environmental targets, develop personalised business plans and then monitor the impacts of implemented sustainable farming practices and wider environmental actions. There was some concern discussed by participants over consistency and accuracy of different carbon calculators, and unease that data collection and monitoring could be an administrative burden, particularly for smaller farms.

A key issue discussed by some farmers and farming organisations was the need to develop baseline data for carbon/
GHG emissions and biodiversity, so that all farms have an accurate picture of their business benchmark to help identify areas for improvement for environmental targets, develop personalised business plans and then monitor the impacts of implemented sustainable farming practices. This is vitally important, as several participants suggested, since the idea of "transition" can feel confusing, messy, disorientating and sometimes threatening for many people involved with farming.

There was some concern that there needs to be standardised tools or calculators to ensure consistency and accuracy, and also that there was robust

reporting. Individualised support was highlighted as crucial to ensure carbon baselines were established for all farms:

"one of the important things for farmers to know is their baseline, where are we starting from with this? So, actually if we are X number of tonnes of carbon positive, what are we going to start to do to bring this down? Or, if the result shows that we are negative, right, so that extra carbon is an opportunity for us. Whatever that might be in the future. So, carbon planning is a really important one."

(farmers' network representative)

There was some concern that data collection and monitoring could be an administrative burden, especially for small-scale farms. In particular, several farmers said they wanted more information on the funding opportunities for carbon auditing for their agricultural business and also clear data on what financial benefits or opportunities arise from having a carbon audit for their farm. Some stakeholders outlined that training and guidance for farmers on how to collect and use the data will be important. It was stressed that support needs to be tailored to the location, type and size of the farm.

Stakeholders highlighted positive examples of fully-funded support packages for farmers such as the recent partnership between Eden District Council in Cumbria with the Farmer Network (which now covers Northumberland) (Eden District Council, 2023), as easily replicable formats of comprehensive, place-based sustainability and business support.

Another issue raised by farmers was related to fairness across sectors of the economy in the context of climate change. For instance, a participant questioned whether farmers are being influenced so that they have to change their practices so that other industries do not have to, through carbon offsets, for example:

"if we create new markets for carbon and biodiversity in agriculture, how do we stop companies in different industries continuing their current practices and just 'buying' their way clean?" (arable farmer)

Therefore, there needs to be real caution that issues of climate change do not become reduced to discussions of 'carbon' alone and **lead to problematic** outcomes related to private and corporate interests within carbon credits dominating. For example, 'carbon offsetting' works by compensating for CO₂ emissions via other activities (such as tree planting). Yet, in reality this allows the buyer's emissions to continue, rather than requiring them to cut their emissions at source. Therefore, as discussed by an environmental stakeholder, there are

concerns about the effectiveness of carbon offsetting to tackle climate change.

Overall, there was a general desire from farmers to see 'tried and tested models' before any decisions were made for their farm business to reduce risk. They also wanted to see clear regulation and a fair market to operate within — an "even playing field" — in future natural capital markets.

b) Opportunities related to 'Natural Capital' and Carbon Sequestration

Our research found that there is interest amongst the farming community to generate additional revenue from carbon sequestration alongside producing food. However, there was some scepticism expressed in relation to private markets for ecosystem services and 'natural capital' with a lack of clarity of who actually benefits from carbon trading schemes. Given that the national Government has placed increasing emphasis on investment in 'natural capital' to support nature's recovery (Defra, 2018b; Defra, 2023d), it must be noted that research has discussed how translating natural entities into 'natural capital' and 'ecosystem services' converts nature to an asset on a balance sheet, facilitating their further enclosure and exchange on the market (Coffey, 2016; Raworth, 2017).

Farmers highlighted the various opportunities that have been promoted in relation to nature-based solutions to net zero farming often rely on the idea of "natural capital" — that is, the monetisation of 'natural assets' through economic metaphors (Coffey, 2016); as one farmer stated, "it has a bit of a Bitcoin-esq definition because if we all believed that natural capital is worth money, then it will be" and as another farmer stated "there is potential with carbon markets and trading to bring in money".

While new revenue streams for farmers were discussed as important: "at the end of the day the business has to be viable" (farmer), there was some scepticism expressed in relation to private markets for ecosystem services.

"there are companies out there looking to buy carbon credits, biodiversity credits is the next big one. Farmers aren't going to get a look in." (mixed farmer)

"Defra want to grow the natural capital sector, to make them a new revenue scheme in land management, but this is the 'wild west', with completely cowboy climate codes, so they need to be developed with care, especially for the tenanted sector." (tenant farmer)

In the context of the tenanted farming sector, there was also a concern that there was no clarity of who actually benefits from these carbon trading schemes — the tenant farmer or the landlord - or both - and how agreements would be entered that have positive outcomes for both parties. Moreover, farmers stated that there was uncertainty over the temporal aspects of carbon trading schemes – for example. whether it was best to wait or sell carbon credits now to get the 'best price', and also what exactly is being offset and who they could or should sell them to.

In short, farming stakeholders believed there is money to be made from storing and trading carbon – the question is, who will benefit from this new income stream (traders and investors, landowners, or farm workers)? Moreover, who decides the value of 'carbon'? And, how will this price be agreed? These are still unanswered questions in relation to 'natural capital', which create further feelings of uncertainty for the farming community.

More honest conversations that include representatives of all aspects of the agriculture industry, policymakers and other land management stakeholders about what the move towards 'natural capital' accounting and carbon market schemes within agriculture is actually achieving - and who it is benefiting – are urgently needed 16. This is crucial because it was suggested by some participants that large businesses can purchase land at high prices, and plant trees to offset their carbon emissions, which in turn further reduces land availability for existing farmers or new entrants.

It is also important to clearly state that the increased commodification of natural entities and their translation into "natural capital" and ecosystem services converts nature to an asset on a balance sheet, facilitating their further enclosure and exchange on the market (Raworth, 2017). This quantification of nature must be problematised by farmers, policymakers and others, as it is likely to be central to government strategy in the foreseeable future via flagship policies such as the 25 Year Environment Plan (Defra, 2018b), but narrows the terms of the environmental debate (Coffey, 2016). From a purely sustainability lens, the liberalisation of the agricultural sector through a market for environmental services does not address the social and environmental wellbeing of farming communities.

c) Supporting Sustainable Farming **Practices**

Encouraging and incentivising farmers to adopt sustainable farming practices which improve biodiversity, land, soil and crops management is vital to supporting a just transition. Participants were clear that farmers are unlikely to change their practices unless it is economically beneficial to do so.

¹⁶ Good practice was highlighted for investing in natural capital in relation to existing mechanisms within the Woodland Carbon Code (WCC) - the government-backed quality assurance standard for woodland creation projects in the UK, that "generates high integrity, independently verified carbon units" (https://woodlandcarboncode.org.uk) and the Peatland Code – a voluntary certification standard for UK peatland projects wishing to market the climate benefits of restoration that "provides assurances to carbon market buyers that the projects they are investing in are credible and deliverable" (https://www.soilassociation.org/certification/forestry/carbon-schemes/peatland-code/).

Financial Viability

Numerous farmers are already engaged in sustainable practices and many more are interested in adopting agroecological or regenerative farming practices, however, financial viability is a key factor given the phase-out of BPS direct payments. There was particular interest in carefully and thoughtfully integrating trees within farms, planting more native woodland and hedgerows based on the notion of "the right tree, in the right place". Yet, financial constraints were cited as a crucial barrier by some farmers and they wanted to see the budget of ELMs match the scale of the challenge.

Agricultural workshop discussions underlined the importance of supporting farmers and farm workers to help with decarbonisation on site and incentivise sustainable, agroecological or "regenerative" farming practices. It was emphasised that the **financial viability** of adopting sustainable practices was crucial, as discussed by an arable farmer:

"On my farm, I am mid-tier
Countryside Stewardship and in that,
I have a field of wildflowers and kale
for pheasants... and margins and
hedges and I am also on SFI Pilots
as well... So, I am very keen. [...] the
new areas that you can move into
like SFI and Countryside Stewardship
and all the other ones, they must pay
enough, financially, because we have
all lost BPS and that was a very good
cushion for good years and bad years
particularly, and we've lost it, and the
financial aspect is really very, very
important."

It was frequently stated that farmers are unlikely to change their practices unless it is economically beneficial to do so, and therefore, policy measures and agricultural payment systems are required to help farmers adapt their land use to alternative practices and switch to low-carbon, low-impact agriculture.

Particular focus was placed on carefully and thoughtfully integrating trees within farms, planting more native woodland and hedgerows based on the notion of "the right tree, in the right place" (conservation charity manager). This is crucial given that there was concern over large non-native or coniferous tree plantations and a reported "nervousness around another Kielder and more Sitka Spruce and people just buying up huge swathes of land and planting timber, sticks in the land" (local authority stakeholder). Several participants referenced the opportunities surrounding the Great Northumberland Forest¹⁷ – from planting individual trees, small community woodlands to large schemes bringing together farming, forestry, biodiversity and recreation.

However, it was stated that there are multiple barriers impeding tree planting action 'on the ground' for particular farmers. For instance, agroforestry requires investment over long-term horizons that can make it challenging to incentivise the shift, given the upfront costs (such as ground preparation and tree planting) and the timing of returns. As an upland farmer explains, financial constraints are a particular issue:

¹⁷ See: https://www.northumberland.gov.uk/Economy-Regeneration/Programmes/Rural-Growth-and-Innovation/Great-Northumberland-Forest.aspx

"We are farming up in the Cheviots and looking at the transition at the moment and we are trying to subtly move through to some more sustainable methods and we are having to put some of our projects on hold at the minute because our income is dropping at the rate of knots as BPS comes down [...] there is nothing there to replace that. [...] there are certain things that we would like to do on the farm to increase our sustainability, like tree planting, but projects we just can't afford because we are paid retrospectively. And we have to pay upfront, possibly they [local authorities] may be able to help with that, maybe loans or in a pool, even for like community garden projects, we can borrow that money, and get things going, I think more could happen with that kind of assistance." (upland farmer)

While farmers and businesses are interested in new opportunities to earn income from the land by diversifying into woodland management or adopting agroforestry to support sustainable agriculture — practical, financial and capacity barriers must be overcome, and local authorities along with delivery partners can help address these obstacles.

'Regenerative' Farming

'Regenerative agriculture' has become a key phrase over the past few years. It has gained increasing traction amongst farmers and can encourage shifts to greater sustainability. However, there is no agreed definition, which creates a degree of confusion for farmers over what the term actually means. It was stated by participants that regenerative practices must be tailored to the specific environmental setting of each farm.

Many of the farmers interviewed work broadly in 'conventional' agriculture and stated that they had noticed a recent surge of interest in "regenerative agriculture" (see Box 6) both in the mainstream farming press, online forums and in conversations that they have had with others, which has helped to gain their interest. This traction is promising and can encourage shifts towards greater sustainability.

BOX 6: WHAT IS REGENERATIVE AGRICULTURE?

The term 'regenerative organic' was first utilised in the 1980's by Robert Rodale as a holistic approach to farming that included social and economic improvements alongside environmental benefits. Subsequently, the term has evolved beyond organic to broadly include land management approaches that aim to build soil health, crop resilience and nutrient density by aligning with natural processes such as the carbon and hydrological cycles (Seymour and Connelly, 2023). Regenerative agriculture therefore is broadly used to describe any form of farming (i.e., the production of food or fibre), which at the same time improves the environment. Groundswell outlines five principles that regenerative agriculture follows: 1. Don't disturb the soil, 2. Keep the soil surface covered, 3. Keep living roots in the soil, 4. Grow a diverse range of crops, and 5. Bring grazing animals back to the land. For more information, see: https:// groundswellag.com/principlesof-regenerative-agriculture/ and https://regenerativefoodandfarming. co.uk

A few stakeholders cautioned that with no agreed definition of the term "regenerative agriculture", it can be conflated with other concepts such as organic agriculture, biodynamics, permaculture and agroecology (Seymour and Connelly, 2023). This creates a degree of confusion of what the term actually means and could potentially lead to "greenwashing". Therefore, it was stated by a participant that there needs to be effective and robust data collection tools, criteria and indicators developed to evaluate the sustainability impacts of particular 'regenerative' practices and their outcomes in various place-based contexts.

Participants said that by sharing learning and knowledge about the science and practical applications of regenerative farming in particular local contexts, it can inspire farmers to embrace sustainable practices and support a low carbon agricultural transition. As a farmer discussed, regenerative practices must be tailored to the specific environmental setting of each farm:

"it is a balanced approach, and looking at a sustainable way to grow things like beans, might not be able to grow peas up here but you can certainly grow field beans that could be used for human consumption that can actually trap nitrogen and reduce the fertiliser requirement. There is a long way to go on developing this and unfortunately, it's not a one-size-fits-all, and regenerative farming practices or integrated crop management, actually you have to develop a system for your particular farm or even your sort of locality for the weather, the climate, the soil type, the works - so, it needs rather more thought and input than has been given at the sort of national level so far." (upland farmer)

It was also discussed by some participants that it is vital that agricultural college courses in the region ensure that course content reflects the move towards sustainable and regenerative farming practices, because as highlighted by a workshop participant, this is not always the case, and the majority of agricultural education tends to focus on 'conventional farming':

"I feel like learning in agricultural college at the moment, there isn't enough said on regenerative farming, it is all on what is already happening, so not really taking us forward."

(agricultural college student)

In order to encourage the uptake of regenerative farming in the North East, it was emphasised by several participants that bringing numerous farming, rural, education and research organisations together to create sites of experimentation

and demonstration within the region, which is able to respond to the specific climatic, land and socio-cultural characteristics of the area could be one way to support shared learning, skills development and innovation. As a participant discussed:

"If we regionally think going down the 'regen' route is important, then funding a farm to try different things, and have a play around, and probably have a regional farming steering group would be beneficial. It would be quite nice as an experimentation and demonstration hub with somebody to take on responsibility for showing visitors around and bringing farmers in. Setting up an area or field or even a bigger portion of the farm to try some of this regen stuff and really try and push it on. And then that way, I think you are going to push things on faster, farmers learn nicely from each other." (farm manager)

d) Climate Adaptation Strategies

Climate change poses particular risks to farming and the UK's domestic food production (Defra, 2021). Adaptation measures are crucial and will depend on the local context and bio-climatic conditions. It is vital that workers have the knowledge and skills to adapt to climate change, and action is taken to prepare for, and adjust to, both the current effects of climate change and the predicted impacts in the future. Stakeholders placed particular focus on worker wellbeing and productivity, creating more climate-resilient food production models, and the role of agricultural research, innovation and technology. A critical distinction was made by participants between advice, knowledge exchange and agricultural extension services, whereby it was emphasised the latter are crucial to practically support farmers with the uptake of new farming practices, innovation and technologies to increase sustainability.

Climate change, with increasingly extreme weather, poses particular risks to farmland and the long-term viability of rural farming communities — and climate change is the biggest medium- to long-term risk to the UK's domestic food production (Defra, 2021). Participants outlined that appropriate adaptation measures will depend on the local context and bio-climatic conditions — with particular support needed for marginal or smaller-scale farmers who may not have the capacity to respond to climate

transitions.

"We had 40 degrees last summer, certain crops just could not cope with that and died [...] a key challenge is climate change and the loss of biodiversity, and they are very hard for us to comprehend, what our landscapes are exactly going to look like in 20, 30, 40 years' time and I think it is going to be utterly unrecognisable in some situations." (horticultural grower)

Workers in the farming sector must have the knowledge and skills to adapt to climate change, and action is taken to prepare for, and adjust to, both the current effects of climate change and the predicted impacts in the future. This, for instance, can relate to sustainable water management and diversification of crops to adapt to changing climates. There were several key issues related to climate adaptation discussed by participants, which can be summarised as follows:

- It was stated by a stakeholder that restoring soil health can help to reduce the impact of drought and flooding. Therefore, support is needed for farmers and land managers to establish their soil health baseline to inform how to best manage soil health to increase climate resilience.
- Climate change will have an impact on the workforce, with outdoor workers in industries such as agriculture likely to be most exposed to high temperatures, which can have negative impacts on workers' health (such as heat exhaustion) and productivity (CCC, 2023).

- Many farmers reflected on the recordbreaking 40-degree heat experienced in Summer 2022, and suggested that there may be possible impacts on future food security. One farmer discussed that there may need to be increased focus on identifying new qualities in crops and livestock that can cope with more extreme heat and develop resistance to pests and diseases that may shift geographically as the climate warms.
- Some participants discussed how
 a changing climate is already
 impacting what is grown in the
 UK, which has both opportunities
 (particularly to grow new and different
 crops) and challenges "in terms of how
 do we cope with extreme heat and
 extreme droughts" (CSA grower).
- Agricultural technology was also identified by some participants as a possible area of growth, often framed in the literature as the "fourth agricultural revolution" (Rose and Chilvers, 2018). The potential of technology to shape how farming is done and who farms in a changing climate is significant. Participants discussed technology primarily through "agri-tech" - mainly precision agriculture and the use of Artificial Intelligence (AI), remote sensing and drones to improve sustainability (e.g., by reducing the application of fertilisers and manures through greater accuracy).
- The role of high-tech, innovative farms was also discussed, both now and in the future. There are interesting examples of innovative and entrepreneurial food production enterprises emerging in the North East such as the hydroponic vertical micro-farm, FYTO, based in Newcastle¹⁸.

A critical distinction was made by participants between advice, knowledge exchange and extension, with importance placed on Agricultural Extension Officers to support the uptake of new farming practices, innovation and technologies to increase sustainability:

¹⁸ FYTO frames itself as a low-carbon company that aims to reduce food miles and grow food in the most efficient way possible. This 'vertical farming' business uses hydroponic farming technology — a horticultural method that involves growing plants without soil, which are dependent on water-based mineral nutrient solutions instead. See: https://www.fyto.org

"The sort of advisory things that are going on will point you in the right direction to get things, whereas an Extension Officer might go in and get their hands dirty and show someone how to set it up on a tractor and be able to do it practically. When you talk to people outside of the sector, they tend to lump advice, knowledge exchange and agricultural extension all in one as 'an adviser' and those are three different things".

(farm manager)

e) Low-Carbon Energy for Agriculture

Participants outlined that there is potential for farms to produce renewable energy (such as wind and solar) on suitable sites, however, the current planning system was identified as a possible barrier. Energy demand on farms can be high for various reasons (i.e., powering heavy machinery and heating animal sheds) and at present often relies on fossil fuels. It was highlighted that targeted support is required for those most affected by energy price increases and a national strategic plan needed to move towards more renewable energy sources and low-carbon fuels in farm buildings and machinery.

Workshop participants pointed towards the importance of farmers being able to access funding to adopt renewable energy initiatives such as wind and solar on their land to reduce the carbon emissions of their business. However, the current planning system was referred to by some farmers as a barrier to implementing renewable energy projects on their farmland.

The NFU (2016: 3) has highlighted cases where farmers have installed their own renewable sources of energy and achieved significant savings, outlining how "renewable energy production has indeed become part of the agricultural growth agenda".

Interviewees said it would be useful if there was more advice and support on the opportunities related to producing renewable energy on site, particularly as a way to offer a diversified income stream. Eagerness to install renewable energy initiatives was shared by many participants. As expressed by an CSA grower:

"we are trying to get away from our reliance on fossil fuels and head towards greener, cleaner, renewable energies, could that be sort of linked into farming? Farming is making use of the land and environment that we have, and that doesn't mean that it always has to carry on as it has been, so change is inevitable... could we tap into what we have here in the North East - an abundance of wind... and solar panels, to get off our reliance of what we have been used to in the past. [...] Northumberland County Council are working towards getting to net zero by 2030 - that is one of their goals, and obviously there will be various funds [...] if they were also made available for the farming community, that could be a way to go as well."

Energy demand on farms can be high for various reasons, such as powering heavy machinery and heating animal sheds, and at present often relies on fossil fuels. It was highlighted that targeted support is required for those most affected by energy price increases and a strategic plan to move towards more renewable energy sources and low-carbon fuels in farm buildings and machinery. Indeed, reducing energy use on farms was discussed as important for financial reasons in the context of the high cost of energy, as a farmer stated, "it makes sense and we want to reduce our costs".

It was suggested that the UK Government must develop a plan to help decarbonise tractors and other agricultural machinery to support farmers reduce their carbon footprint. At the local level, it was stated that rural areas must have access to low-carbon transportation infrastructure and rural mobility in general must be improved.

Recommendation 2:

Support a Just and Sustainable
Transition for Farmers, Farm Workers
and Farming Communities — The
Combined Authority could support
those working in the farming sector
on their journey to net zero through
the low-carbon transition to adopt
more sustainable farming practices.
Specifically, the Combined Authority
could examine opportunities to co-design
comprehensive fully-funded holistic
support packages for farmers, in order
to increase resilience and sustainability
at the farm-level. Actions the Combined
Authority could consider include:

· 2.1: Natural Assets and Rural Stewardship: The region has a range of natural assets (i.e., forests and peatland) that have significant potential to sequester carbon. Given the increasing focus on natural capital approaches, and the evidence gap in terms of understanding how natural capital and societal benefits are identified and supported at the local scale, the Combined Authority could work with relevant stakeholders to undertake participatory placebased mapping of "natural capital assets" across the region. This could inform collaborative natural capital accounting pilot projects. It can also meaningfully engage workers and communities in natural capital discussions across a range of participatory mechanisms, examining how 'natural capital' can be harnessed for local community benefit and to tackle rural challenges.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Natural England, Environment Agency.

Indicator: COLLABORATE

· 2.2: Funding and Support for Calculating a Carbon Footprint: The Combined Authority could work with local authorities to determine funding availability to support farms to undertake soil health baselining and GHG emission audits. The Combined Authority could collaborate with farming organisations to determine the most appropriate audit tools and promote their implementation extensively as part of broader rural or agricultural business sustainability support packages. The widespread adoption of carbon foot-printing and auditing is needed to enable farmers to establish, track and reduce on-farm emissions (including both carbon reduction and offsetting potential).

Potential Delivery Partners: NTCA, NEMCA, local authorities, farming organisations.

- 2.3: Rural Decarbonisation
 Business Support: With relevant
 partners, the Combined Authority
 could examine opportunities to
 develop comprehensive fully-funded
 holistic business support packages
 for farmers to increase resilience
 and sustainability at the farm level (i.e., through funding and
 commissioning rural support and
 extension services). This can include:
 - o targeted business advice and a farm business review,
 - o support to reduce GHG output and assessment of the farm's potential for environmental payments,
 - o help to identify farm diversification opportunities,
 - o guidance on skills development needed for the take-up of agricultural innovation and technology,
 - o tailored advice and support to help cut energy use and adopt renewable sources of energy on site (such as wind and solar), and in turn reduce costs of the business and diversify income streams.

Potential Delivery Partners: NTCA, NEMCA, local authorities, farming clusters and groups, The Farmer Network, Nature Friendly Farming Network, skills and training providers, community charities, groups and hubs, FE colleges, farming organisations, National Innovation Centre for Rural Enterprise, DESNZ.

Indicator: COLLABORATE

• 2.4: Climate Adaptation: Rural and coastal areas are feeling the effects of climate change with more frequent and severe storms, flooding and droughts, which are detrimental to the local environment and weaken the resilience of businesses and communities. The Combined Authority could work with key partners to support and develop co-designed climate adaptation plans, strategies, and interventions at the landscape level that help communities and businesses respond and adapt to the current and predicted future localised impacts of climate change.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, Environment Agency, Natural England, Forestry Commission, Defra, DESNZ.

- · 2.5: Sustainable "Regenerative"
 Farming Research and Innovation:
 - The region has a range of world-leading educational and research institutions. The Combined Authority could work with such partners to leverage investment to create a collaborative sustainable agriculture demonstration site in the region. This could:
 - o act as a site to experiment and encourage innovative lowcarbon farming methods and enterprises (such as those related to regenerative farming) that are based on the specific climatic conditions of the North East.
 - o function as a learning and demonstration hub increasing opportunities for knowledge exchange between academics and local farmers through the development of a regional farming steering group.
 - o harness the knowledge, expertise and natural assets of the region to develop a national and international reputation for research and innovation in sustainable agriculture, which could have multiple economic, social and environmental co-benefits for the region.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Newcastle University Farms, regional universities, Agriculture and Horticulture Development Board (AHDB), LEAF, North East Chamber of Commerce.

Indicator: COLLABORATE

- · 2.6: Low-Carbon Transportation:
 - The challenges associated with rural connectivity require extensive investment beyond the scope of the Combined Authority alone, however, they can work with partners to support the roll-out of new infrastructures such as electric vehicle (EV) charging points 19 and battery storage.

 They could also support innovative community-based solutions to address local transport problems, ensuring that rural areas have equal coverage to support low carbon transportation options.
 - o This could form part of a larger rural green mobility study that develops in-depth insights into current mobility needs of users, travel behaviours and provision of transport across rural communities and the opportunities and barriers in relation to the rollout of low-carbon solutions and inform an action plan.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Transport North East, HE institutions, NE LEP, Defra, DfT.

¹⁹ There are currently 220 public EV charging points in Northumberland. According to government targets, Northumberland should aim to install 1,508 EV charging points by 2030. See: https://groups.friendsoftheearth.uk/near-you/local-authority/northumberland#transport

THEME 3. ADOPT
A PLACE-BASED,
MULTIFUNCTIONAL
APPROACH TO LAND
THAT BALANCES LANDBASED OBJECTIVES
AND SUPPORTS
'MULTIFUNCTIONAL
FARMERS'

Summary: Land is the most fundamental resource we have. Without sustainable land use, there is no sustainable, lowcarbon future. In order to meet the UK's legal commitments on carbon emissions, foster nature restoration and ensure sustainable food security, a multifunctional approach to land is required (FFCC, 2023; Royal Society, 2023). This is both a challenge and opportunity for the farming community. Recent focus placed on agriculture delivering 'public goods' has raised broader questions for some participants about the role and occupational identity of farmers as 'food producers', whereby particular ways of farming are often connected with individual, intergenerational and collective identity. Greater visibility for and recognition of the role of women in farming and their leadership in the industry is also required to help the sector become more inclusive, diverse and encourage women entrants (Shortall et al., 2020; Women in Agriculture Taskforce, 2019; Sutherland et al., 2023). There is no one-size-fits-all approach to sustainable land management and there will be trade-offs over different uses, given the place-based characteristics of particular landscapes. Local communities and workers must therefore be empowered to directly shape the land that they live and work on.

Key Findings:

- a) Supporting Food Production and Environmental Sustainability
- b) The Role and Identity of Farmers
 - Farmers as 'Food Producers'
 - Gender in Agriculture
- c) Multifunctional Approaches to Land (Policy)
- d) Participatory Mechanisms to
 Deliberate Regional Land Policy and
 Frameworks
- e) Collective Landscape Scale Action for Nature's Recovery

a) Supporting Food Production and Environmental Sustainability

There was a general feeling amongst farmers and farm workers that participated in our research that food production and food security have been overshadowed by environmental management considerations in new post-Brexit agricultural policy. This also was related to a strong perception within the agricultural community that wider society does not appreciate its role in food production or land management. It was highlighted that sustainable food production and environmental sustainability are inextricably linked and vital for the sector to support a just transition.

A major concern mentioned by farmers was the belief that the **national policy commitment to food production has been scaled back in favour of environmental management**. As a tenant farmer in Northumberland stated: "Agriculture policy is moving away from food and farming systems which is a huge issue... and problem".

"Defra are focusing on the environment... public goods [...] now I get behind that, don't get me wrong, but completely ignoring what farmers do [produce food] [...] now that seems to be missing an important part of the puzzle, the importance of food production." (livestock farmer)

We grow just over half of the food we need (approximately 60%) on nearly three-quarters of land (71%) devoted to agriculture in the UK (Defra, 2018a) and as a tenant farmer stated "we should be capable... as a nation... of producing much more food for human consumption in a sustainable way".

Increasing self-sufficiency (by increasing domestic production of many crops) is important so that we do not end up offshoring environmental externalities elsewhere (Lang, 2020) — but this needs government support to scale up. There was a general consensus amongst participants that we should be **growing more nutritious food locally**, as a CSA grower described:

"there are a lot of lowland areas that have got permanent pasture in them or animal feed being grown and I think there is a huge potential for growing more fruit and vegetables here in the North East, especially in those lowland areas."

While farming organisations stressed that the environment/food security dichotomy was a false distinction: "we need healthy soils to grow better food and be more resilient to climate change", there was an overwhelming feeling expressed by the majority of farmers that food security was being relegated in favour of environmental actions (such as tree planting and reversing biodiversity loss), rather than viewing the two together.

It was frequently stated in interviews with farming participants that they believed the UK Government lacks an overall vision and ambition for scaling up sustainable farming — and fails to view sustainable food production itself as a 'public good'.

As a local food campaigner discussed:

"So, sustainable and affordable food really should be seen as a 'public good', moving away [from] supermarkets determining the price, and getting a better deal for our producers, moving away from industrial agriculture and encouraging farming based on agroecological practices."

Not feeling valued by the public was discussed many times by farmers and farm workers, reflecting the agricultural community's perception that wider society does not appreciate its role in food production or land management.

As a farming stakeholder summarised, in any just transition process, the social and environmental 'public goods' farmers, farm workers and land managers deliver "need to be justly rewarded".

One of the key issues highlighted by participants was the potential negative social repercussions resulting from a change in land use, for instance with a reduction or move away from livestock farming in particular places and transformation of upland landscapes from sheep farming to 'rewilding' (which was a particularly contested term). As a participant from a nature conservation charity stated. "if rewilding is prioritised that would be a significant transformation of certain cultural landscapes or if there is scaled down livestock farming working in harmony with nature in other places that would be less of a change". These different options will lead to very distinctive outcomes for existing farmers, communities and landscapes.

Several participants outlined that it is vital that farmers contribute to enhanced biodiversity, cleaner water, reduced GHG emissions and flourishing landscapes (which can attract tourists). However, there was a perception held by many farmers that diversification could be considered inferior compared to food production as it would replace 'productive' (i.e., food and fibre production) with 'unproductive' land use.

Therefore, our research highlights that any changes to land use must be accompanied by open policy dialogue about acceptability, suitability and feasibility in particular areas and also fully-financed support (i.e., training for other 'green', well-paid jobs) for the livelihoods of those affected by these subsequent changes — for instance, in cases where there is a move from primarily delivering food production to providing environmental public goods and services.

b) The Role and Identity of Farmers

The social and cultural importance of agriculture in rural communities and in shaping the region's landscape, particularly in the local authority areas of Northumberland and County Durham, was discussed by participants. Farmers and farm workers frequently considered their role in farming not just as a 'job' but something much more all-encompassing – essentially, they explained farming as 'a way of life', 'a passion' or an 'agri'-culture that can be physically and mentally demanding. A just transition for agriculture also requires greater inclusivity, and participants discussed the need for more visibility and recognition of the role of women in farming and their leadership in the industry.

"it is difficult to example to the general public, you become a farmer and there is a perception that farmers are always rich and we are not unfortunately, we are sometimes asset rich and very cash poor and if you don't have the passion for agriculture then it is a very, very difficult job — and I think that is what keeps farmers doing the job they do." (farmer)

Farmers as 'Food Producers'

Government policy has shaped farmers' occupational identity as 'food producers'. Particular ways of farming are often connected with individual and collective identity. Therefore, discussion of farmers' current and future role in 'net zero agriculture' needs to be sensitive to the emotional (often intergenerational) dimensions of farming as much as practical opportunities and barriers.

The move towards public goods delivery reflected a broader question of what it means to be a 'farmer' at present. For example, several farming stakeholders highlighted that the post-war consensus was firmly orientated to farmers as "food producers", as a participant discussed:

"we have had a 100 years of government policy saying to farmers you must produce more food [...] this is the difficulty because generation after generation have been led down this route - you must produce. I talk to a lot of young farmers now who are influenced by their parents and their grandparents and they are still not getting it and I say to young farmers, your job description in the future is going to be a brilliant food producer but you are going to have to leave the natural environment in a far better state than it is now [...] and they feel like it's a failure if they are actually going to keep less stock and make use of the environmental payments coming." (farming organisation representative)

Therefore, one key issue that should not be overlooked is the emotional connection farmers have to particular ways of farming that have often been inherited throughout generations. As a farming stakeholder mentioned, particular ways of farming are connected with individual and collective identity, which can limit openness to new ways of working and "some will resist change" (agricultural organisation representative) because of attachment to old ways and a fear of the new.

A central element therefore of safeguarding a fair transition for agriculture is **ensuring** that everyone who wants to farm in the future are fully supported to adapt, understand and practise sustainable agriculture, which in turn can affect a broader cultural and behavioural change within the sector to ensure that we cut emissions, enhance biodiversity and produce sustainable food.

As a farming organisation stakeholder discussed, the idea of agriculture as 'multifunctional' delivering food and a broader range of other public goods is vital:

"we need to educate our farmers and grab a hold of our young people and get them to see that their job description in the future is farmer and conservationist."

(farming group stakeholder)

While environmental stewardship has always been a part of farming, many interviewees felt there has been a shift in narrative towards the environment at the expense of food production, with a range of new, sometimes incomprehensible jargon to get your head around — such as "biodiversity net gain", "ecosystem services" and "natural capital" — which all have consequences for how the future of farming will unfold.

This complex issue is equally complicated by the fact that the farmers we talked to discussed their role in farming not just as a "job" but something much more all-encompassing — essentially, they explained farming as "a way of life", "a passion" or culture — an 'agri'-culture. Many interviewees stressed the social and cultural importance of agriculture in rural communities and in shaping the region's landscape for centuries, particularly in parts of Northumberland and County Durham.

Gender in Agriculture

A just transition for agriculture requires greater visibility for and recognition of the role of women in farming and their leadership in the industry. Ensuring that women active in agriculture (both on-farm and off-farm) are represented in decision-making processes and policy developments is fundamental so that training is accessible and appropriate, and barriers to inclusion and cultural stereotypes are challenged (Shortall et al., 2020; Women in Agriculture Taskforce, 2019; Sutherland et al., 2023). This would also help the industry to become more diverse and encourage women entrants. Further research could be undertaken to examine the gender dynamics of farming, for example, in relation to leadership roles and farm succession, in greater depth across the region to inform specific actions and policy programmes to attract a more diverse workforce.

A particular issue raised by some participants was the need to bring greater visibility to and recognition of the role of women in farming and their leadership in the industry²⁰. It was highlighted by a farming stakeholder, that a 'just transition' for agriculture must ensure that women active in agriculture are represented in decision-making processes and policy development so that barriers to inclusion and cultural stereotypes are challenged, in a context where research has highlighted that men typically inherit land and there is still gender inequality, with few women farming in their own right (Shortall et al., 2020).

For instance, it was discussed by a participant that while there has been cultural change, they believed traditional views of gender and exclusionary practices can continue to influence farm succession and land inheritance: "it's usually the eldest son, unless they don't want to take it [the farm] on" (owner-occupier farmer), and as another mentioned, she now farms with her husband on a different farm from where she was brought up: "I grew up on the family farm, so born and bred [....] my brother,

²⁰ A few participants did point to high-profile female farmers already in prominent leadership roles such as Minette Batters, NFU England and Wales President, and their possible role in encouraging women entrants. Elected in 2018, she is the first female president in the organisation's history (founded in 1908). It represents more than 50,000 farmers and growers in England and Wales.

he runs the farm with my father, whose now semi-retired, but not really, [...] and I met my husband who was a farmer, so that's how I ended up in farming, it's just in me". These comments highlight that there could be further research undertaken to examine the gender dynamics of farming in greater depth across the region.

As research in the UK has recently demonstrated, enabling women raised on farms to inherit and/or establish new farms is "critical to altering patriarchal succession cycles" (Sutherland et al., 2023), given that in farming, entry is most often through family inheritance of private property, either owned or rented (Shortall et al., 2020). Indeed, the Farm Structure Survey (Defra, 2016) shows that women represent 55% of family farm workers in England (52% for the UK), but only 16% of 'farm holders' — that is, land owners or managers.

Moreover, as highlighted by the recent Women in Agriculture report (Women in Agriculture Taskforce, 2019: 12) enabling and supporting more women to access training will "help to counter current agricultural industry norms and unconscious bias where men are identified as 'the primary producer', and therefore the primary individual in need of training". This is vital in the context of the low-carbon transition given the need for upskilling farm managers, farmers and farm workers to address the challenges of climate change. Therefore, policy development must reflect women's diverse roles to enhance the social, economic and environmental sustainability of UK agriculture²¹.

As Sutherland et al. (2023) highlight, there is significant evidence from both the European and North American context, that women-led farms are more likely to be involved in short supply chains, 'alternative' approaches to agricultural production (such as organic farming) and specific forms of diversification (for example, agritourism). They also outline that emphasising "the characterization of women leading farms as "normal" and ensuring access to

training and other resources which help to build successful businesses are critical" (Sutherland et al., 2023: 539).

Recent research has also demonstrated that diversity and inclusion will enhance the financial viability of the agricultural sector (Women in Agriculture Taskforce, 2019). In particular, the Taskforce identified that there is a requirement to support women into leadership roles, providing tailored, accessible training, facilitating access to land, finance and other support for new entrants, and increasing the availability and access to formal and informal childcare in rural areas to better enable women in agriculture to engage in training, networking and to develop business opportunities (see Box 7).

BOX 7: BEST PRACTICE: WOMEN IN AGRICULTURE – LEADERSHIP PROGRAMME DEVELOPMENT, SCOTLAND

The Scottish Government has a vision for Scottish agriculture to become a fairer, more inclusive industry, where farm succession is not determined by gender, training is accessible to everyone, and more women take on senior roles in organisations. Following the ground-breaking Women in Agriculture Taskforce's final report (2019), further research was undertaken to inform the development of a leadership programme (Scottish Government, 2023), with the aim of enabling more women to take up leadership positions within agriculture. The initiative will be funded by Scottish Government through the Women in Agriculture Development Programme.

c) Multifunctional Place-based Approaches to Land (Policy)

There are multiple pressures and demands of our finite land — such as food production, nature recovery, renewable energy and house building. Recent research (Dimbleby, 2021; FFCC, 2023) has demonstrated that a Land Use Framework is a credible strategic approach to managing the tensions and choices inherent in land-use decision-making. Moreover, land is too often seen in binary terms, therefore a multifunctional land use approach is needed (i.e., using land for simultaneously delivering more than one 'function').

Given the multiple pressures placed on land, it was suggested by several participants that "we need a land use strategy; I have been saying this for years" (tenant farmer). Indeed, a **UK**'Multifunctional Landscape' Land Use

Framework that brings the latest national policy developments in agriculture and environment together would be beneficial to support long-term, strategic sustainable land use and management (Royal Society, 2023).

A public goods approach requires a joinedup strategy to land use and management at all spatial scales (local, regional and national) and must view 'land' as dynamic and multifunctional — that is, providing multiple services and benefits at the same time (i.e., a mixture of, for example, food production, carbon storage, nature's recovery and recreation).

The Food, Farming and Countryside Commission (FFCC) have been advocating for a Land Use Framework as a way to help manage competing pressures on land and bring people together for better decision making – and over the last three years have been exploring the design and use of land use frameworks in Devon and Cambridgeshire²². This research highlighted how a Land Use Framework for England, can manage competing pressures on land and encourage multifunctionality. Moreover, it suggests that "local decision-makers are best placed to decide on suitability of land and benefit to their community" (FFCC, 2023: 1).

In relation to farming and land use, the National Food Strategy Independent Review (Dimbleby, 2021) recommended a 'Three Compartment Model', creating a patchwork of different landscapes that integrates 'land sharing' (purposively sharing farming land with nature) and 'land sparing' (freeing up land for environmental projects such as nature restoration and carbon removal) (see Box 8).

BOX 8: THE THREE COMPARTMENT MODEL

The National Food Strategy (Dimbleby, 2021) was the first independent review of English food policy in nearly 75 years. It was commissioned by the Government and authored by Henry Dimbleby. The report suggests the creation of a Rural Land Use Framework to inform payments that are designed to help farmers in England transition to nature-friendly farming. This Framework is based on a "three-compartment model", in which some areas are used mainly for food production, some for nature and carbon sequestration, and some for low-intensity, nature-friendly farmland. As a workshop participant stated in relation to sustainable land use models, "that is all in Henry Dimbleby's Food Plan, we just need to adapt our own northern version to it".

As part of its response to the Independent Review (Dimbleby, 2021), the Government's Food Strategy policy paper (Defra, 2022b) announced that it would **publish a Land Use Framework in 2023** "to ensure we meet our net zero and biodiversity targets, and help our farmers adapt to a changing climate, whilst continuing to produce high quality, affordable produce that supports a healthier diet".

As the Northumberland Future of Farming Inquiry (NCC and NU, 2022) suggested, a Local (or Regional) Land Use Framework would help to create a holistic place-based approach that is sensitive to local heritage, farming culture, geography, ecosystems and economies, and provide a solid foundation to improve how we manage and incentivise sustainable land management and farming practices

at the local level. Participants outlined that the proposed framework should be **co-produced** with farming groups and networks, countryside agencies, local communities and other stakeholders to ensure its applicability and suitability to cultivate a fair transition for farming.

d) Participatory Mechanisms to Deliberate Regional Land Policy and Frameworks

Increasing the transparency of information related to land is crucial to support broader inclusive citizen engagement with land governance. Participatory democratic structures can help people to work together to accommodate different views on how land should be used and managed in diverse local geographical contexts. Inspiration can be taken from the Citizens' Jury on Land Management and the Natural Environment in Scotland (2019).

Transparency of data and land mapping is crucial to engage citizens on topics of land and food governance. A lack of transparency and multiple barriers to land access fundamentally impedes innovative solutions to the climate crisis and inhibits broader agri-food justice (Coulson and Milbourne, 2022). As a workshop participant commented, transparency of land is a crucial dimension to democratic local governance:

"Local Authorities need to publish or speak about what is available and what land there is for people in the local community to use it locally, I feel all the land local to me is being sold on to development companies to build houses and I feel that all these pockets of green space that were once there, have now gone." (agricultural college student)

Democratic, participatory forums such as Citizens' Jury Land Assemblies²³ at the local and regional level - made up of a representative group of citizens could be established to facilitate public discussion of land use and management in both rural and urban areas. This form of deliberative democracy is crucial because there are many different ideas on the 'common good' and multiple pressures on land (such as housing, food, nature, carbon sequestration) (Royal Society, 2023). Therefore, participatory democratic structures can help people work together to accommodate different views on how land should be used and managed in diverse local geographical contexts. Significantly, this can inform the development of "Local Land Use Frameworks" (as discussed in Theme 3(c)).

The NTCA has already ran the successful North of Tyne Citizens' Assembly on Climate Change (Shared Future and NTCA, 2021), therefore can further utilise this mechanism to examine the crucially important, multi-dimensional topic of Land Use and Management to support an inclusive approach to decision-making to support nature's recovery, sustainable food production and carbon sequestration across the region.

e) Collective Landscape Scale Action for Nature's Recovery

Collaboration across multiple stakeholders (i.e., landowners, farmers, local authorities, organisations, and charities etc.) at the landscape-scale is vital to deliver sustainable land management and support nature's recovery. Bold and ambitious partnerships at scale requires working together collectively across entire landscapes to meet the significant challenges that the climate and biodiversity crises pose.

Local action is crucial to a sustainable and regenerative future and local authorities have a diverse range of ways to make a difference in relation to supporting sustainable land management in the public interest. This process must be inclusive, collaborative and meaningful and bring together a range of people and expertise to strategically plan for the future of the region and its land, food and farming systems, as a workshop participant discussed:

"we have a diverse range of landscapes; you have the arable coast and then you are up in the uplands in the Pennines and the Cheviots in Northumberland... but we need somebody who can come out to different groups and get a grasp and a handle on what is going to suit each landscape and enhance it. Still producing food of course, and I think all farmers are capable of enhancing landscape, our intention is not to work in a landscape and destroy it, we work there every day, and I think if we had a little bit better understanding, and I think farmers feel frustrated because they seem to never get their point taken on **board** and I think that is hard, but if you have someone who is prepared to listen and engage with you more, I think you will get a far better uptake with policy, it's more carrot rather than stick." (upland farmer)

Several participants pointed to the potential for the North of England to become the testbed for collaborative projects that bring farmers, landowners, conservation charities and community organisations together to cooperate at an integrated landscape scale to capture carbon and mitigate the impacts of climate change. In particular, it was highlighted that there is potential for farmers to turn unproductive segments of land into productive use for nature's recovery in a move towards a more multifunctional approach to using land (see Box 9).

BOX 9: COLLABORATIVE NATURE PROJECTS: WANSBECK RESTORATION FOR CLIMATE CHANGE (WRCC)

Almost £600,000 has been awarded from Natural England to the WRCC project managed by Groundwork NE & Cumbria, which will assess how nature-based solutions can thrive in a farmed landscape. It is one of six pilot projects and will restore mixed habitats - grasslands, peaty pockets and woodlands - and demonstrate how land managers, farmers and landowners can work together to reduce greenhouse gas emissions and promote carbon sequestration. Working across 10 sites, the work will restore over 144 ha spanning the Wallington Hall, Middleton North and Little Harle estates and will contribute to the wider restoration of the River Wansbeck catchment in Northumberland (Natural England, **Environment Agency and Forestry** Commission, 2023).

It was suggested that a Sustainable Rural Transition Leaders Programme that harnesses the knowledge, expertise and passion of farmers, farm workers, land managers and other rural actors (drawing upon existing well-respected farming clusters, groups and networks in the region) could act as a platform for nurturing collaborative rural transitions across job creation, sustainability, citizen empowerment and food system change. This can form part of, and feed into, the planned "Rural Growth and Stewardship Board" as outlined in the proposed North East Devolution Deal (DLUHC, 2022: 5) that emphasises the importance of being "bold on the rural economy".

Recommendation 3: A Place-Based Multifunctional Approach to Land Management — The Combined Authority could adopt a place-based multifunctional approach to land that balances land-based objectives and supports farmers to deliver multiple functions (i.e., nature restoration, food production and carbon sequestration) that are sensitive to local context and land characteristics. Actions the Combined Authority could consider include:

- 3.1: Engagement with the Farming Community: The Combined Authority could develop a more discursive approach with the farming community by arranging participatory discussions and knowledge exchange events at farms in collaboration with farming organisations.
 - o This could, for example, expand upon the NFU annual 'Farming for Non-Farmer Day' which invites those who work in roles that intersect with rural issues or food to visit a local farm and learn more about farming and food production.
 - o This form of interaction between the farming community and local government is vital because many farming participants were not fully aware of what role and powers the Combined Authority currently have (or will have with planned further devolution). Creating stronger links between the Combined Authority and farming community could help to build trust, increase engagement and optimise decisionmaking processes (for the farming community and relevant local authorities) across land use and agricultural support to help facilitate a just transition for the sector.

Potential Delivery Partners: NTCA, NEMCA, local authorities, farming clusters, networks and groups, farming and land organisations, NFU, TFA, LWA, CLA, Northumberland National Park.

Indicator: COLLABORATE

· 3.2: Local Land Use Frameworks:

The Combined Authority could support the development and application of a Regional Land Use Framework that is tailored to the particular opportunities and needs of the area, in response to the Government's planned Land Use Framework set to be published in 2023 (Defra, 2022b).

- o Based on recent research findings and successful pilot projects in Devon and Cambridgeshire (FFCC, 2023; Royal Society, 2023), Land Use Frameworks developed with inclusive and transparent public involvement can help provide longer-term clarity and manage competing pressures on land by bringing people together for better decision-making.
- o Accompanied with improved and transparent spatial land mapping data at the granular level, the Land Use Framework could be utilised to guide decision-making and funding allocation for collective landscapescale projects such as Local Nature Recovery Strategies (LNRS)²⁴, collaborative sustainable farming initiatives, and woodland creation.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, Defra's Arm's Length Bodies (i.e., Environment Agency, Natural England, Forestry Commission), Northumberland National Park, the National Trust, landowners and local communities.

²⁴ LNRS are a new system of spatial strategies for nature that will cover the whole of England, for which Northumberland was one of five local authorities chosen to pilot the process in 2020-21. Three LNRS geographies were developed: North of Tyne, South of Tyne, and Durham. The North East Devolution Deal confirms that Defra will consider the role of the NEMCA in the LNRS including a review of relevant LNRS geographies once the combined authority is in operation.

· 3.3: Gender Equity and Land: The Combined Authority could collaborate with partners to directly work with women to co-design, develop and support placed-based women-led activities and initiatives to encourage inclusive socio-economic development and the rural growth agenda. Following recent actions by the Scottish Government, the Combined Authority could commission a "Women in Agriculture Taskforce" led by women, for women to produce recommendations and an action plan to support an inclusive industry that places gender equity at its heart across the region, as part of the broader NTCA green and inclusive rural prosperity narrative (NTCA, 2022).

Potential Delivery Partners: NTCA, NEMCA, local authorities, skills providers, agricultural groups and organisations, Women in Farming Network, regional universities.

Indicator: COLLABORATE

· 3.4: Participatory Citizen **Processes:** The Combined Authority could examine the potential to develop democratic, participatory forums such as Citizens' Jury Land Assemblies which could be established to facilitate public discussion of land use and management in both rural and urban areas. As there are multiple pressures on land (such as housing, food, nature, carbon sequestration), participatory democratic structures can help people work together to accommodate different views on how land should be used and managed in different local geographical contexts. Inspiration can be taken from the Citizens' Jury on Land Management and the Natural Environment in Scotland (2019) and the NTCA Citizens' Assembly on Climate Change (Shared Future and NTCA, 2021).

Potential Delivery Partners: NTCA, NEMCA, local authorities, Shared Future, Defra's Arm's Length Bodies (i.e., Environment Agency, Natural England, Forestry Commission),

the National Trust, landowners and local communities.

Indicator: COLLABORATE

3.5: Inclusive Green Rural Prosperity and Sustainable

Transition: The Combined Authority could support a Sustainable Rural Transition Leaders Programme as part of the pledged £9 million NTCA Stewardship and Rural Growth Investment Plan²⁵ and later feed into the planned "Rural Growth and Stewardship Board" as outlined in the proposed North East Devolution Deal (DLUHC, 2022: 5) that emphasises the importance of being "bold on the rural economy".

- o The programme could help provide a collective voice for rural stakeholders (including farmers and farm workers) through the just transition process, given that many rural stakeholders discussed a perceived asymmetry in power between urban and rural areas shaping regional governance. This scheme would require securing funding to develop a pilot project to examine how best to prepare and support rural stakeholders, enterprises and communities for the transition to net zero and sustainable land management.
- o It can champion rural issues through a flexible participatory forum/ steering group that translates national climate objectives into collaborative workable place-based solutions and landscape-scale activity. This could also help to ensure that the 'natural capital' of the region is leveraged to support inclusive, sustainable communities and environments, and generate shared benefits contributing to a spatially and socially just and inclusive transition.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, Northumberland National Park, farming clusters and groups.

Indicator: IMPLEMENT

THEME 4. SUPPORT A THRIVING TENANTED FARMING SECTOR THROUGHOUT THE ROLLOUT OF NEW AGRI-ENVIRONMENTAL SCHEMES

Summary: The tenanted farming sector is crucially important to the North East region, where there is a high proportion of tenanted farmed land (29%) compared to other regions, with Northumberland having the highest percentage of tenanted farms in England (Defra, 2022a). However, many tenanted farmers are facing increasing insecurity in the context of the post-Brexit Agricultural Policy Transition (Defra, 2020). The loss of tenanted farms and livelihoods across the region will have significant implications for the future of farming and the broader vitality of rural communities. Tenant farmers need fair and equitable access to new public

and private environmental schemes to ensure benefits are shared (Rock Review, 2022; NFU, 2023a). Participants stressed that the implementation of new agri-environmental schemes requires a collaborative process based on meaningful dialogue and partnership between tenant and landowner.

Key Findings:

- a) Equal Access for Tenant Farmers to Agri-Environmental Schemes
- b) The Importance of Long-term Tenancies to Support Low-Carbon Sustainability Transitions

a) Equal Access for Tenant Farmers to Agri-Environmental Schemes

There are particular challenges facing the tenanted farming sector in the context of the Agricultural Policy Transition (Defra, 2020) and in achieving net zero. Participants emphasised that farmers may be unable to change their practices or land use under the terms of their existing tenancy agreement, which can limit longer term planning in tackling climate change through carbon sequestration. Tenant farmers need fair and equitable access to new public and private environmental schemes to ensure benefits are shared across landowner and tenant for delivering 'public goods'.

Stakeholders emphasised that tenant farmers are crucial to the rural fabric of the North East. Tenant farmers and farming organisations stated that **new agri-environmental schemes must have workable options for all farmers**, and they must be accessible regardless of the length of tenure, recognising the increasing short-term nature of many tenancies (Rock Review, 2022; NFU, 2023a).

Tenant farmers clearly have the added complexity of being governed by tenancy agreements when making decisions about their holding's operations, which **can limit longer term planning in tackling climate change through carbon sequestration**. For instance, it was stated by participants that in some cases, tenants are barred from planting trees on their holdings by their

that in some cases, tenants are barred from planting trees on their holdings by their tenancy agreement — either through the use of blanket clauses requiring tenants to use their holdings for agricultural purposes only, or clauses which specifically ban the planting of trees.

Therefore, if new agri-environmental schemes are aiming to reconfigure how farmers and land managers relate to their working environments and the actions they perform (such as increased tree and woodland planting), it was emphasised that tenant farmers need fair and equitable access to new public and private environmental schemes to ensure benefits are shared. It was also stated that the person delivering the environmental 'public goods' should be the person who receives the payment.

There was a strong feeling that tenant farmers, particularly those on 'smaller' farms, are not adequately valued or supported by government policy, as discussed by a livestock tenant farmer at an agricultural workshop:

"I'm fifth generation, and we farm 100 acres, which is very small as far as agricultural farms go here [...]. Big seems to be the best, but big seems to make the most mess, and people aren't farming in a conscious way. Now I'm not a big believer in being organic, I'm not a big believer in being intensive... What we do in a very small way, is get the best out of what we produce. [...] we are tenant farmers, we are very insignificant in the world of agriculture as far as any government thinking goes, we don't qualify for a lot of subsidies, or anything like that, but what we do is produce top quality, the best we can with what we have got."

Concerns were articulated by tenant farmers and tenant representatives in relation to the post-Brexit agricultural transition. In particular, it was emphasised that new agri-environmental schemes may result in landowners, who wish to take advantage of tree planting opportunities or 'rewilding' (a highly contested term according to participants), moving tenanted farmers off the land²⁶. As a land use stakeholder with a farming background described:

"how can tenant farmers actually make a good living? At the minute it's moving the other way **because landlords can take the farm back, plant it all with trees**, do rewilding, you know, less jobs arguably."

It must be noted that tenant farmers and those who live in rural communities, particularly in Northumberland where half of all land management is undertaken by tenant farmers, frequently shared anecdotes during our discussions that this was already happening to friends or tenants they knew

in the local area. That is, landlords are taking tenancies (and land) "back in hand" to manage directly and capture income opportunities from new agrienvironmental funding schemes.

Given the concentrated land ownership structure throughout the country (Shrubsole, 2019) - particularly in parts of the North East of England such as Northumberland - there is a real possibility that it will be landowners, not farm workers, who will gain financial rewards for delivering public goods. Moreover, several stakeholders discussed that as landowners capitalise from new 'public goods' markets and if the trend of removing tenants from their land continues, this will result in the hollowing out of rural communities further. It was also suggested that this could possibly lead to bringing in external contractors to deliver the work of afforestation, and therefore not generating local job creation.

Various tenant farmers highlighted that the implementation of new agri-environmental schemes should be a collaborative process based on meaningful dialogue and partnership, rather than landlords simply taking back land and putting it into environmental schemes themselves. However, it was argued that the possibility of this happening was very much dependent on the particular existing landlord-tenant relationship - which obviously can vary depending on the individuals (and their interests) involved. As a tenant farmer stated, "every landlord and tenant farmer are different; good relationships are important, but not always there". Trust and effective communication were discussed as crucial for productive farmer-landowner relationships that seek to balance the rights of each party. It was emphasised that collaborative working between landlords and tenants and starting conversations early - is crucial so that all parties benefit from the new agricultural transition.

²⁶ This could be, for example, either by serving a notice to quit on a tenant or by not renewing a tenancy which might have ordinarily been renewed.

b) The Importance of Long-term Tenancies to Support Low-Carbon Sustainability Transitions

A particular issue raised by participants was the need for long-term tenancies (e.g., at least 10 years) to provide better security for farmers, given that the average length of new Farm Business Tenancies is 3.03 years (Rock Review, 2022). Short-term tenancies add a significant level of uncertainty for tenant farmers and can reduce their adaptive capacity to act and plan for the future. It also means that tenants are not incentivised to adopt sustainable farming practices and invest in the holding over the long-term.

One of the key issues discussed by interviewees in relation to tenant farming in the region is the **need for long-term tenancies** (at least 10 years) to provide better security for farmers. The average length of new Farm Business Tenancies (FBT)²⁷ is 3.03 years (in 2021), and they are often used "off the shelf without the flexibility they offer" (Rock Review, 2022: 13). As a farming interviewee discussed:

"long-term tenancies are needed to address biodiversity and climate change, but the pendulum has swung to shorter tenancies. With shorter tenancies, tenants are not incentivised to take on regenerative farming and invest in the holding over the long-term."

Short-term tenancies therefore add a serious level of uncertainty for tenant farmers, and the thought of moving livestock, machinery and other equipment between farms is a very daunting task. It was frequently stated that farming on tenanted land can be extremely precarious, whereby short tenancies actually discourage the implementation of sustainable farming and rising rents negatively impact people's wellbeing, resilience and ability to plan for the future. Moreover, it has been documented that longer, sustainable tenancies need to be encouraged to attract new entrants into the industry (NFU,

2023a). It was therefore emphasised that landlords should be incentivised to enter into longer tenancy agreements with tenants, as outlined by the Rock Review (2022) (see Box 10).

Several workshop participants suggested that large institutional landowners (such as the National Trust – the biggest single farming landlord in the country) could play a key role in providing more secure, long-term tenancies on "land that is supposed to be held for the public benefit" (farmer). Some participants raised the issue of concentrated land ownership more broadly and its impact on the availability of land for agricultural workers to develop sustainable farming businesses, which it was suggested, can impede a just food system transition.

BOX 10: NATIONAL POLICY DEVELOPMENTS: THE ROCK REVIEW (2022)

Multiple stakeholders referenced the Independent Rock Review on Tenant Farms in England, published in October 2022, which outlines the pressures facing the tenanted sector. Chaired by Baroness Kate Rock, the Tenancy Working Group (TWG) report identifies over 70 detailed recommendations for Defra that require either immediate or longer timescale action to ensure that the tenanted farming sector thrives. The Rock Review's findings are particularly relevant to the region, as Northumberland has the highest

percentage of tenanted farms in England. It is also pertinent to highlight that 52% of North East NFU members are tenants (NFU, 2023a). Following Defra's response to the Rock Review on 24 May 2023, the Tenant Farmers' Association (TFA) criticised the government for what they observed as a partial 'pick and mix approach' to the issues affecting the tenanted sector and the recommendations of the review, rather than taking them as a 'considered whole' (Clarke, 2023). The Rock Review recommendations must be taken and

addressed as a holistic whole to ensure effective reform.

²⁷ These tenancies comprise all principal lettings entered into under the provisions of the Agricultural Tenancies Act 1995 and relating to the original term of the current letting.

Recommendation 4: A Flourishing
Tenanted Sector — The Combined
Authority could help support a thriving
tenanted farming sector through
the rollout of new post-Brexit agrienvironmental schemes and ensure that
tenant voices are heard and actioned
upon by local government. Actions the
Combined Authority could consider
include:

 4.1: Tenant Voice: The Combined Authority could work with local authorities and farming organisations such as the Tenant Farmers' Association (TFA), National Farmers' Union (NFU) and Landworkers Alliance (LWA) to ensure that tenant voices are heard and actioned upon by local government.

The tenanted farming sector is important to the local economy of Northumberland and County Durham, therefore regular dialogue could help ensure place-based support for tenant farming businesses throughout the agricultural policy transition is beneficial and appropriate to support the region to be "a rural exemplar" (DLUHC, 2022: 46).

Potential Delivery Partners: NTCA, NEMCA, local authorities, TFA, NFU, IWA

Indicator: COLLABORATE

· 4.2: Showcase and Value **Tenant Farmer Achievements:** The Combined Authority could promote tenants' achievements and publicise their role in sustainable, innovative farming and land management to showcase the importance of tenant farmers to food production, addressing climate change and nature's recovery across the region. This could be through, for example, sharing case studies of tenanted farms on the combined authority website, demonstrating how they are actively supporting key climate, environmental and social sustainability objectives and supporting the region meet council net zero targets.

Potential Delivery Partners: NTCA, NEMCA, local authorities, TFA, NFU.

Indicator: IMPLEMENT

· 4.3: Encourage Longer-Term Farming Tenancies: Utilising its convening power, the Combined Authority could play a crucial role facilitating discussion and supporting collaborative initiatives between local authorities, institutional landowners, landowning estates, farmers and new entrants to promote the benefits of, and develop, more secure, long-term agricultural tenancies to provide the stable, secure conditions that tenant farmers need to invest long-term in the land holding and maintain a viable business to support sustainability, so the benefits of the agricultural transition are shared fairly.

Potential Delivery Partners: NTCA, NEMCA, local authorities, TFA, NFU, landowners.

Indicator: COLLABORATE

• 4.4: National Developments: The Combined Authority could state its commitment to work with tenants and local landowners to pioneer any changes made as a result of the Government's response to the Rock Review: Working Together for a Thriving Agricultural Tenant Sector (2022) to ensure that tenanted farming across the region continues to contribute to the nation's food production alongside the delivery of environmental public goods.

Potential Delivery Partners: NTCA, NEMCA, local authorities, TFA, NFU, Defra

Indicator: IMPLEMENT

THEME 5. MENTAL
HEALTH AND WELLBEING
SUPPORT FOR THE
FARMING AND BROADER
RURAL COMMUNITY

Summary: It is vital that we take care of people's mental wellbeing through the Agricultural Policy Transition and beyond, recognising the uncertainty that accompanies this process for many agricultural workers and families and the feeling of anxiety it can create. Given that a relationship between people's mental health and the sector of farming they are involved in has been identified by recent research (RABI, 2021), it is imperative to ensure that there is targeted support available to reach those working in farming who require it. This can draw upon existing rural farming networks, groups and trusted charities to work collectively to remove barriers, encourage discussion of mental health and ensure accessible rural service provision. Targeted joined-up approaches to strengthening the rural economy, developing rural infrastructure and delivering accessible rural services (particularly mental health) is a prerequisite for a just transition.

Key Findings:

- a) Addressing Poor Mental Health Amongst the Farming Community
- b) Accessible Community-Based Mental and Physical Health Services for Rural Communities
- c) Collective Socialising Opportunities to Overcome Isolation

a) Addressing Poor Mental Health Amongst the Farming Community

There are a range of factors that can drive poor mental health in farming (RABI, 2021; Shortland et al., 2023), with particular occupational stressors (i.e., long hours, living at place of work, poor physical health), contextual factors (i.e., policy changes, price fluctuations) and barriers to support (i.e., stigma, lack of anonymity in small communities). In order to facilitate a just transition, the mental and physical wellbeing of farmers, farming families and farm workers must be prioritised and supported.

Poor mental health is a key challenge for the farming industry (Shortland et al., 2023). It was stated by several participants that the current uncertain policy context is a crucial factor creating worry and stress for farmers, along with a range of factors associated with agriculture such as:

- · long working hours, often in isolation,
- new agri-environmental policy schemes, and the associated bureaucracy (i.e., paperwork) and regulatory requirements,
- climatic conditions and unpredictable/ extreme weather,
- agricultural crime, which can increase feelings of vulnerability and anxiety,

- significant financial pressures, rising input costs and volatile markets,
- the fact that in many cases, a farmer's place of business is also their home, meaning there is no easy way to get away from the workload.

Moreover, agricultural work is often low paid and can be dangerous — in fact, the rates of life-changing injuries and fatalities make it the most hazardous industry in the UK — almost one person a week has been killed as a direct result of agricultural work, and many more have been seriously injured or made ill by their work (HSE, 2017). Some farmers and farm workers interviewed openly discussed the physically demanding nature of the work that has caused a range of health issues over the years. As a farmer described in relation to severe back pain:

"I hurt my back a long time ago. Jack was a lot heavier than me and had the tractor seat set up for him. [...] So, in the field I hit a deep rut and bounced down on the blooming thing and my back went. I still have bother with it to this day. There're days when I think, ah I'm going to pack it in but that will never happen." (arable farmer)

Several participants commented that many farming people remain heavily or solely dependent on income from agriculture or rely on a partner to bring in a second income to support the business. In-work poverty has already been identified as a particular issue facing the sector, where nearly a quarter (23%) of workers in the agriculture, forestry and fishing industries are living in poverty (IRF, 2018). For example, a workshop participant described how their partner was "far better paid doing a day's teaching than a day's farming". In this context, a rural-based charity discussed the latest "squeeze" on farming incomes as household budgets have also been reduced due to the cost-of-living crisis and rising costs of energy, which has created further anxiety and stress for the farming community.

Focusing on wellbeing is vital, as over a third of the farming community respondents to the recent Royal Agricultural Benevolent Institution (RABI) survey (36%) have mental wellbeing scores that are sufficiently low to cause concern (i.e., likely to be possibly or probably depressed) and almost a half (47%) of the farming community are experiencing some form of anxiety (RABI, 2021), with 58% of women suffering from mild, moderate or severe anxiety.

Significantly, there is a relationship between people's mental health and the sector of farming they are involved

in. The farming community is most likely to report poor mental health in four sectors of agriculture: 1) specialist pigs, 2) dairy, 3) Less Favoured Areas (e.g., upland) and 4) grazing livestock and lowland grazing livestock (RABI, 2021), with people working in these farm types more likely to be "possibly or probably depressed".

One participant discussed that there is a tendency to not openly discuss the social sustainability of farming within the farming community - including wellbeing, health and quality of life of those who work in agriculture, but "this must be challenged, and discussion of mental health normalised so people are comfortable talking and seeking the help they need" (practitioner, farming charity).

A particular issue raised by several participants was young people entering the industry also can feel threatened and vulnerable to debates on climate change and a move towards plant-based diets. Therefore, it was emphasised that there is a need to protect the mental wellbeing of young farmers and young people moving into farming. Research undertaken by the Farm Safety Foundation (2021) revealed that four out of five young farmers (under 40) believe that mental health is the biggest hidden problem facing farmers, underlining the need for action to address poor mental health. In 2018, the Mind Your Head campaign was launched to raise awareness of this issue in the industry²⁸.

Moreover, as previously discussed in Theme 3, the shift towards a 'public goods' policy focus that has centred environmental sustainability raises questions about the role and identity of farmers. As discussed by a farming stakeholder, the impact of new policy on individual's personal and occupational identity and sense of self should not be overlooked:

"Perfect example, a young man said to me recently, 'I am the 6th generation on this farm, and I am going to be the first to fail'. And I said 'why do you think you are a failure?'... 'Well, I will never be able to farm a thousand sheep. And I love farming sheep'. And it is trying to get through that mentality to say actually you are not a failure, if you are going to keep less sheep but you are going to plant trees and increase the wildlife population on your farm and do wonderful things, that is not a failure. And it's all about the messaging."

This work-related concern is also compounded by isolation and a lack of social infrastructure and youth services in rural areas, which can exacerbate poor mental wellbeing among young **people**. This underscores the need for joined-up approaches that expand preventative mental health support for children and young people, for example, by prioritising the roll-out of Mental Health

Support Teams to cover all schools and colleges in rural areas (House of Commons Environment, Food and Rural Affairs Committee, 2023).

Rural transport is a crucial issue interconnected with mental health in terms of both prevention (mitigating isolation and loneliness) and treatment (access to and by services) (House of Commons Environment, Food and Rural Affairs Committee, 2023).

Targeted approaches to strengthening the rural economy, developing rural infrastructure and delivering accessible rural services (particularly mental health) is a prerequisite for a just transition.

b) Accessible Community-Based Mental and Physical Health Services for Rural Communities

Agricultural transitions have impacts on farmer wellbeing, and therefore require interventions that support the social resilience of farming communities in specific contexts. To be effective, they need to be accessible, well-funded, joined-up and adaptative to evolving crises (Rose et al., 2023). Stressors on farmer wellbeing can be highly contextdependent given placed-based social, environmental and political-economic factors, therefore participants identified the possible role of community-based services to reach farmers where they already gather (such as at auction marts and agricultural shows) to ensure that help is more accessible and available to farming communities.

Participants highlighted the reluctance of some farmers, farm workers and contractors to seek the physical and mental healthcare they need and the barriers (such as time given their heavy workload and locational difficulties) to accessing services. Some participants therefore discussed the importance of community-based actions to improve access to and awareness of existing service provision.

"any new services need to **be** developed by farmers, for farmers

[...] and work with those trusted groups and organisations in those communities [...] and make sure that it builds on where they already feel comfortable and familiar, I think that's how you have buy-in from farmers with this."

(farming organisation stakeholder)

Recent research has highlighted that for 'landscapes of support' (i.e., a range of support sources available to farmers, including: mental health charities, primary health care, chaplains and other faith groups, auction mart staff and people in rural communities and farmer/peer organisations) to be effective, they need to be accessible, well-funded, joined-up and adaptative to evolving crises (Rose et al., 2023).

For example, it was highlighted by a stakeholder that health clinics or wellbeing hubs for farmers based in Marts²⁹ have proved successful with a pilot at Shrewsbury Livestock Mart extended so that a mobile clinic will visit the market twice monthly. It offers visitors a blood pressure check, as well as more general health and wellbeing advice with no appointment necessary. The rural health service, provided by Derbyshire Community Health Services NHS Foundation Trust, offers health checks on a drop-in basis to members of the farming community who might otherwise find it difficult to get the healthcare they require (Sleigh, 2023). This links with a recent study into farming mental health in the UK (Shortland et al., 2023: 136) which pointed towards the importance of "taking support to where farmers gather, such as at auction marts and agricultural shows".

It was frequently highlighted by participants that **farmers tend to trust other farmers**, and there are already several support organisations and charities that provide services to farmers, therefore one stakeholder suggested further collaboration between these groups could support well-respected, trusted farmers to act as mental health ambassadors within the farming community.

c) Collective Socialising Opportunities to Overcome Isolation

Isolation, exacerbated by the Covid-19 pandemic, and the loss of local infrastructure, was mentioned as an important issue facing some remote rural farming communities. It was highlighted that collective training and peer-to-peer learning could act as a forum to support broader socialising opportunities and also be a focal point to renew relationships and foster interest in existing (or develop new) farming clusters or groups.

Some participants mentioned that collective training and peer-to-peer learning courses could provide opportunities for increased social interaction, which can have a positive impact on the mental health of agricultural workers. It was suggested at the agriculture workshops that there should be long-term support to ensure that farmers can afford the financial cost of training to either upskill or retrain, which can support the ongoing development of new skills of workers in association with trusted agricultural organisations.

In particular, an important theme that emerged from both the workshops and stakeholder interviews was the need for greater focus on farmer-to-farmer knowledge exchange, peer support and collective socialising opportunities to improve broader wellbeing, with increased government investment in rural infrastructure and services fundamental. Several participants discussed that during the Covid-19 pandemic, agricultural shows were cancelled, and marts/sales of cattle moved online, eliminating key social hubs for farmers:

"In rural areas, especially in the farming community, isolation, working on your own, working long hours, and after Covid, probably cutting out on a social life, a lot of farmers and their families have not really re-engaged since Covid, and actually to encourage that cross-fertilisation of ideas would improve the general wellbeing of the farming industry, at a time when there is a lot of angst and pressure." (upland farmer)

"what the farmers in the north of Northumberland, once you get into those really remote areas, what they were saying to us was, yeah, we buy in to everything you say about knowledge transfer and helping us with our business but actually what is really important to us, is just having a club we can go to. We have lost our market at Rothbury, the nearest Auction Mart where we tend to get together, is actually Hexham which is nearly forty miles away. And apart from weddings and funerals in winter we don't get together, so we would see our farmer network in this particular area as much about social as well as business."

(farming network representative)

It was emphasised that the Combined Authority can work with existing local farming structures (i.e., farming groups, clusters and charities) to encourage collaboration and coordination to provide proactive, spatially targeted support to suit individuals (i.e., based on age, gender etc.), facilitate discussion of mental health, and support social hubs where provision is sparse.

Recommendation 5: Worker and Community Wellbeing — The

Combined Authority could collaborate with partners to help promote, roll-out and pilot mental health and wellbeing support for the farming and broader rural community, ensuring that mental health services are co-designed by farmers, for farmers to ensure they are appropriate, relevant and accessible. Actions the Combined Authority could consider include:

- 5.1: Improving Wellbeing and Quality of Life: The Combined Authority could convene a partnership to examine with relevant stakeholders the potential of community-based health services to reach farmers where they already gather to ensure that help is more accessible and available to farming communities (Shortland et al., 2023). Following successful pilot projects in other rural communities³⁰, drop-in mobile health clinics for farmers and workers based in marts and other accessible, familiar collective venues could be applied to reach people who may be reluctant to ask for support and advice, or where rural services are currently lacking.
 - o Social isolation is a key issue facing remote rural communities; therefore, the Combined Authority could work with local authorities to invest in physical and social activities and provide capital infrastructure to support community organisations (e.g., based in village halls and community buildings) to create opportunities for farmers and other rural residents to connect in person, socialise, learn new skills and improve wellbeing (i.e., delivering co-benefits). Investment in social networks and skills development for people of all ages is essential to promote positive wellbeing. In this context, the Adult Education Budget could be utilised to support skills courses in rural areas.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, Auction Marts in partnership with the NHS (mental and physical health services), rural charities, community hubs, farming clusters, groups and organisations, Young Farmers' Clubs.

Indicator: COLLABORATE

- 5.2: Raising Awareness of Mental Health Support: The Combined Authority could closely work with mental health charities, community organisations and farming groups to ensure that existing relevant wellbeing and health information is signposted through trusted agricultural organisations to those working in farming and the broader rural community. Any new mental health services must be co-designed by farmers, for farmers to ensure they are appropriate, relevant and accessible.
- o Farmers tend to trust other farmers, and there are already several support organisations and charities that provide services to farmers; therefore, focus could be directed towards supporting well-respected, trusted farmers to act as **mental health ambassadors** within their farming community.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, in partnership with the Royal Agricultural Benevolent Institution (RABI), local charities such as Upper Teesdale Agricultural Support Services (UTASS), The Farmer Network, NFU, TFA, LWA, North Pennines AONB, Northern Upland Chain Local Nature Partnership, Livestock Auction Marts, local GP surgeries.

³⁰ Wellbeing hubs for farmers based in Marts have proved successful with a pilot at Shrewsbury Livestock Mart extended so that a mobile clinic will visit the market twice monthly. It offers visitors a blood pressure check, as well as more general health and wellbeing advice with no appointment necessary. The rural health service, provided by Derbyshire Community Health Services NHS Foundation Trust, offers health checks on a drop-in basis to members of the farming community who might otherwise find it difficult to get the healthcare they require (Sleigh, 2023).

THEME 6. CREATE
ACCESSIBLE, FLEXIBLE
OPPORTUNITIES FOR
PEOPLE TO LEARN
AGRICULTURAL AND
LAND-BASED SKILLS IN
THE REGION

Summary: The agricultural sector has a relatively poor record of skills engagement compared to other industries in the UK (TIAH, 2021). Therefore, developing the skills of farm workers, farmers, growers and land managers is crucial to ensure that agriculture helps to safeguard our natural environment in addition to contributing to sustainable food systems. Peer-to-peer learning, training and site visits were discussed by farmers as their preferred format to 'upskill', where first-hand, practical knowledge and skills can be shared in real world contexts, where it was believed farmers are most comfortable. Participants discussed the wealth of knowledge and skills of established agricultural workers must be preserved and can be shared with new entrants via various formats such as innovative shared, multi-sited apprenticeship schemes and mentoring systems. Land-based and agricultural training should be accessible to all who want to pursue a career in the sector, where students have access

to meaningful, diverse practical work experiences. The Combined Authority can collaboratively work with partners to ensure that training and funding are aimed at improving the sustainability of the sector across specialised, practical and business skills.

Key Findings:

- a) The Role of Education to Raise Awareness and Promote Sustainable Farming as a Career
- b) Knowledge and Upskilling of Existing Workers
- c) Develop a Multi-Sited, Shared Apprenticeship Scheme
- d) Mentoring System between New Entrants and Established Farmers
- e) Geographical Accessibility of Skills Training
- f) The Loss of Agricultural Colleges and the Need for Quality Learning Experiences

a) The Role of Education to Raise Awareness and Promote Sustainable Farming as a Career

Educating young people about the sector in general and promoting farming as a career in particular were highlighted as important tasks to attract diverse entrants into the industry in the context of an ageing farming workforce. Participants discussed that connecting the next generation with food and farming is a 'public good' in itself, therefore believed that farmers should be paid to undertake this vital public engagement role on farms under ELMs.

Many participants stated that activities such as **educational farm open days and visits, and also organising school career events** that promote agricultural and land management jobs would be useful to increase awareness and attract new entrants. In this context, raising awareness of career opportunities in farming, beginning at Primary School level, was identified as crucial by several participants:

"so, it is raising awareness as much as anything and for some that will end up being a career choice in agriculture and for others it is just understanding about the land a bit more." (local authority stakeholder)

"Educate people. Get farmers into schools, talk about food, openly and honestly talk. The value and benefit of red meat if you believe that, nutrient-dense locally produced off grass [...] the work that has been done on farms to reduce carbon that people have no idea about. So that is a huge bit — education of the public."

(farming organisation stakeholder)

As highlighted by the NFU (2021: 8) in their briefing 'Levelling Up Rural Britain', agriculture has a particular ability to engage children in STEM (Science, Technology, Engineering and Maths) learning outside of the classroom and "inspire children who prefer a more hands-on approach to learning" which could lead to a new generation of farmers and growers.

Networks such as Linking Environment and Farming (LEAF) Education were discussed as particularly valuable to inspire, engage and mobilise both farmers and teachers about the value of farming in a learning context and deliver curriculum-linked knowledge through on-farm activities. At the moment, there are two farms in the North East signed-up to the LEAF network (see Box 11), therefore there are significant opportunities to enrol more farms from across the region.

Several participants discussed that connecting the next generation with food and farming is a 'public good' in itself, thus farmers should be paid for this vital public engagement role on farms under ELMs³¹. Defra has been urged to extend its offer to farmers for educational access visits³², as part of its drive toward 'public money for public goods'.

BOX 11: THE LEAF (LINKING ENVIRONMENT AND FARMING) NETWORK

There are currently two farms connected to the LEAF Education Network in the North of Tyne region:

- Renner Farming (sectors: beef, sheep, grassland) LEAF Demonstration Farm. Member since 2003 and LEAF Demonstration Farm since 2005. North Bellshill and Amerside Hill are mixed farms located between Berwick-upon-Tweed and Alnwick, bordering the edge of the Northumberland National Park. For more information see: https://s3-eu-west-1.amazonaws.com/leaf-website/Renner-Farming-FINAL-without-print-marks.pdf
- Newcastle University (NU) Farms
 (sectors: arable, pigs, dairy, beef,
 energy crops) LEAF Innovation
 Centre. NU farms act as research,
 teaching and engagement platforms,
 working at all scales in the agri system. For more information see:
 https://leaf.eco/farming/leaf-innovation-centres/nufarms

b) Knowledge and Upskilling of Existing Workers

In general, the agricultural sector has a relatively poor record of skills engagement compared to other industries in the UK (TIAH, 2021). Participants valued more informal peer-to-peer learning, training and site visits to enhance skills, rather than 'formal' routes to upskilling. Participants discussed 'skills development' occurs over many years, whereby experience is based on workers' everyday familiarity, involvement, and know-how of working on and/or running a farm. In order to accelerate and maximise the impacts of knowledge exchange across all farming systems and people involved, barriers to worker engagement with skills development, peer-to-peer learning and adoption need to be addressed.

Recognising the need for greater upskilling in the sector in the face of significant changes and a highly fragmented skills and training landscape, Defra established The Institute for Agriculture and Horticulture (TIAH) to coordinate and promote professional development, training and a culture of lifelong learning for the industry in England, given the sector "has a **relatively poor record of skills engagement**, not only in comparison to other industries in the UK, but to other international agricultural sectors" (TIAH, 2021: 7).

For existing farmers, **peer-to-peer training and site visits** (Box 12) were discussed as particularly valuable to enhance learning opportunities, where first-hand knowledge and skills can be shared in real world contexts where it was believed farmers are most comfortable. Particular value was placed on grassroots knowledge exchange learning opportunities that often happen organically when visiting other farmers:

"On the peer-to-peer side of things, I think farmers are quite good at helping each other out... from the outside it might seem like business rivals, but generally, if we are thinking about doing something on our farm we will go and have a look at another farm we know and what they do. So, we get quite a lot of help that way." (dairy farmer)

³¹ See: https://landworkersalliance.org.uk/paymnents-for-public-engagement-elms/

³² Defra's 'Educational Access Payments' for farmers in Mid- or Higher-Tier Countryside Stewardship (CS) have been increased over the past two years to £318 a visit, but the number of visits allowed has been capped at 25 since 2015. For those on Higher Level Stewardship (HLS) agreements, some of which have just been extended for five years, only £109 per visit is available. The present deal, however, has been branded "not credible" given that farmers need to invest in infrastructure such as handwashing and toilets to host 25 visits a year (Kay, 2023).

BOX 12: BEST PRACTICE: PROMOTING PEER-TO-PEER LEARNING ABOUT AGROECOLOGY IN SCOTLAND

A coalition between the Landworkers' Alliance, Pasture for Life, the Nature Friendly Farming Network, Propagate, Nourish Scotland and Soil Association Scotland came together (between August 2022 and March 2023) to run a peer-to-peer knowledge exchange programme among farmers, crofters, and growers in Scotland entitled 'Agroecology: Enabling the Transition'. This initiative emphasised creating friendly and relaxed environments where participants could freely share and learn from each other. The programme involved farm visits, webinars, WhatsApp groups, and shared meals, allowing participants to showcase their practices, receive feedback, and explore alternative approaches. The intergenerational mixing of new entrants and seasoned practitioners proved valuable in challenging established practices and fostering innovation within the agricultural community. By hosting visits on their own farms, members had the opportunity to exchange knowledge and receive support from their peers. The project was funded by the Scottish Government through the Knowledge Transfer and Innovation Fund (Farm for Scotland's Future, 2023).

Our discussions with established farmers revealed that there was a relative lack of interest in 'formal' learning events linked to 'green skills', but rather the majority of people said they would prefer to learn from other farmers who have adopted different sustainable practices and find out how this has impacted their business by talking and sharing understanding in a way that was meaningful for them (i.e., linked directly to their farm). This also suggested that there were higher levels of trust for those within the sector.

"I am a great believer in farmer-tofarmer learning networks. That's the best way to learn and farmers to change their practice by seeing what other farmers are doing. I've been on a few farm visits; they are well attended and you want to learn from others. That's the best place to get your information from because you trust them." (smallholder)

In relation to **farmer-to-farmer knowledge and skills sharing**, a few farmers discussed the cultural barriers that must be overcome to ensure broader engagement across the farming community to drive knowledge exchange in the sector:

"I am definitely speaking from the farmer-side of things here, I think we need a mentality shift amongst some farmers as well, and we have had the facilitation groups [...] And you tend to see the same faces at these groups all the time. And I spent a couple of years in New Zealand and once a month on the dairy side of things. we used to have farm discussion groups, and all the local farmers would get together and each time we would go to a different farm and discuss very openly, right down to the financial side of things, what was happening on that farm and why they were doing it, and it was openly questioned, and nobody was offended. Whereas I think here, we play our cards a lot closer to our chest, especially when it comes to finances, everybody has always had the best lambing we have had this vear or the worst one - nothing is ever in between, we need that social shift to enable that moving on. I think there are a lot of younger farmers coming through that are more open to that, but I think there is still a lot that are not being reached that could be." (upland farmer)

It was also highlighted by several farmers that the majority of 'skills development' they experience is based on their everyday familiarity, involvement, and know-how of working on a farm, accumulated over many years. As a tenant farmer described:

"I've been working since I was 13 and you learn as you go, pick up as you go, learn it by doing it really. [...] You need to be a bit of a master-of-all-trades, you name it [...] but I don't have any certificates for any of that!"

Indeed, around 65% of farm managers have no formal agricultural education, so fewer formal routes to upskilling and more informal peer-to-peer learning pathways may be required to support those already working in agriculture to adapt and acquire new skills to support a more sustainable agriculture sector (CCC, 2023). It was also highlighted by participants that farmers will need more support in order to allocate time and resources to upskilling "because farmers tend to be very time poor" (upland farmer).

c) Develop a Multi-Sited, Shared Apprenticeship Scheme

Participants discussed the potential of supporting the development of a multi-sited, shared apprenticeship scheme where agricultural apprentices are paid a living wage and work across various farms to gain a range of work experiences. This responds to the needs of both the student (i.e., diverse skills development opportunities) and farm businesses (e.g., who may not have enough work to take on a full-time apprentice and/or sufficient time to dedicate to administrative tasks associated with apprenticeships).

Some workshop participants currently enrolled on college courses or apprenticeships stated that their learning experiences could be improved, with many pointing to the difficulty of finding relevant and diverse work experiences in the region:

"there is a big difference between somebody telling you how to do something and somebody showing how to do it. [...] to qualify for the course, you need to do 150 working hours, that is how I ended up working at the dairy. [...] But as a mature student with a child, I have overheads so I still have to earn a living while I am learning. So, I am currently at the dairy at the morning, then going up to Matthew's³³ farm, and 3 days a week I am stuying and alongside that I am still a mam, so it's guite hard to find a balance, and get out there to get the experience you need. [...] I know a lot of the students in my class who are struggling to get placements because they know nobody in the industry, now to me that is where the college should step in, there's an abundance of farmers who would be happy for the free labour, for the students to go on one or two days a week, and do some work and get hands on, but it's trying to break down barriers."

(agricultural college student)

A promising suggestion that emerged from discussions with aspiring new entrant farmers, farming stakeholders and workshop participants related to the potential to develop a funded multi-sited, **shared apprenticeship scheme**, where apprentices are paid a living wage and work across various farms to gain diverse experience. As a workshop participant discussed:

"An apprenticeship scheme. something like that is very good for getting people into farming, I mean when we have tens of millions of underspend at the moment from the money they have taken back from BPS and I think all farmers would like to see things like that put back into tangible schemes — like an apprenticeship scheme - not everybody could take them on [apprentices] five days a week but could take them on a couple and what it does is, if they go around different farms it gives them a diverse bit of training, and what I do on my farm is completely different from what another does on their farm, because we are completely different businesses." (tenant farmer)

The idea of a shared apprenticeship scheme would also help to address another issue identified by participants, that is — the gradual loss of, or failure to share, place-based agricultural knowledge between younger new entrant and older generations. For example, it was discussed that ageing farmers can sometimes find it hard to connect with apprentices without support, therefore an organisation or scheme connecting people together would be extremely helpful.

"A shared apprenticeship scheme would be great. So, a lot of farmers will be happy to have an apprentice but don't have enough, either enough work to keep them employed full-time or enough variety to cover an apprenticeship." (local authority stakeholder)

"I would love that kind of apprenticeship scheme where you can get two or three farms together in a cluster, and there are many farming clusters already out there brought together for specific issues that are usually something like a tree planting scheme or a river **scheme** or a river catchment, to come together to do a particular piece of work, because if they are already together and already talking to each other, which is the main challenge for farmers, because if they talk, you are on to a winner, so, would they be then interested in sharing one or two apprentices or coming together for that?"

(farming organisation stakeholder)

"we are a very small organisation, we don't want any hassle to go with it, so if there was an apprenticeship scheme that we could tap into or some sort of admin support that goes with it, so it's not just a burden, that would be great." (CSA grower)

The shared apprenticeship system would also need to consider how learners transition from apprentice to farm worker given the high cost of land (see Theme 7). Therefore, **learning pathways must be linked to meaningful, secure job opportunities**, as discussed by a workshop participant:

"If you are going to have people learning, and you have those that want to learn, you also have to have a place for them to work afterwards, and if they can't get land on their own, that is difficult. Also, it has to be an employment that has to last throughout the year, because you can't just live on summer work." (tenant farmer)

It was stated that many new entrants do not come from an agricultural background, therefore while there is significant enthusiasm, particularly from those studying an agriculture-related course, there is not always the support needed to help build their social connections and knowledge of how to start and run a successful farming business.

d) Mentoring System between New Entrants and Established Farmers

There was interest amongst both new entrants and established/recently retired farmers to engage with a supportive mentoring scheme. This programme could provide valuable information, advice and contacts for those entering the sector and ensure the ongoing legacy of an established worker's farming career.

Several workshop participants looking to enter the industry said that a **mentoring system** where established farmers could share their wealth of knowledge with new entrants would make it easier to navigate the sector and also support them on their career journey through place-based intergenerational knowledge exchange:

"you have to go out and speak to people to find out how everyone is doing it, that's not information that is offered up, you have to actually go out and look for it, without going out and finding your own contacts, otherwise you sort of... you'll just be doing the way you are told to do it by college."

(agricultural college student)

Established and retired farmers also discussed the positive role of mentoring. As a recently retired farmer stated during a workshop:

"I also quite like the idea of mentoring, of pairing up, probably retired farmers, partly because it keeps them part of farming and it keeps them interested, to act as a sounding board to discuss things with outside of the family because sometimes discussions within the family can end up with disagreements. I think there is scope to do that. [...] and you have got somebody who is prepared to be challenging and play devil's advocate, you could actually get to the nub of the problem and make progress - and it's not a one sizefits-all-approach, the pairing is quite important but I think it can produce huge results."

e) Geographical Accessibility of Skills Training

The accessibility of training for land-based skills development was an issue raised by participants, specifically where transportation connectivity is poor. There was also significant support for community-based training and learning located within rural communities delivered by trusted organisations to ensure that skills development is accessible and affordable.

The **geographical accessibility** of training for land-based skills development was a key issue discussed by some participants, as the following comments by a stakeholder from a Further Education partnership highlighted:

"accessibility is a real challenge, because where these organisations are based, or where the work happens... is generally in the remote rural parts of Northumberland, where transport links are poor. [...] that's equally the same when it comes to accessing the learning. [...] I think that the green and natural resources, land-based area is going to be the area which will have the most significant challenges."

The workshop discussion groups also outlined that trusted community-based rural charities are crucial to ensure that training is accessible and affordable to people who would like to learn new skills, and there is significant scope for the Combined Authority to support these organisations to reach more people. As a farmer described:

"UTASS, which is a charity in Teesdale (see Box 13), that is very well run and it has done an awful lot with communities and farming and they do a lot of training courses and manage to get funding and help people upskill for very little cost, and so if you get this devolution deal it would be great to see businesses who want to take young people on, they offer stuff like that and subsidised training. That would be a real plus for the agricultural side, whichever part of agriculture people want to go into."

BOX 13: CASE STUDY – UPPER TEESDALE AGRICULTURAL SUPPORT SERVICES, COUNTY DURHAM

Upper Teesdale Agricultural Support Services (UTASS) is a local charity that works across the Dales to help support people living and working in the area to overcome the challenges that they may face. UTASS arranges and hosts a broad range of courses and events throughout the year, organised to meet community needs and ensure that quality training opportunities (for example, related to animal health, land management and driver training) are available in the Dales. See: https://utass.org/training-events/

f) The Loss of Agricultural Colleges and the Need for Quality Learning Experiences

It was emphasised by participants that many agricultural colleges have either closed or there was a perception that, in some cases, the quality of learning has diminished, which intensifies concerns about skilling up the future agricultural workforce. Participants called for increased investment in training future farmers and farm workers within the region, ensuring that the practical aspects of learning are robust and engaging for students.

Several participants reflected on what was often framed as the 'demise' of agricultural colleges across the country and the lack of investment in agricultural training in general, which intensifies concerns about skilling up the future agricultural workforce:

"I think the agricultural colleges have been decimated. I went to Wye College and that was shut years ago. It was a brilliant place, a brilliant agricultural college. Imperial took it over, said they wouldn't shut it, and they promptly shut it." (smallholder)

"I mean our local agricultural college, just isn't an agricultural college anymore, it just doesn't do, it's more animal care, there is some of that, but it is a completely different place to what it was 20, 30, 40 years ago." (horticultural grower)

"the reputation of some colleges isn't that great, and a lot of the young kids who did want to study [agriculture] have had to go Newton Rigg College, near Penrith (in Cumbria), which is no more, unfortunately, or further afield like Harper Adams."

(farming network stakeholder)

As a local authority stakeholder reflected: "I really do think we have missed an opportunity not having a really strong agricultural college provision. However, we do have two, if not three university farms in Northumberland". This sentiment was supported by a farming stakeholder: "I do feel there is a missed opportunity with regard to that quality agricultural training and learning provision."

Moreover, current agricultural college students also reflected on their experience, pointing to the need for **increased investment in training future farmers and farm workers**, as a workshop participant discussed:

"The organisation of my college is not great. The learning is good but could be so much better. [...] My college is all livestock based, but within silage season we do produce our own silage but we get contractors in to do the work for us. We don't have the practical side of things really. We have the bare minimum of machinery. It's not great. And I think if the government would actually help, it would make learning agriculture for the younger generation easier."

(agricultural college student)

It was considered there should be significant investment in agricultural learning facilities and infrastructure in the region to support a next generation of agricultural and land-based workers that can help deliver the low carbon transition. It was stated that better coordination between skills providers, rural businesses, farmers and schools could raise awareness among young people about land management and the agricultural sector and help collectively plan future skills provision.

Skills Bootcamps in 'Green Skills' are now being developed for the land-management sector, for instance, with a specific focus on Arboriculture based on identified skills gaps in woodland management and the Biofuels (renewable energy) sector with employers in the region (New College Durham, 2023), however, there has been no focus placed on sustainable farming and agroforestry.

Recommendation 6: Education,
Skills and Training — The Combined
Authority could support accessible,
flexible opportunities for new entrants to
learn agricultural and sustainable landbased skills in the region and help upskill
existing workers by encouraging peer-topeer learning and knowledge exchange.
Actions the Combined Authority could
consider include:

• 6.1: Inspire Young People: The sector has an ageing workforce and is also struggling to attract diverse, new entrants. The Combined Authority could support young people from across the region to learn about farming and food systems through experiential learning (i.e., first-hand farm experiences) that can showcase the different careers open to young people. Partnerships could be developed by working with agrieducation organisations (such as LEAF Education) to help teachers deliver high-quality lessons that translate the subjects of food, farming and the environment into practical classes linked to the curriculum.

Potential Delivery Partners:

NTCA, NEMCA, Linking Environment and Farming (LEAF) Education, other educational charities such as the Country Trust, UK Schools Sustainability Network (UKSSN).

Indicator: COLLABORATE

· 6.2: Promote Farming as a

Career: Attracting new talent into the industry is crucial to promote diversity, inclusion and sustainable innovation. The Combined Authority can collaboratively work with partners to develop a campaign to promote the sector, the various careers available and educational pathways into the industry to a wide and diverse audience to increase the accessibility and diversity of the sector to support a low-carbon, inclusive transition to a sustainable food system.

Potential Delivery Partners: NTCA, NEMCA, local authorities, NFU, TFA, LWA, CLA, land-based FE colleges, HE institutions, skills providers.

Indicator: COLLABORATE

6.3: Good, Decent Agricultural Work: The NTCA Good Work Pledge³⁴ could be used to **advance** good work in the agricultural sector (and the broader food system). 'Good work' focuses on supporting decent, secure and safe jobs that are rewarding with accessible training pathways and wellbeing support. The Combined Authority could work with industry partners to encourage and support businesses to invest in good working conditions, and identify and meet the training needs of workers through investment in quality skills development.

Potential Delivery Partners: NTCA, NEMCA, local authorities, LWA, NFU, TFA, Northern TUC, BFAWU.

- 6.4: Upskill the Existing
 Workforce: The Combined
 Authority could work with farming
 organisations, industry associations
 and educational institutions to trial
 a range of methodologies and
 incentives (including financial) to
 upskill the existing workforce and
 encourage peer-to-peer learning
 and knowledge exchange
 amongst the farming community to
 increase the accessibility and expand
 the uptake of skills development
 opportunities.
 - o Farmers tend to trust other farmers and learn well when the information is tied to practical, real-world cases. Therefore, multiple benefits could emerge from investing in peer-to-peer learning and knowledge exchange programmes for farmers and growers drawing on a range of formats (including farm visits, webinars, WhatsApp groups, and shared meals), which can allow participants to showcase their practices, receive feedback, and explore alternative approaches. Inspiration can be taken from the 'Agroecology: Enabling the Transition' programme in Scotland (Farm for Scotland's Future, 2023).

Potential Delivery Partners:

NTCA, NEMCA, local authorities, FE colleges, training providers, local skills networks, farming clusters, groups and organisations.

Indicator: COLLABORATE

• 6.5: Prioritise Apprenticeships:

The Combined Authority could examine the potential along with relevant partners to develop a regional multi-sited, shared apprenticeship scheme which focuses on jobs in the green, land-based economy (such as agroecological farming and sustainable forestry) where apprentices are paid a living wage and work across various farms that provide students with multiple diverse hands-on industry experiences. This can also expand and strengthen the social networks of new entrants.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, FE colleges, training providers, local skills networks, farming clusters, groups and organisations.

Indicator: COLLABORATE

• 6.6: Facilitate Mentoring: The Combined Authority could work with farming organisations to facilitate a supportive mentoring scheme where new entrants are partnered with experienced/recently retired farmers, farm managers or other agricultural stakeholders that can help guide new entrants through the early years of their career.

Potential Delivery Partners: NTCA, NEMCA, local authorities, NFU, TFA, LWA, local farming groups and clusters, Young Farmers' Clubs.

Indicator: COLLABORATE

6.7: Green Skills Bootcamps: The
Combined Authority could examine
opportunities and demand for Green
Skills Bootcamps in regenerative,
sustainable agriculture and
agroforestry to support a highly
skilled workforce to deliver quality
food production and nature's
recovery across the region.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, FE colleges, training providers, local skills networks, North East LEP.

Indicator: IMPLEMENT

THEME 7. FACILITATE ACCESS TO, AND COLLECTIVE OWNERSHIP OF. LAND

Summary: A significant barrier that stops people from developing agricultural initiatives and enterprises is a lack of access to appropriate and affordable land (LWA, 2020). Participants stated that attracting new entrants to farming is essential to ensure the ongoing vitality, resilience and competitiveness of the sector, however, gaining access to suitable land remains difficult. The decline of county farms (farms owned by local authorities) across the region was frequently discussed as a lost public asset and policy lever that could have been utilised to support new entrants. Given the multiple benefits of county farms outlined by research, there should be an immediate halt to the sale of remaining county farms (Graham et al., 2019; CPRE, 2022b). There was significant support for facilitating access to land for experimental farms and given the high cost of land, collective and cooperative models (such as community land trusts) were discussed as important to increase local access to land for sustainable

food production. Another critical issue raised was the lack of affordable, secure housing for low-paid workers in rural communities, and community-led housing was proposed as one avenue to support affordable housing that could help rural places thrive. Participants also placed significance on ensuring that land is available for urban or peri-urban food growing (i.e., community gardens, allotments and city farms). Overall, transparency of data and land mapping is crucial to engage citizens on topics of land and food governance.

Key Findings:

- a) Barriers to Land Access
- b) Collective Approaches to Land
- c) Affordable, Community-Led Rural Housing
- d) Providing Land for Collective Growing in Urban Areas
- e) The Decline of Council-Owned 'County Farms'

a) Barriers to Land Access

A significant barrier that stops people from developing agricultural initiatives and enterprises is a lack of access to appropriate and affordable land. Participants stated that attracting new entrants to farming is essential to ensure the ongoing vitality, resilience and competitiveness of the sector, however, gaining access to suitable land remains difficult. Therefore, new entrants and existing farmers require access to land under secure, fair and affordable conditions to support a sustainable and regenerative future.

Participants discussed the most significant barrier that stops people from developing agricultural initiatives and enterprises is a **lack of access to appropriate and affordable land** (see Box 14). Discussions at the participatory agricultural workshops underlined that land and our relationship to it — its use, management and ownership — is a vital area that must be addressed to support fair and inclusive farming systems.

A recent Land Workers' Alliance (LWA) survey of 156 new entrants revealed respondents faced significant barriers setting up and scaling up their businesses with 61% struggling with accessing land, 46% having difficulties with accessing finance (loans and grants) and 54% experiencing access to relevant training as a barrier (particularly business-related) (LWA, 2020).

BOX 14: THE COST OF FARMLAND IN THE NORTH EAST OF ENGLAND

In 2020, the average price of arable land in the North East of England was £8,250/acre, while pasture was £5,000/acre (Harris, 2020). There is significant demand for land and rural properties from a wide range of buyers, whereby farmland with accompanying farmhouses and outbuildings are frequently out of the price range for the majority of people looking to establish or run their own farm business. Demand is strongest for equipped units that offer diversified income streams such as holiday lets or renewable energy. It is also highlighted that the lifestyle market strengthened due to the Covid-19 pandemic, which has driven a requirement for property that offers a balance between lifestyle and connectivity (particularly close to the urban centres of Newcastle, Darlington and York, which has strong transport access to London). Moreover, the increasing value of land makes it a good, 'safe' investment opportunity particularly in turbulent times, which increases competition for land and also creates a disincentive to sell.

Several stakeholders mentioned that agriculture tends to be an "inherited occupation", as an upland farmer bluntly stated: "they used to say there is two ways to get into farming, you either are born into it or marry into it. And we have got to break that mould."

This is highly problematic given that:

- farming is the **least diverse**occupation in the UK (98.6% White
 British) (Norrie, 2017) therefore, the
 industry must become more diverse (not
 just in relation to ethnicity/race, but also
 gender and age).
- agriculture has an ageing workforce.
 In 2016, over a third of all farm holders in the UK were over the age of 65 years and only 3% of holders were aged less than 35 years (Defra, 2022a).
- Across the UK, land ownership is highly concentrated, and in England, half of the country is owned by less than 1% of the population (Shrubsole, 2019).

Attracting new entrants to farming is essential to ensure the ongoing vitality, resilience and competitiveness of the sector, however, access to land remains problematic:

"For new entrants getting any land is a huge issue. I am happy to work with somebody else for the rest of my life, but my ultimate goal is to have something that was my own alongside it, so a small flock of sheep would be ideal. Making it easier for somebody like myself to rent, I don't even need to buy, rent some grazing land, I am talking ten sheep, something that is easy to manage, to be able to know where to go to get that land. There is no information about land. [...] So, having the information available that you need, would be a great way to help people getting into the industry." (agricultural college student)

"We are frequently approached by people who want to do something similar to us and want to have access to land and buy it or rent it and they frequently struggle to find that land, so again that is something that the local authorities can do as significant landowners is to free up some land specifically for those reasons." (CSA grower)

Therefore, several participants outlined that we need to create a space where people can imagine, experiment and enact alternatives to individualised models or established ways of doing farming. As a workshop participant discussed, access to land is crucial for experimentation in farming:

"I definitely have a suggestion which is experimental new farms. Which could be lowland or upland, depending on the location and context. I think there is a huge scope for that. In terms of who would do it and funding, it's an issue there, but it inevitably helps change happen, if you have got a bit of land or a farm or a group of people who are willing to experiment with those changes and see what works and what doesn't work and then it becomes an educational resource for all of us. [...] It is potentially a cost but local authorities are quite significant land owners and - and I am not sure this exists anymore - but we used to have tenant farms that were controlled by local authorities to enable new young farmers a foot in the door."

As described by a livestock tenant farmer, if there are training and educational courses in agriculture available in the region then there needs to be accessible pathways for people to develop smallholdings on affordable land:

(CSA grower)

"There is a lot of land within local authorities that is now earmarked for development that really should be earmarked for smallholdings, whether it is 5 to 10 acres... around the local authority area and they can give them [new entrants] opportunities in the form of say, a five year tenancy, to build up their experience to grow into agriculture, but not just giving them five years of support and then burst their bubble or a dream, but give them five years of support to allow them to grow their business, but in the meantime try and help them to find other land to move on to, so the next person can move in behind them, so you're building a stepping stone by building that experience. [...] I think Local Authorities aren't interested in this, but they will support colleges but not actually helping the people they are producing from those colleges."

Local authorities and the Combined Authority have a role to play in supporting the notion of "public land for public good" — where groups and communities can access land and collectively take ownership to develop sustainable small-scale farms and support local food systems. They can also explore diverse ways to increase collective, public ownership of land³⁵, as a climate campaigner and smallholder discussed:

"public land ownership — even just a little bit, we have got to start looking at land ownership, we have got to get people associated with responsibility for their land and water now. [...] And that ties in to local power, food and bioregionalism and resilience. But it empowers and educates people to own and have responsibility. [...] If we owned that section of the river or that field, then we engage with it."

³⁵ It was revealed in May 2023 that if the Labour Party win the 2024 General Election, they plan to empower local councils to buy development land at a price without the development premium ('hope value'), therefore at a fraction of its open market value to help kickstart a 'pro-building' agenda (Stacey, 2023). This kind of intervention could be used to help local authorities buy land at an affordable price to develop collective agricultural enterprises that can address multiple societal challenges such as food security and biodiversity loss.

b) Collective Approaches to Land

Collective and cooperative approaches to land ownership and management were discussed by participants, such as Community Land Trusts. Several 'best practice' models were outlined that could help promote farming experiments or "incubator farms" as a way to make access into farming easier for new entrants, such as RENATA, the National Network of Farm Incubators in France.

Given the high cost of land and concentrated landownership model in England (Shrubsole, 2019), some participants outlined community and cooperative models of land ownership can be encouraged to support new entrants and increase local community access to land for sustainable food production.

It was highlighted by participants that **Community Land Trusts** (CLTs) are one way to forge locally-driven solutions that can strengthen social, environmental and economic sustainability. CLTs can be utilised in relation to agricultural initiatives where communities can bring tracts of farmland into better stewardship.

The workshops revealed a range of 'best practice' models to help new entrants into ecologically sustainable farming. Participants discussed the following examples:

The Ecological Land Cooperative (ELC) purchases parcels of land to be leased in small plots to farmers to "support new entrants into agriculture by making access to land a reality for all — not just a few". While the ELC currently operates primarily in the South West of England and South Wales, the model can be replicated in the North East of England and the Combined Authority can support the establishment of Land Trusts in the region to encourage community-based sustainable agriculture. See: https://ecologicalland.coop/about/vision/

- Terre de Liens in France is an example of a civic organisation that promotes land preservation and facilitates access to farmland for organic farmers. New entrants access land as long-term tenants. As of 2020, Terre de Liens owns 219 farm estates, amounting to 5,750 ha, where 318 farmers are working. Thousands of farmers and future farmers have been advised and supported. This has been made possible by the support of 24,600 citizen members and investors, with €90 million raised (through investment and donations), as well as by local citizens and local authorities. See: https:// www.accesstoland.eu/-Terre-de-liens-
- **RENATA**, the National Network of Farm Incubators in France (Réseau National des Espaces-Test Agricoles) is an umbrella organisation that aims to promote farming experiments or "incubator farms" as a way to make entry into farming easier. Farm incubator start-ups "enable prospective farmers to develop a life-size farming activity, in an autonomous way, during a limited time period, and in an environment designed to reduce risk-exposure. At the end of the time period, the prospective farmers evaluate their project and themselves, to decide whether to continue their project, modify it or abandon it". There are currently 58 farm incubators in RENATA, each of them specific in its stakeholders, legal statutes and ways of working. See: https://www. accesstoland.eu/RENETA

Within the North East of England, there are interesting developments occurring where institutional landowners are open to working with collective organisations to take on farming tenancies to support community development (see Box 15). This open and collaborative model can be promoted by the Combined Authority.

BOX 15: INCREASING ACCESS TO LAND — INSTITUTIONAL LANDOWNERS AND COMMUNITY TENANCIES

West End Women and Girls Centre (an open-access community-based women and girls centre in Newcastle) was set up in 1991 in Elswick and has successfully run community gardening and a community bakery for many years in the local area. During Covid-19 they delivered soup to the local community using produce from the gardens, which led to talks of getting a farm where women and girls would be able to learn new skills, have access to open, green space and grow produce and rear animals. In December 2021, the group signed a 20-year tenancy with the National Trust Wallington Estate in Northumberland for £10,000 a year for a 10-acre smallholding that is completely 'off-grid'. As a community organiser explained, they found out subsequently that Wallington Estate³⁶ was given to the National Trust by Sir Charles Trevelyan who was the local MP and came from Elswick. He had put in the land transfer to the National Trust, 'I want people from Elswick, workingclass people from the West End of Newcastle, to be able to access my land'. By giving the farm tenancy to the West End Women and Girls Centre, the landowner is able to open up farming to a broad range of people, and in this case, supporting women from a diverse array of backgrounds to experience and participate collectively in agriculture and share their skills. This fantastic example of a collective organisation taking on a farming tenancy highlights the further potential of landowners to creatively link with organisations to diversify access into farming.

A further potential solution suggested by a workshop participant related to "land matching" to support new entrants gain access to land, where there is not a designated farming successor in place. It was proposed by a farmer that there was potential to discuss opportunities for new entrants to help take over the running of

a farm with mentorship through a **land matching system** (e.g., through tailored leases of land). However, it was stated that this would need to be mindful of the various challenges facing retiring farmers (such as family issues related to transferring land, attachment to the farm, and low pensions to support retirement). It was stated that the goal should be to keep smaller farms in operation, giving new entrants the opportunity to farm, build up their skills and learn from existing farmers without having to take on the wholesale operation of a farm business from the outset (see Box 16).

BOX 16: LEARNING FROM NEW ZEALAND IN THE DAIRY SECTOR

Specific attention was placed on experiences in New Zealand within the workshops, where it was considered that various systems (such as career-ladder farming or share farming) provide better support for new entrants to gain their first experience of entrepreneurial responsibility on an established farm and move through the steps of the farming ladder from entry to a career in farming. As described by a workshop participant:

"With regard to the new entrants, what I find very interesting is the sort of systems they have in New Zealand on the dairy side where you might have an elderly farmer with no one to follow on, he possibly doesn't want to retire but he is working 7 days a week... but say a youngster can come on to the farm to work to build up capital because the capital side is a real problem and so this youngster may come and buy 5 cows when he comes on and then those cows have calves and basically you develop a herd within a herd. And if the whole thing is properly done, the farmer can keep farming and has somebody to help him out and the youngster can get a foot on the ladder. But it does need help with, shall we say, they have lots of contract agreements. So, you can sign the contract agreements and they are very beneficial to the farmer and the youngster." (dairy farmer)

³⁶ Wallington Estate consists of 14,000 acres encompassing 15 tenanted farms. It was given to the National Trust by Sir Charles Trevelyan in 1941 because of his disdain for private land ownership.

c) Affordable, Community-Led Rural Housing

The lack of affordable, secure housing for low-paid workers in rural communities was emphasised as a significant issue that can hamper a just transition for the countryside. Green job creation for agricultural and other land-based workers (i.e., sustainable land management) in rural areas must be accompanied by affordable, local homes to support flourishing, diverse communities.

Another critical issue raised by participants was the lack of affordable, secure housing for low-paid workers in rural communities. As a community organisation emphasised, affordable homes are needed to "keep young people in rural areas and jobs".

Focusing on affordable housing is crucial because as another interviewee stated, the excessive value of rural homes (particularly with accompanying land) frequently means that farm houses and barns in rural areas are often bought by wealthy individuals seeking the 'rural idyll' and a ruralised "lifestyle", rather than actively engaging in agricultural activity.

At a national level, it was suggested that there needs to be reform of the planning system to enable (agricultural) workers to access affordable housing in rural areas. As one interviewee stated, "I'd like to see more regulation around second homes, Airbnb's, buy-to-lets, so more housing is available for local people to live where they grew up". Research has pointed out how shortterm rental platforms offering residential homes to tourists that were intended to be an example of the 'sharing economy' have been co-opted by property developers and now implicated in wider processes of financialization, platform capitalism and gentrification (Wachsmuth and Weisler, 2018; Gurran and Shrestha, 2021).

As one rural resident and CSA member pointed out, **community-led housing** via community development trusts that bring empty buildings back into community ownership³⁷ are a noteworthy example, "Wooler is a really interesting case study of **community engagement to regenerate** and hang on to Wooler as a rural town" (see Box 17).

BOX 17: CASE STUDY – THE GLENDALE GATEWAY TRUST, WOOLER, NORTHUMBERLAND

The Glendale Gateway Trust is a charitable community development trust based in the small rural town of Wooler in North Northumberland and was established in 1996 with the aim to support one of the most sparsely populated areas in England. Since its development, the Trust has bought and now manages property worth £2.5 million. It tailors the use of their assets to support budding businesses, generate income for the area and provide affordable housing. For more information, see: https://www.glendalegatewaytrust.org

If new 'green' job opportunities, such as those related to progressive land management and nature-friendly farming are to be created as we move to a 'greener' economy in the region, then as a participant from a rural-based organisation reflected:

"if the focus for the region is going to be on more land-based work then these workers will need to live somewhere, [but] housing is expensive, [...] particularly once you go into some parts of Northumberland and probably out of reach for must young people just starting out."

³⁷ It was also emphasised that there needs to be greater awareness raising amongst community groups about government initiatives such as the "Community Ownership Fund" which is a £150 million fund over 4 years to support community groups across the UK to take ownership of assets which are at risk of being lost to the community, which could be applied to land stewardship. See: https://www.find-government-grants.service.gov.uk/grants/the-community-ownership-fund-1

d) Providing Land for Collective Growing in Urban Areas

Participants also raised the issue of ensuring that land is available for urban food growing (i.e., community gardens, allotments and city farms). By extending the amount of public and private land used for collective growing projects a range of environmental and sociocultural co-benefits can be created in communities (Nettle, 2014).

As an Allotment Society stakeholder discussed, plot holders frequently would like to expand their food growing activities beyond their allotment plot, however, are unable to do so because land is prohibitively expensive. This means that opportunities to nurture a thriving 'market garden model' across the region has been hampered, as a farmer stated:

"we do need to connect our urban population with where their food comes from and have a better understanding — so then having a 2-acre site in every village and around the outskirts of towns where people can grow their own veg, might work."

Moreover, the horticultural skills of community gardeners, allotment holders and small-scale growers' — who it was emphasised tend to be more diverse in terms of age, race/ethnicity, and gender — are often under-utilised. While not the explicit focus of this research, the increasing significance of urban agriculture — in the form of community gardens, city farms and allotment growing — highlights the ways in which agriculture traverses and complicates rural-urban boundaries:

"I think community gardens and allotments, where everyone in the local area can go down and grow something and it's within the community, and anything that is grown there they can consume themselves, have your own chickens to have your own eggs. Things like that need to be done and supported for people like me who live in a built-up area like Newcastle."

(agricultural college student)

Taking inspiration from the "Capital Growth" project in London³⁸, the Combined Authority could help support community food growing initiatives, for example, developing in partnership with established relevant organisations, a regional food growing network or hub, which provides advice, training opportunities and promotes existing projects³⁹.

By extending the amount of public and private land used for such collective growing projects in urban and periurban areas, a range of environmental (i.e., increased biodiversity) and sociocultural (i.e., access to green spaces of sociality, civic empowerment and improved wellbeing) co-benefits can be created in communities (Nettle, 2014).

f) The Decline of Council-Owned 'County Farms'

The reduction of county farms (farms owned by local authorities) across the region was frequently discussed as a lost 'public asset' and 'policy lever' that could have been directly utilised to support new entrants. Given that participants outlined that county farms provide a valuable entry point for those looking to enter the sector, there should be a halt to all sell-offs of remaining county farms (Graham et al., 2019; CPRE, 2022b).

³⁸ See https://www.capitalgrowth.org

³º It was highlighted by a participant that UK-wide networks, such as Social Farms and Gardens, which have a broad range of expertise in community-based farming, gardening and growing, currently do not have a designated Regional Development Coordinator for the North East, therefore there is scope to support regional coordination and action.

Many farming participants expressed the importance of county farms (farms owned by local authorities) as essential, accessible entry points for people with limited finance looking to begin a career in agriculture. However, as a regional tenant farming representative stated, "there have been huge losses in county farms and that has impacted new entrants, they provided a valuable entry pipeline". As further discussed by an established farmer in Northumberland:

"I am a first-generation farmer as well, I had some very lucky breaks, I don't know the details of it but the French Government run a grant system for new starters specifically for people under a certain age getting into agriculture and getting set up, yeah that is something that we could look at here — some of the local authority farms would be ideal for that kind of scheme. I know a couple of folk who have much larger farms who started out on council-owned farms in the 80s and early 90s and made a real go of it. I started off with a 100-acre National Trust farm, we now have got a lot bigger where we are now, we are at 1000 acres, it's doable, it's just getting that foot on the ladder "

It was also highlighted that council farms remain one of the most powerful levers local authorities have to directly help new people into farming and support the economic viability of local sustainable farming (Graham et al., 2019; CPRE, 2022b). But as a community-focused grower bluntly stated in the context of the North East of England, "Northumberland has lost their council farms — they sold them off". However, the majority of people stated they were actually unaware of how many county farms, if any, there were in their local authority area (see Table 2).

Nationally, we have seen a decline in the size of England's county farms estate; between 2010-18 this has fallen by over 15,000 acres — a decline of 7%, with 75% of Smallholding Authorities selling parts of their estate since 2010 (Graham et al., 2019). After years of austerity, local authorities are under great pressure to sell off public land and this is one of the main factors that has led to their decrease in number (CPRE, 2022b).

Several participants stated the loss of county farms in Northumberland is particularly detrimental given the concentration of landownership within several large, private, land-owning estates, which means purchasing land to start a new rural business is even more difficult: "working alongside the big landowners... and in Northumberland it is very clear who the big landowners are" (CSA grower).

Table 2: Change in Area of County Farms by North East Smallholding Authority, 2010-2018

Smallholding Authority	2010 Let Area (acres)	2018 Let Area (acres)	Change (2010-2018)
Northumberland	568	0	-568
Durham	1,415	1,217	-198
Hartlepool	217	198	-19

(Source: Graham et al. 2019)

However, as Graham et al. (2019) have shown with their analysis of county farms in England, other councils have taken different approaches, with some protecting and even expanding their county farm estates (such as the Conservative-controlled Cambridgeshire and Norfolk Councils) – by valuing them as vital "public assets" that provide social and environmental benefits, as well as an income source for the council.

For instance, it has been assessed by CPRE (2022b: 20) that on a cautious estimate, the freehold value of all council estates nationally went up from £657 million in 1998/99 to £1.56 billion in 2019/20 (or by

£900 million). If the 38,923 ha of land that was sold by councils was retained instead over that period, it might have contributed a further £650 million to council balance sheets, or more than £16,700 per ha, as well as rental revenue during that period. Therefore, at the national level, there should be an immediate halt to all sell-offs of remaining county farms. Moreover, the government can bring forward a package of measures and new funding methods and mechanisms to enable councils to increase their county farm estates.



Recommendation 7: Access to Land -

The Combined Authority could facilitate access to, and collective ownership of, land by taking a progressive and facilitative role to support citizens gain access to appropriate land for sustainable food production. They could also help citizens access land to develop collaborative experimental farms to drive innovation that can inform a just transition for farming. Actions the Combined Authority could consider include:

· 7.1: Experimental 'Incubator Farms': The Combined Authority could work with local councils and other partners to develop a pilot experimental or 'incubator farm' model in the North East region as a demonstration project that can work to make access into the sector easier for new entrants by providing land, peer support and advice to develop their business ideas and foster sustainable bottom-up innovation to develop new solutions. Inspiration can be taken from the RENATA network in France⁴⁰, which currently consists of 58 farm incubators and is part-publicly funded.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, Defra, agricultural organisations, landowners, nature and conservation charities, universities, skills providers.

Indicator: COLLABORATE

- · 7.2: Affordable Rural Housing:
 - There is limited affordable housing in some rural areas across the region, which can drive people away from rural communities. For sustainable businesses to thrive and create green jobs, affordable, low impact housing is needed for land-based workers.
 - o The Combined Authority could consider the Community Land Trust model for regeneration development and housing sites with communities-as-landowners to address the lack of affordable rural housing. The Combined Authority could partner with

housing associations, developers and councils to give more power to local people to shape what happens in their area and support small-scale pilots testing new approaches to house building projects to **deliver affordable community-led housing**. This could help to address local housing shortages as part of a wider inclusive (rural) economy approach to sustainable communities.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Community Land Trust Network, housing associations, developers, landowners, community groups.

Indicator: COLLABORATE

- 7.3: Urban Food Growing: The Combined Authority could support local communities to access public land and finance to set up communal gardens, collective smallholdings, community orchards and city farms in urbanised areas to strengthen local food systems, increase inclusivity and provide educational spaces for the community to learn new skills while connecting with nature.
 - o Crowdfund North of Tyne (a small grants scheme) is one mechanism that already gives local people the opportunity to create and fund projects which improve local areas. This could be promoted further to encourage more food growing projects.

Potential Delivery Partners:

NTCA, NEMCA, Social Farms and Gardens, National Allotment Society, Groundwork North East and Cumbria, voluntary, community and social enterprise (VCSE) sector organisations.

Indicator: IMPLEMENT

7.4: County Farms: Local Authorities could enhance their county farm estates or explore how to create new council-owned starter farms. All local authorities could undertake an audit of land available in their jurisdiction that can be utilised for food production and make it available (to rent at an affordable rate) for individuals or groups who want to implement their agricultural business ideas into practice.

Potential Delivery Partners: Local authorities, farming organisations and groups, voluntary, community and social enterprise (VCSE) sector organisations.

Indicator: COLLABORATE

7.5: Communication over Land: The Combined Authority could generate and share more information and data on land and agriculture in their area. Local authorities and the Combined Authority can lead by example and ensure that land ownership data is accessible and communicated in a clear, open way to the public — for example, through user-friendly, interactive online formats/maps.

Potential Delivery Partners: NTCA, NEMCA, Local authorities.

Indicator: IMPLEMENT

Additional recommendations for key partners:

• Access to Land for Long-term
Tenancies: Private and institutional local landowners (i.e., churches, universities, estates, the National Trust and other bodies), which hold large tracts of land, could be encouraged to offer long-term tenancies to new entrants, community groups, charities and non-governmental organisations to develop agricultural initiatives to ensure land is used to provide 'public goods' and ensure that farming is accessible to a broader range of people.

Potential Delivery Partners: NTCA, NEMCA, local authorities, institutional landowners, private landowners, CLA, Northumberland National Park Authority, North Pennines AONB.

Indicator: INFLUENCE

· Land Matching: National Government can support a land matching system that connects retirement-age farmers who have no successor in place with new entrants to help them access land. This enables new entrants to develop their knowledge, skills and entrepreneurial responsibility and also allows older farmers to remain active while reducing workload. Different models and methodologies could be examined (i.e., share farming, career ladder farming etc.) to support new entrants and facilitate intergenerational learning. The Scottish Land Matching Service⁴¹ and Wales' Start to Farm⁴² are both examples of long-term publicly-funded land matching services in the UK.

Potential Delivery Partners: Defra, NTCA, NEMCA, local authorities, NFU, TFA, LWA, CLA, local farming groups and clusters.

Indicator: INFLUENCE

Summary: Small-scale collective agroecological and community-supported agriculture (CSA) farm enterprises need to be valued for the co-benefits they generate. Collective approaches to agroecological farming can be encouraged where farmers, communities, businesses and organisations work together to help transition agriculture to a more sustainable future that delivers benefits for nature, health, climate and the economy. Targeted support is crucial to maximise the multiple benefits of

CSAs. This can be related to making council-owned land available for collectives to develop small-scale food cooperatives, funding peer-to-peer colearning opportunities between projects and supporting collective agroforestry initiatives.

Key Findings:

- a) Supporting Small-Scale Sustainable Agroecological Farm Enterprises
- b) Encouraging Cooperation and Collective Approaches

a) Supporting Small-Scale Sustainable Agroecological Farm Enterprises

All farms should be supported on an agroecological transition that produces food in a way that regenerates the environment. Several participants emphasised that ELMs should be developed to support an inclusive just transition so that small-scale active farms below 5 ha (which were not eligible to qualify for Direct Payments under CAP) can receive the support they need to contribute towards a thriving agricultural and horticultural sector. Local policy can work to strengthen the business development and multifunctional role of small-scale agroecological farms as sites of skill development, knowledge exchange, community food security and local food economies.

Several participants discussed that small farms have been overlooked and neglected by national agriculture policy. This issue travels to the heart of the government's approach to farming under the EU CAP — focus was placed on subsidising large and (the bigger) medium-sized farms, but not small-scale initiatives that had potential to scale-up and make a real difference to their local community and ecosystems in terms of delivering on biodiversity and climate policy objectives.

It was highlighted by a workshop participant that some forms of cultivation such as horticulture can be very productive on small pieces of land and therefore small-scale farms should be supported to produce nutritious food for people (see also LWA, 2017: 13). It was stated by a member of a community farm that small agroecological enterprises are often discounted as 'serious' food producers on the national policy scale because they often challenge the current corporate farming model upheld by large-scale producers and retailers.

Under the BPS, smallholdings that farm less than 5 ha of land are not eligible to qualify for Direct Payments, therefore it was stated by a smallholder that Defra should abolish this threshold as the ELMs regime is rolled out. This would help to ensure that thousands of small-scale farmers are recognised and valued for the work they already do (i.e., enhancing nature, delivering sustainable food production), making the payment system more accessible to a diverse group of smaller farmers and growers to create a fairer, more sustainable farming system. It was stated by a participant that the real issue is not so much creating a fairer payment framework which works much better for smallholders, but the political will to do so.

Given the legacy of Direct Payments and what was framed as a "preferential drive for larger farms, more concentration and increased productivity", a grower involved with a CSA described their disconnect from current government agricultural policy:

"I don't feel particularly connected with what government policy is, I think we kind of operate really without awareness of that. We are too small to be involved with applying for grants, we are just below the cut-off point basically to be accessible for grants, so we have no motivation to remain in touch with what government policy is. I am much more in touch with other community farms basically and mutual support."

Several stakeholders discussed how local and regional policy should work to support the business development and role of small farms or smallholdings in terms of sites of skill development, knowledge exchange, food security and local food economies. However, there needs to be tailored support to help "microbusinesses" remain viable in the future, as a participant from a small collective agricultural enterprise described:

"The problem is all this small business stuff, they want you to prove FTE [Full Time Equivalents] still under European numbers, the number of employees, turnover that kind of stuff, and we are so small, and my colleague said 'we are not small, we are a nano business'. And the challenge is how do you become a small business so you can become part of that conversation? There are lots and lots of nano businesses in Northumberland and the North East but none of the support or systems are directed to nano businesses and even when they think they are, basically the people behind it who understand this, the administrators, they are trying really hard to shoehorn you into something that you can't be shoehorned into."

This was supported by another agricultural stakeholder who stated that "if we want these smaller businesses to do more, then they have to be viable in the first place [...] and it needs the right support in the right place to support people in the right way". Several participants pointed out that all farms should be supported on an agroecological transition that produces food in a way that regenerates the environment (see Box 18).

BOX 18: WHAT IS AGROECOLOGY?

Agroecology applies ecological principles to agriculture and ensures a regenerative use of natural resources and ecosystem services. It also addresses the requirement for socially equitable food systems, whereby people can exercise choice over what they eat and where and how it is produced. In that sense, agroecology is a science, a set of principles and a social movement. Agroecology promotes farming practices that: mitigates climate change, works with wildlife, and empowers farmers and communities. Agroecology is a 'wholesystem approach' and can be practised by small, medium and large farms. For more information see: https://ffcc. co.uk/agroecology

b) Encouraging Cooperation and Collective Approaches

Co-operatives (co-ops) are organisations owned and controlled by their members. Participants discussed the crucial role co-ops across the agricultural sector can play in supporting community and worker-owned enterprises to deliver a just transition. Community Supported Agriculture (CSA) is a partnership between farmers and citizen-consumers whereby the responsibilities, risks and rewards of farming are shared, and short supply chains are developed what is produced on the farm goes directly to the consumer. Participants involved with CSAs outlined the financial challenges that CSAs face competing with large supermarkets. It was also stated that support to market their produce more effectively to a larger, diverse audience and having access to shared infrastructure (such as machinery) would be useful.

It was highlighted by a number of agriculture workshop participants that given the multiple uncertainties and vulnerabilities facing the agricultural sector, **cooperative models could be a 'new' way forward for conventional farming more broadly**

- that is, farmers working with other farmers to share the cost, risk and implementation of the agricultural transition. However, it was argued by some participants that a wider culture of collaboration would need to be fostered in the farming sector across the North East for this to materialise at scale.

There are various examples of **farmers' co-operatives**, for instance:

- North East Grains⁴³, is a farmerowned agricultural cooperative based in Northumberland (with sites in Longhirst and Swarland) that was established in 1987 with the objective to provide cost-effective and efficient grain storage through a collaborative approach and scale. It provides a complete grain drying, storage and marketing service to their membership, whilst offering a wide range of farming-focused services.
- Moreover, examples such as **Machinery** Rings (i.e., a grouping of farmers and others involved in agriculture who have come together to pool their resources as a means of controlling costs and making the best use of specialised equipment and expertise) have shown how farmers' co-operatives can work in practice at scale. For instance, Scotland's first Machinery Ring was established in 1987 (Flanigan and Sutherland, 2015) and currently the Scottish Machinery Ring Association has member Rings throughout Scotland, serving more than 7,000 farmers and other rural businesses⁴⁴.

Several participants emphasised that there is potential for the Community Supported Agriculture (CSA) model to be scaled-up across the region (see Box 19), however, there needs to be greater awareness among the general public and better support for cooperatives — both identifying and facilitating access to land and finance for collectives to start their own initiatives and help them deliver broader 'public goods' to the community. There are currently three CSAs listed on the Community Supported Agriculture

Network⁴⁵ in the North East region: Go Local Food (Tyne Valley) (see Box 20); Gibside Community Farm CIC (Gateshead) and Abundant Earth (Durham).

BOX 19: THE COMMUNITY SUPPORTED AGRICULTURE MODEL

Community Supported Agriculture (CSA) is a partnership between farmers and citizen-consumers whereby the responsibilities, risks and rewards of farming are shared, and short supply chains are developed – what is produced on the farm goes directly to the consumer. The multiple benefits of CSAs are outlined in terms of transparency, sustainability, social relationships and connection to nature. For example, farmers receive a more stable and secure income and closer connection with their community, while consumers benefit by eating fresh, healthy local food, feeling more connected to the land where the food is grown and often learn new skills and share knowledge. Therefore, while the CSA model is about food production, it also has broader social, community and ecological benefits. For more information see: https:// communitysupportedagriculture .org.uk

Participants stated that tailored business support for CSAs and access to alternative finance alongside an accessible educational campaign for the public is crucial because:

"cooperatives are a nice idea, but there's a lot against it happening,

supermarkets for instance, and it's all down to money, so the supermarkets will lower their price and do a big advertising campaign."

(horticultural grower)

Many stakeholders discussed the potential of developing a sustainable and resilient local food system, where more food comes from regional and local growers, producers and manufacturers, but it was advised that there is additional support needed to help smaller co-operative producers to thrive across the region.

⁴³ See: https://www.northeastgrains.co.uk/about/

⁴⁴ For more information see: https://scottishmachineryrings.co.uk

⁴⁵ See: https://communitysupportedagriculture.org.uk

BOX 20: CASE STUDY — 'GO LOCAL' FOOD: A HORTICULTURAL CSA IN OVINGTON, RURAL NORTHUMBERLAND

Go Local Food was established in 2011 and is a community-run co-operative, based in the Tyne Valley and is part of the Community Supported Agriculture Network. It is entirely volunteer run and aims to produce and distribute good quality, local, seasonal food, whilst looking after the environment. It currently has over 100 members. The CSA operates on 2 acres in Ovington (Halls of Heddon Nursery) which has 5 polytunnels and also an additional 2.5 acres of land owned by the Matfen Estate, which they secured access to lease in 2020. A founding member described the CSA's formation in their own words: "Back in 2009 or 2010, a woman called a meeting in the local pub because she was interested in how we can create a sustainable village. [...] Our line was here we are in a village surrounded by fields and all our food comes from miles and miles away. And one of the people had been researching CSA and we looked at that as a model and we thought we can do that - and what we were interested in was turning us as consumers into **producers** – so community ownership is absolutely at the core of what we are about." For more information see: https://golocalfood.org.uk

It was highlighted that the Combined Authority has a key facilitation role in supporting co-learning opportunities across small-scale farms and cooperatives. As discussed by several smallholders, learning from other projects is incredibly important:

"I was lucky enough to go visit Go Local about a year ago, because the national Community Supported Agriculture Network, they had some funding to enable one project to go and visit another project. It will be great to have more opportunities like that for people to go and visit other inspiring places that might be inside the region or outside the region. Basically, we got our travel costs covered and I think Go Local got paid some consultancy rate. It is a simple idea, very easy to administer." (CSA grower)

"It is that exchange of ideas, and that you can take from other people who are on a similar route to you and it helps as well to develop your own community." (CSA grower)

These extracts underline the importance of targeted support in the form of funding and resources to facilitate grassroots engagement, co-learning, local autonomy and collaboration in rural areas. At the national level, the 'Levelling Up' agenda must ensure that rural governance and the funds that are set to replace the EU LEADER programme⁴⁶ build upon this legacy and expand it to meaningfully support locally-led development and proactive participation in future rural community governance.

⁴⁶ EU LEADER funding was delivered via LEADER Local Action Groups (i.e., Northumberland Uplands, Northumberland Coast and Lowlands etc.) and available to local businesses, communities, farmers, foresters and land managers. A total of £138 million was available in England between 2015 and 2020 under the scheme for projects that create jobs, help business to grow, and benefit the rural economy.

Moreover, small-scale grassroots changes enacted by communities can become transformative as they 'connect-up' across places to have more significant impact. There is no 'one-size-fits-all' policy that works to support transformative change in rural communities, and there must be active support for communities to experiment, take collective approaches and build strong interpersonal relations of trust and solidarity. As a member of a CSA discussed:

"we have had people come out from Gateshead and Newcastle, to Ovington to where Go Local is based. And they have never had an experience of growing their own food but as soon as they get 10 or 11 miles [out] of the city, or a built-up area and they see what is going on and how everything is connected, it really can be transformative on a small scale." (CSA grower)

It was also discussed by some participants that encouraging smaller, more labour-intensive agroecological farming enterprises and local supply chains could provide valuable, quality job creation based on an "ecologically skilled workforce" (Carlisle et al., 2019) to help revitalise some areas of the rural landscape and tackle climate change. This is supported by the Landworkers' Alliance (2019) who outline:

"Climate friendly agroecological farming, including the production of high animal welfare pasture and waste fed livestock, employs more people per hectare in decent work. Job losses must be avoided, including those working in the meat industry, and replaced with better jobs that respect people, animals and the environment."

However, it was also pointed out that while some forms of small-scale organic or agroecological growing are more ecologically sustainable, it does not mean that it is socially sustainable and can perpetuate its own forms of (self-) exploitation in terms of labour and pay because of the broader political economic context in which they exist (see Galt, 2013), as discussed by a workshop participant:

"We run a very small business that's getting smaller as we get older, and I talk to lots of people who do this for a livelihood and it's difficult to grow fruit and vegetables organically. Because of your prices. I don't sell them at the price I should do. But prices are a lot higher and it's really hard. People are often not paying themselves a Living Wage. It's very difficult in the context we are in, and especially with the cost-of-living crisis, it's not getting any better." (horticultural smallholder)

For a move to small-scale agroecological farming to be a transformative, just and sustainable process, the quality of life of workers in more labour-intensive forms of food production must be prioritised and good work promoted.

Recommendation 8: Agroecological Farming Practices and Collective Enterprises — The Combined Authority could support and encourage collective and community-focused agroecological initiatives to produce nutritious, sustainable food for their local communities and deliver diverse cobenefits. Actions the Combined Authority could consider include:

· 8.1: Promote Agroecology Networks: The Combined Authority could look at creating "agroecological clusters" based on multifunctional farming in the region linking small-scale collective agricultural projects together with experimental smallholdings and established sustainable farms (i.e., organic, regenerative, permaculture, biodynamic etc.) to support localised patterns of agroecological food production and consumption. This can focus on peer-to-peer learning and knowledge exchange programmes and serve as the basis of more locally focused, diverse, naturepositive and sustainable food systems.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Community Supported Agriculture Network, Nature-Friendly Farming Network, LWA, food movements.

Indicator: COLLABORATE

 8.2: Community-Focused **Agriculture Businesses:** The Combined Authority can work with partners to support and raise awareness of Community Supported Agriculture (CSA) projects across the region. Greater knowledge among the general public and better support for CSAs (i.e., accessing land and finance) is required to ensure that collectives can deliver multiple co-benefits (i.e., more stable income for farmers, access to healthy, local food for citizens, members learning new skills, and shorter supply chains etc.) as part of the NTCA focus on community wealth building. This can be delivered through partnering with organisations such as the Community Supported Agriculture Network⁴⁷.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Community Supported Agriculture Network, LWA, food movements, community groups.

Indicator: COLLABORATE

Additional recommendations for key partners:

 National Government should remove the 5 hectare eligibility threshold which currently prevents small-scale agroecological growers from applying for ELMS. Connecting subsidy claims with evidence of commercial trading would safeguard that payments are made to commercial enterprises.

Potential Delivery Partners: Defra.

Indicator: INFLUENCE

THEME 9. NURTURE THE EXPANSION OF LOCALLY PRODUCED FOOD AND PROMOTE THE BENEFITS OF LOCAL FOOD SYSTEMS

Summary: There are significant opportunities to strengthen local food networks to support a more inclusive, resilient and sustainable regional food system. Participants identified a lack of local food infrastructure as a key obstacle to scaling up and strengthening local food systems in the region, therefore, investment is required to address gaps in food processing facilities. Support is also needed for local food businesses to develop new markets for their products and harness the potential of farm diversification (such as sustainable agritourism) through place-based branding and experiences. Public procurement is increasingly recognised as a vital tool

to promote more sustainable forms of local food production by leveraging the buying power of the public sector to influence producers, for example, by ensuring contracts are awarded to local producers and suppliers who commit to defined sustainability practices, keeping value within the local economy.

Key Findings:

- a) Strengthening Local Food Systems
- b) Promoting a Regional "Food Identity" and Farm Diversification
- c) The Role of Sustainable Public Food Procurement to Support Local Food Systems

a) Strengthening Local Food Systems

There was interest from participants in promoting local produce and creating more direct routes to market (e.g., farmers' markets and local farm shops) to encourage shortened supply chains, however, there are geographical and logistical challenges for some producers. Participants also identified gaps in the physical local food infrastructure (such as food processing, particularly abattoirs), therefore, investment is required to address gaps. Local food systems must be inclusive, meaningful and affordable for citizens.

Farming has become increasingly specialised and dependent on external inputs, and supply chains have become longer and more complex in our globalised food system. The Covid-19 pandemic vividly highlighted the vulnerability of supermarket supply chains, which are built on 'just-in-time' (JIT) delivery systems, which means that items in the supply chain arrive just when they are needed (Hasnain et al., 2020). They are also carbon-intensive — relying on significant food miles (from field to warehouse to supermarkets to homes, with different forms of transport between these stages).

Farmers interviewed expressed concern about **power imbalances** across the food chain. In particular, discussions of a just transition for the agricultural sector must examine the uneven power dynamics that permeate the UK food system. Farmers tended to focus on the devaluation of food production and the increasing concentration of power in the hands of a few supermarkets, where large business interests dictate the price farmers receive for their produce (Lang, 2020).

It was emphasised by participants that farmers are squeezed by high costs and low prices, whereby control of supply chains lies in the hands of retailers and processors. It was also believed that the **interests of producers are disregarded**.

In this context, it was suggested by many agriculture workshop participants that there should be **significant support for local produce and more direct routes to market** (for example, farmers' markets and local farm shops) to encourage shortened supply chains, however, there are geographical and logistical challenges:

"another participant mentioned being near to Durham or Newcastle, to a centre of a population, where you can market produce, but if you are way at the top of the Coquet Valley or the top of the Tees, that distance to the market place is huge."

(livestock farmer)

The location of a farm holding (particularly in relation to urban centres and consequently, potential consumers) therefore impacts the options available to businesses to do things differently. This issue was further supported by a participant outlining the challenges of developing a vegetable or meat box scheme when based in remote rural areas. As another stakeholder stated:

"In terms of resilient, sustainable farming and food systems, there has been a myriad of different things where people have tried to do local food producer groups, and unfortunately many of them have failed, for whatever reason, and I think it is just the whole system from farm to fork, I think it is so difficult without going through the normal processing methods."

(upland farmer)

Current local food systems in the region were often discussed as "under-developed", requiring a coordinated food strategy that recognises their potential to create jobs and support local economies. As stated by a small-scale farmer:

"To be absolutely honest, I think we're quite a way off that [sustainable local food systems]. Partly because we don't have... I don't think there's much discussion about these things, bringing people together around specific topics."

There is also a significant need to address gaps in the physical food system infrastructure in the region. For example, as a small-scale livestock farmer described:

"abattoirs are a classic case in point. The direction of travel with abattoirs is in the wrong direction. In our case, we are now on our fourth abattoir, and we've only been doing this for twelve, thirteen years. We now have to take our sheep to Carlisle, we used to take them to Cockfield in County Durham, before that they went to Westgate in Weardale, and we had a one-off going to Lockerbie in southern Scotland. Northumberland doesn't have an abattoir of its own, there is still one in Whitley Bay but they're not really suitable for producers like ours. And because we don't have our own butchery, I also depend on somebody to do the butchery for me, so the abattoir I go to needs to be linked to the people who do my butchery. So, things like abattoir, butchery, is a thing that is tied into national legislation, [...] it's not just regulation, it's staffing as well, it's not a glamorous job, and when you lose very skilled staff and you cannot replace them, that stops the abattoir working."

In relation to the specific issue of the closure of abattoir facilities in rural areas, it was suggested by some participants that there may be possibilities to **explore the** viability and sustainability of mobile units that are shared by farmers, as recently examined in Scotland (see Menzies et al., 2020), which successfully operate within tight regulatory regimes in European countries, as well as Canada, New Zealand and the United States (James, 2023). It was however stated that establishing a mobile abattoir is a complex undertaking and requires skilled workers (when there are already labour shortages of abattoir vets after Brexit).

The creation of new markets that emphasise the place-based and **cultural properties** of produce to drive value creation at the local level were highlighted as a key part of building successful local and regional food systems and fostering relationships between local consumers and producers:

"Local food systems, getting food into restaurants, into shops, local butchers, that happens to a great extent, but not every butcher buys local. Farmers' markets, giving people a chance to buy into the story, our Northumberland Beef, or whatever it might be, Cheviot Lamb, wherever there is a story to tell."

(farming organisation stakeholder)

It was highlighted that local restaurants and hotels could be incentivised to source local food. Moreover, participants stated that they wanted to see local produce in supermarkets and shops to **increase** accessibility.

This is linked to a broader objective of overcoming rural-urban divides by creating new narratives of 'local food' that are inclusive, meaningful and affordable for citizens — and importantly, avoids "the local trap" which romanticises the local food system at the expense of other larger spatial scales (such as the national). The local trap often assumes that eating local food is more ecologically sustainable and socially just, and treats localisation as an end in itself — however, 'local' is not inherently environmentally better (Born and Purcell, 2006).

b) Promoting a Regional "Food Identity" and Farm Diversification

Support is needed for local food businesses to develop new markets for their products and harness the potential of farm diversification (such as agri-tourism) through place-based branding and experiences. Agri-tourism can generate multiple public as well as private benefits including: increased public awareness of food and farming, supporting rural entrepreneurism, and contributing to the sustainability of local economies through the promotion and sale of locally produced foods (Flanigan et al., 2015). Participants stated that focus on tourism in rural areas, however, must ensure that pressures are not placed on local communities and their infrastructure and services.

Several participants discussed that **the region needs its own "food identity"** tied to its agriculture (local authority stakeholder). While there are various initiatives such as the "Produced in Northumberland" brand that seeks to support local businesses, it was identified these need to be expanded, extended and promoted far more widely — both across the broader region and nation — to reach a diverse audience.

This could be a relatively low-cost programme to champion the value of local produce for economic and social benefits. It would also ensure agricultural communities that are going to be part of the new expanded Combined Authority feel included in local government plans. As a local government stakeholder described:

"there's potential to make it much more about the provenance of Northumberland and local food and how do we make that more accessible locally so farmers can keep more of that profit margin but also local people can access that more affordably." A participant discussed how developing a stronger "food identity" in the region and increasing interest in locally produced food and drink could create significant agritourism opportunities: "there's definitely potential to scale up tourism related to food and drink [...] I think the tourism side is only going to grow, I am talking long-term here 20, 30 years down the line" (farmer). This could capitalise on Northumberland⁴⁸ being named as the number four destination on the 2022 list of "52 Places for a Changed World" that highlights locations around the globe where "travellers can be part of the solution" to key challenges facing society (New York Times, 2022).

As a **farm diversification strategy**, agritourism (see Box 21) can generate multiple public as well as private benefits; including increased public awareness of food and farming, supporting rural entrepreneurism and contributing to the sustainability of local economies through the promotion and sale of locally produced foods, and supporting the implementation of agri-environmental and conservation measures (Flanigan et al., 2015).

However, as an upland farmer stated, this might be "suited to some farms more than others, it may be difficult... particularly if you are out in the sticks... that could be hard". It was also identified that agri-tourism will require better support for farmers and farm households with small farm businesses to develop their marketing and financial planning skills to ensure viability and long-term profitability. This in turn requires comprehensive digital infrastructure in rural areas.

BOX 21: WHAT IS AGRI-TOURISM?

Agri-tourism has a long history in Italy agriturismo – which couples farm stays with the consumption of locallyproduced and sourced food. Currently, agritourism can be found throughout the world with a variety of definitions and practices (Lamie et al., 2021). Broadly, agri-tourism diversifies farmers' income streams beyond the production process of agricultural work, where visitors come to stay on farms and gain insight into farming life and how the food they eat is produced. It can take many forms from camping or 'glamping' to staying in luxury cottages located on the farm, and observing farming demonstrations to active participation in farm tasks.

Focus on tourism in rural areas, however, must ensure that pressures are not placed on local communities and their infrastructure and services. In this context, some participants highlighted that encouraging tourism without sustainability embedded at its centre will counteract efforts to ensure affordable housing and limiting the negative impacts of short-term property rentals such as Airbnb.

c) The Role of Sustainable Public Food Procurement to Support Local Food Systems

There is significant potential to examine the role of sustainable public food procurement as a policy 'lever' to support local food systems and has the potential to help close the health gap between those from the lowest and highest income households (Defra, 2021). In particular, a regional assessment to understand the capability of farmers and other regional food producers to supply local schools, hospitals and other public sector caterers through existing infrastructure and what changes are needed and gaps exist could help to establish the opportunities and challenges to increase local food procurement. Transition towards innovative approaches to sustainable public sector food procurement is dependent on political will, strong

leadership and an infrastructure that balances the economic, social and environmental drivers to effect change (Smith et al., 2016).

Public food procurement impacts 24% of the population in England and is "an important lever to promote a healthy, sustainable food system, to support economic growth, and deliver a broad range of social, environmental, and health benefits" (Defra, 2021).

As outlined in the UK Food Security Report 2021 (Defra, 2021), approximately **2 billion meals are served in public sector settings each year and government spend on food is an estimated £2.4 billion**, which is 5.5% of the UK food service sector turnover. Of the total spend, 29% is in schools, 29% in further and higher education settings, 25% in hospitals and care homes, 11% in the armed forces, 5% in prisons, and 1% in government offices.

Unleashing the potential of public procurement is one of the most powerful tools that local and combined authorities have to stimulate and generate multiple co-benefits (such as supporting sustainable diets, better public health nutrition and local economic development) through the sourcing of food grown locally from smaller businesses that pay the real Living Wage. Moreover, improving public sector food buying standards benefits all and has the potential to help close the health gap between those from the lowest and highest income households (Defra, 2021).

Stakeholders discussed how support for the local economy can be harnessed at scale by encouraging public procurement of high-quality, sustainable local produce⁴⁹. It was suggested by a Procurement Specialist that there is a need for a regional assessment to understand the capability of farmers and other regional food producers to supply local schools, hospitals and other public sector caterers through existing infrastructure (and what changes are needed and gaps exist) to gain an in-depth understanding of regional sourcing and its contribution to sustainability:

"I think it's making those links between your main distributor and your smaller guy who wants to do it, but it would be interesting if somebody did a survey with these people, what do you produce? Would you produce for a local authority? Because you can do creative things in procurement. [...] If we knew what was going on in the area, in the region, you could actually get meat producers, for example to bid for a regional area or two. [...] I think there is a lot you can do."

Where gaps exist in the supply chain, it was stated that there is a requirement to explore the opportunities for setting up cooperatives and new businesses to meet the untapped demand. Crucially, some stakeholders discussed the arbitrary nature of the term 'locally-sourced', which can refer to different spatial scales (such as a local authority area, region or UK-context), and pointed out that this must be reflexively factored into locally-sourced sustainable procurement.

Overall, transition towards innovative approaches to sustainable public sector food procurement is **dependent on political will, strong leadership and an infrastructure that balances the economic, social and environmental drivers to effect change** (Smith et al., 2016).

⁴⁹ There are already successful examples of creative local procurement across England, as demonstrated by the new municipalism of the 'Preston Model' (as pioneered by Preston City Council in Lancashire), where the council has supported local businesses through a procurement policy that prioritises local suppliers.

Recommendation 9: Localised Food Systems — The Combined Authority could nurture the expansion of locally produced food and promote the benefits of local food systems in order to create new economic opportunities and routes to market for farmers via short supply chains and improve community food security. Actions the Combined Authority could consider include:

- 9.1: Invest in Place-based
 Community Food Infrastructure:
 The Combined Authority could
 facilitate the development of direct
 relationships between growers
 and eaters through the creation of
 place-based community food
 infrastructure that reflects local
 context such as community food
 hubs, shortened supply chains,
 and enhancing the role of local
 markets, farmers' markets and small
 food enterprises that are all vital to
 supporting resilient and accessible
 localised food systems.
 - o This could include business rate discounts for empty shops to support individuals or groups of local food producers to sell products within their community (which positively facilitates broader council objectives of regenerating high-streets and town centres).

Potential Delivery Partners: NTCA, NEMCA, local authorities, farming groups and organisations, VCSE sector.

Indicator: COLLABORATE

• 9.2: Regional Processing Infrastructure: The Combined Authority in partnership with local authorities and other stakeholders, could direct investment into the regional infrastructure that supports sustainable food production and primary processing. The lack of local food infrastructure is a key impediment to scaling up and strengthening cityregional food systems. Addressing this could include part-financing infrastructure for food processing (such as regional dairies or abattoirs) and funding the creation of local retail outlets such as food hubs (supporting 'field to fork' initiatives). A key first step could be to commission a technical feasibility

study on improving local processing infrastructure across the region.

Potential Delivery Partners: NTCA, NEMCA, local authorities.

Indicator: COLLABORATE

- 9.3: Regional Food Identity:
 Building on the "Produced in
 Northumberland" brand, the
 Combined Authority along with
 relevant partners could develop
 an advertisement campaign that
 promotes the region's food
 products and culture and links
 with opportunities to support and
 grow food entrepreneurism. This
 has the potential to increase farm
 diversification and job creation in
 rural areas.
 - o Focus could be placed on enrolling well-known local chefs to help promote the regional food campaign.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Food and Drink North East.

Indicator: COLLABORATE

 9.4: Digital Connectivity: The Combined and Local Authorities could continue to work with partners to address the digital divide by improving 4G coverage and highspeed broadband to ensure that all farms in the region are connected to digital infrastructure to support their business development and marketing.

Potential Delivery Partners: NTCA, NEMCA, local authorities.

Indicator: IMPLEMENT

 9.5: Agri-tourism: The Combined Authority in partnership with local councils could examine the possibility to scale-up and expand opportunities for, and the infrastructure required to enable, sustainable 'net zero' agri-tourism through place-based branding and experiences.

Community-based, led and owned sustainable tourism draws upon local knowledge, skills and expertise, whereby residents manage natural and cultural resources, focusing on sustainable outcomes for citizens, enabling community empowerment, generating local economic development, and minimising the environmental impact of the sector.

Potential Delivery Partners: NTCA, NEMCA, local authorities, Food and Drink North East, North East LEP, Visit North East England, Visit Northumberland, Northumberland National Park Authority.

Indicator: COLLABORATE

· 9.6: Sustainable Food

Procurement: Local and Combined Authorities could adopt sustainable public sector food procurement policies and practices that focus on social value and net zero objectives. The Combined Authority can work with SMEs in the supply sector to encourage them to engage more with anchor institution food procurement.

o The Combined Authority, working closely with the North East Procurement Organisation (NEPO), could commission a regional assessment to understand the capability of local farmers and other regional food producers to supply local schools, hospitals and other public sector caterers through existing infrastructure (and identify what changes are needed and gaps exist) to gain an in-depth understanding of regional sourcing and its contribution to sustainability.

Potential Delivery Partners: NTCA, NEMCA, NEPO, local authorities.

Indicator: COLLABORATE

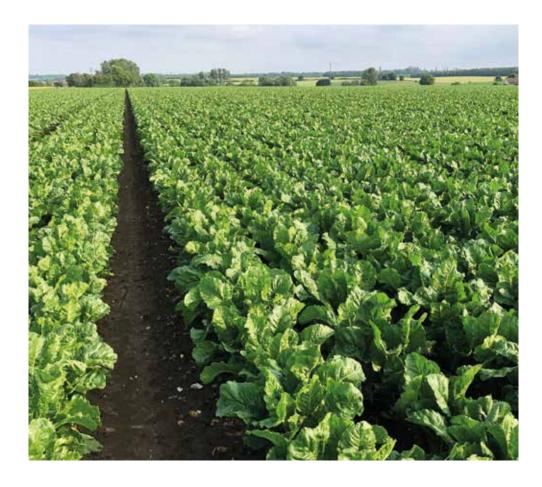
THEME 10. ADDRESS FOOD INSECURITY AND ENVIRONMENTAL SUSTAINABILITY TOGETHER TO ENSURE GOOD FOOD FOR ALL

Summary: Our current diets are one of the key drivers of ill-health - and sustainable, nutritious food is the one of the strongest levers to improve human health and environmental sustainability (EAT-Lancet Commission, 2019). Respecting, protecting and fulfilling the right to food requires taking meaningful action towards eradicating household food insecurity and creating a more sustainable, nature-friendly, inclusive food system that protects the environment, workers and community. Participants discussed there needs to be better connection between campaigns on anti-poverty work, climate change and initiatives on sustainable food systems to support holistic action to address barriers in accessing nutritious food. In particular, stakeholders stated the importance of developing and strengthening community-based infrastructure (i.e., food hubs) as spaces where people can come together to learn about farming

and food, in addition to sharing cooking skills and healthy meals, and learn about how to minimise household food waste. A rights-based food justice framework focuses on the structural causes of poverty and inequality and draws attention to the need to reconfigure the work and welfare system through wider social and economic policy to ensure that everyone has access to food in a dignified and sustainable way. Sharpening focus on sustainable approaches for the region to enhance the capacity to produce food that is climate neutral or positive can develop multiple co-benefits by supporting food security and environmental sustainability.

Key Findings:

- a) Tackling Household Food Insecurity
- b) The Right to Food to Support Food lustice



a) Tackling Household Food Insecurity

Household food insecurity has increased across the region creating significant concern. In March 2023, food inflation in the UK was the highest rate (19.2%) for over 45 years (ONS, 2023). Insecure work and insufficient income are closely tied to household food insecurity, whereby consumption of 'good food' (i.e., nutritious, sustainable and healthy) is often inaccessible to those on low incomes. Child poverty in the North East has also experienced the steepest increase from 2014/5 to 2020/21. more than any other part of the country (End Child Poverty Coalition, 2022). The number of UK households where children are experiencing food insecurity has nearly doubled in the past year (Goudie, 2023), demonstrating the urgency for policy action to ensure that children can access the nutritious food they need.

Increasing household food insecurity⁵⁰ across the region was discussed by several participants as a major issue that highlights the deeply unequal society we currently live in. Crucially, the main drivers of food insecurity in households are economic (specifically, a lack of money). As discussed by a community development worker:

"so, lots of community groups are doing activities around food poverty [...] but it needs higher level intervention, doesn't it? So, policy, living wages, we know what is needed, it's just making that change happen so we don't have children going to school hungry and mams and dads skipping meals."

The North East region has experienced the steepest increase in child poverty, from 26 percent in 2014/15 (just below the UK average) to 38 percent in 2020/21 (the highest rate anywhere in the country) (End Child Poverty Coalition, 2022). Sharp increases in poverty and child poverty in the North East are attributed to a number of factors, including the region consistently having the UK's highest rate of unemployment and a prevalence of low

paid work, with the region having the UK's lowest weekly earnings. As the cost-of-living crisis has taken hold, and poverty figures increase further, several participants outlined that a number of households are experiencing difficulties in meeting food and fuel cost increases.

As a farming stakeholder reflected, consumption of 'good food' is all too often inaccessible to those on low incomes — and more needs to be done to make sure that everyone "has access to nutritious, wholesome food". Similarly, an environmental stakeholder discussed, "if farmers are to be encouraged to grow more sustainable food, then that has to reach everyone, but supermarkets have created a situation of 'cheap' food [...] and lots of ultra-processed foods that aren't great for people's health".

In particular, a workshop participant discussed that there is a need to ensure that the true value of food is accounted for and people's wages are increased (following 15 years of wage stagnation) to ensure that people across the supply chain (and broader society) are paid fairly and can buy 'good food'. This is significant, as explained by a participant, because the proportion of income spent on food is higher for lower income households and consequently they "are disproportionately affected by food price rises". In March 2023, food inflation in the UK was the highest rate (19.2%) for over 45 years – and the latest data on the impact of the cost of food on people has shown that 45% of adults are buying less food when shopping, primarily because of the high cost (ONS, 2023).

Our current diets are one of the key drivers of ill-health — and "food is the single strongest lever to optimize human health and environmental sustainability" (EAT-Lancet Commission, 2019: 5). Several participants pointed to the importance of developing community-based infrastructure such as food hubs and community kitchens as spaces where communities can come together to learn about farming and food, in addition to sharing cooking skills and healthy meals, and learning about how to minimise household food waste.

Indeed, research by the climate action non-governmental organisation Waste and Resources Action Programme (WRAP) shows that we throw away 6.6 million tonnes of household food waste a year in the UK (based on 2018 data), of this, 70% is food that could have been eaten (4.5 million tonnes). The savings associated with the reduction in food that could have been eaten (the 4.5 million tonnes) amount to around 5.3 million tonnes of CO₂e a year (in 2018 compared to 2007) — the same as taking 2.4 million cars off the road for a year (WRAP, 2022). Participants called for awareness about food waste to be improved amongst consumers, and actions to help equip citizens with knowledge and skills to reduce household food waste, which can have co-benefits (i.e., reducing emissions and addressing food poverty).

Despite no comparable estimate for food waste on-farm in the UK (i.e., in relation to primary production), WRAP (2019) has undertaken initial research that has estimated food surplus⁵¹ and waste to be 3.6 million tonnes a year (or 7.2% of all food harvested), equalling a market value of £1.2 billion at farm gate prices. A small proportion of this value is recovered through sales for animal feed. It is highlighted that there is considerable variation between product categories and farmers producing the same product. The findings reinforce the importance of helping farmers measure waste and surplus, gaining more evidence, and prioritising this area for action - through, for example, farmerled approaches to gathering data on food waste.

Several interviewees and workshop participants discussed the role of children's centres in supporting households with integrated assistance on child and family health, parenting, money, training and employment and would like to see the role of Sure Start Centres⁵² be fully restored within local communities and numbers increased. Research found that at their peak, Sure Start Centres prevented 13,000 hospitalisations a year among 11–15-year-olds and delivered long-lasting benefits for children through their teenage years (Cattan and Farquharson, 2021). As a farmer stated:

"There was a tremendous initiative that was launched around 2000 called Sure Start which was about helping parents to be good parents and a lot of it was about cooking wholesome food, rather than buying processed foods from supermarkets."

Recent data by The Food Foundation (Goudie, 2023) has shown that **the number of households where children are experiencing food insecurity has nearly doubled in the past year**, demonstrating the urgent need for policy action to ensure that children can access the nutritious food they need. In January 2023, across the UK, 21.6% of households with children reported that their children had directly experienced food insecurity in the past month, affecting an estimated 3.7 million children. This is compared with 11.6% in January 2022.

Overall, stakeholders said that more could be done to better connect local food production with initiatives and actions to reduce diet-related ill-health and inequality. For instance, several suggestions were put forward by participants, including:

- Ensuring children have access to fresh, locally produced food at school breakfast and after-school clubs.
- Utilising sustainable dynamic public procurement systems to enable local authorities to source seasonal, nutritious food from regional producers to supply schools, hospitals and other public institutions.
- Increasing wages in line with inflation and work to promote good decent work to ensure that everyone can afford to buy good food and feed their families with dignity, rather than the growing reliance on food banks, which were described as a "sticking plaster" that do not address the root causes of food insecurity.

⁵¹ In this context, refers to material that is at risk of becoming waste, but goes instead for redistribution, animal feed, or to become bio-based materials.

⁵² Established in 1999, Sure Start Children's Centres brought together health, parenting support, childcare and parental employment services into a 'one-stop shop' for families with children under 5 years old. At its peak, in 2010, Sure Start received £1.8 billion a year (a third of overall early years spending), but spending has since fallen by more than two-thirds as many centres have been closed, scaled back or integrated into Family Hubs. Official figures show that 1,342 Children's Centres have closed over the last decade (Lepper, 2022).

• Expanding free school meals for children⁵³. Food eaten in schools could contribute as much as 50% of a child's diet in term-time, and for some, a free school lunch is their only main meal of the day (Defra, 2021). The Food Foundation (Goudie, 2023) has highlighted with a recent national poll, there is very strong public support for the Government to take action to help children to eat well, particularly through the expansion of free school meals. For instance, 80% of people now support calls for the Government to expand the provision of free school meals to all children in households receiving Universal Credit. Currently, there are approximately 800,000 children in England who do not qualify for free school meals despite living in poverty.

At the broader national level, it was mentioned by some community stakeholders, the Government should strengthen Universal Credit and increase core benefit levels to ensure that all people can afford nutritious, sustainable food and other essentials such as utilities. As the Joseph Rowntree Foundation (JRF, 2023) has argued, reforming Universal Credit with an 'Essentials Guarantee' would help embed in our social security system the widely held principle that, at a minimum, people must be protected from going without essentials. Their research shows that 90% of lowincome households on Universal Credit are currently going without everyday basics and 66% of the public think the basic rate of Universal Credit is too low (JRF, 2023).

b) The Right to Food to Support Food lustice

It is vital that everyone has access to affordable, nutritious food so that everyone can reach their full potential and live decent, flourishing lives. A rights-based approach can help to support food justice by addressing unfairness throughout the food system and tackling broader inequities to ensure the wellbeing of citizens and the environment is optimised. Central to food justice is empowering people, especially young people and those traditionally marginalised from decisionmaking processes, to not only participate, but to lead in the rights-based food agenda through democratic participatory processes at every governance level.

The UK has already ratified the International Covenant on Economic, Social and Cultural Rights (ICESCR), which enshrines a right to food⁵⁴ within it, but further action is needed to ensure this is realised by everyone living in the UK

At the local level, **Newcastle City Council passed a motion calling for the "right to food"** to be enshrined into domestic legislation (3 March 2021, proposed by Cllr Schofield)⁵⁵. As a participant discussed: "back in 2021, Newcastle signed-up to be a 'Right to Food City', I'm not sure what's actually happened since, but there could be loads done off the back of that" (local food campaigner). Moreover, trade unions have also supported the right to food campaign⁵⁶. In particular, the Bakers, Food and Allied Workers Union (BFAWU) (2021: 13) concluded that:

"The time is right for the right to food to be enshrined in law, to make food truly accessible, affordable, healthy, safe to eat and fairly produced by well-paid and protected staff throughout the food sector."

⁵³ For instance, there are opportunities to follow the lead of local authorities such as Tower Hamlets Council (2023) that have become the first in England to introduce universal free school meals for secondary school students up to the age of 16.

⁵⁴ The UK Government is legally required under international human rights law to secure the right to adequate food for everyone in the UK (Just Fair, 2014)

⁵⁵ See: https://www.sustainweb.org/news/mar21-newcastle-right-to-food-city/ - Durham has also signed-up to the right to food campaign.

⁵⁶ For example, see Unite the Union at https://www.unitetheunion.org/campaigns/right-to-food-campaign/ and BFAWU (2021)
The Right to Food: A Law Needed by Food Workers and Communities across the UK.

The right to food links both ends of the food system, that is — food production and food consumption. It intersects land and workers' rights and demands that farm workers are valued for the vital work that they do and need to receive fair reward for their produce, with a fairer distribution of profit throughout the supply chain, ensuring a fair deal for all those working across the food system. It also starts from the position that everyone should have access to affordable, sustainable and culturally-appropriate food (Alkon and Agyeman, 2011).

As a local food campaigner pointed out, there is a need to build and support worker and community coalitions and **solidarity across the agri-food system** and "encourage collective action to help a fair transition" by addressing the root causes of persistent inequalities related to food production and consumption.

As a trade union representative discussed, greater focus is needed on the quality and conditions of work throughout the food system:

"We need a food system that provides skilled, long-term employment, and supports factories to reduce their footprint, while explaining how reducing energy usage in the workplace actually helps them and their family in the community. Educating people about the food system, people need to have an understanding of where their food comes from and how it is produced. [...] We need to look at the food system in its entirety, the insecurities and vulnerabilities created, what its impacts are on health and the environment. We need a full picture to be able to work towards higher rates of pay and also influence government policy. [...] The food sector is very profitable; we just need that to be shared with food workers."

Applying a justice lens to agri-food systems helps to focus attention on structural inequities and unfairness throughout the food system and points to how to address fundamental and interconnected challenges and injustice (Coulson and Milbourne, 2022) — from the degradation and loss of soil, struggling farmers and decreasing livelihoods, the prevalence of unhealthy food that causes non-communicable diseases (such as obesity and type 2 diabetes), and rising food poverty.

Central to food justice is **empowering people**, especially young people and those traditionally marginalised from decision-making processes, to not only participate, but to lead in the rights-based food agenda through democratic participatory processes at every governance level. The Combined Authority can therefore commit to supporting the fundamental right to food in their work and support participatory mechanisms to engage citizens on the topic of food justice, what it means to them, and what actions can be taken to support an inclusive and fair food system.

For instance, this could include working closely with citizen groups and community-led food partnerships such as Nourish Northumberland, which is working collaboratively to make sure everyone in Northumberland can access safe, healthy and affordable food — and has highlighted the importance of putting "the universal right to food at the centre of a transformative food approach for Northumberland"⁵⁷.

Recommendation 10: Access to
Good Food for All — The Combined
Authority could promote and co-develop
strategies and support action to ensure
that everyone can access affordable,
sustainably produced, nutritious food.
Actions the Combined Authority could
consider include:

· 10.1: Tackling Community Food **Insecurity:** The Combined Authority can continue to support and fund grassroots, community-based projects and initiatives (i.e., community hubs and community kitchens) that take progressive steps to eradicate hunger, poverty and food waste, as well as improve people's skills and knowledge in relation to growing, preparing and cooking healthy food to encourage sustainable diets. Communities can be empowered with funding, advice and support to develop grassroots place-based community-led initiatives that respond to the specific needs of their areas.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, community hubs, food movements, climate change and environmental organisations, citizen groups, antipoverty campaigners.

Indicator: IMPLEMENT

· 10.2: Integrated Anti-Poverty and Climate Change 'Sustainable Food Campaigns': The Combined Authority could ensure that all anti-poverty work is better coordinated with campaigns on climate change and sustainable food systems under a framework of food justice that recognises the multiple interconnected dimensions that impede a fair food system. A cross-departmental holistic approach and multi-sector action to policy development can help improve human health, environmental sustainability and tackle (food) poverty by ensuring an integrated approach.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, community hubs, food movements, climate change and environmental organisations, citizen groups, antipoverty campaigners.

Indicator: IMPLEMENT

- 10.3: Strengthening Food
 Citizenship: The Combined
 Authority could provide diverse
 participatory opportunities and
 inclusive governance mechanisms
 to support citizens shape actions and
 policy that address issues of public
 health and food, farming and the
 environment.
- o Our current diets are one of the key drivers of ill-health (EAT-Lancet Commission, 2019) and the multiple health crises (i.e., obesity) that face the region and broader UK require coordinated actions and campaigns to deliver improvements in health, wellbeing and environmental sustainability. Engaging citizens on these topics in a meaningful way to develop place-based, evidenced policy and actions is crucial to address the multiple inequities that permeates the food system. This can also help to strengthen 'food citizenship' whereby people view themselves as active 'food citizens' that come together to collectively shape the local food system to generate positive outcomes for their families and communities, rather than as passive individual 'consumers'.
- o The innovative NTCA Wellbeing Framework could be applied to food policy at the regional level to help shape the work of the Combined Authority to support healthy diets from sustainable food systems⁵⁸ and improve citizen wellbeing.

Potential Delivery Partners:

NTCA, NEMCA, local authorities, community hubs, food movements, climate change and environmental organisations, citizen groups, antipoverty campaigners.

Indicator: IMPLEMENT

⁵⁸ A 'healthy diet' should optimize health, defined broadly as being a state of complete physical, mental and social well-being and not merely the absence of disease (EAT-Lancet Commission, 2019). Scientific targets for healthy diets are based on the extensive literature on foods, dietary patterns and health outcomes.

- 10.4: Good Food For All Region:
 Following the motion by Newcastle City Council calling for the "right to food" to be enshrined into domestic legislation, local authorities and the Combined Authority could commit to supporting the fundamental right to food in their work.
 - o The Combined Authority could consider running **participative food justice workshops**, as undertaken by Nourish Scotland⁵⁹, which explored what a rightsbased approach can offer citizens, organisations and governments in relation to addressing food system issues.
- o It could also advocate to the UK Government to ask that the right to food be enshrined into parliamentary law to provide a coherent national framework, so that local and regional government can develop place-based policies and programmes that ensure no one is denied access to nutritious, sustainably produced food.

Potential Delivery Partners: NTCA, NEMCA, local authorities, national Government.

Indicator: IMPLEMENT



THEME 11. DEVELOP A REGIONAL, PLACE-BASED SUSTAINABLE FOOD SYSTEMS STRATEGY AND ACTION PLAN FOR THE NORTH EAST

Summary: In order to support policy transformation and the implementation of a resilient and sustainable regional food system, the Combined Authority and partnership local authorities can develop a coherent regional food governance framework and strategy in collaboration with other actors. This strategic food system approach requires a multi-level and cross-sectoral approach that reflects the region's unique characteristics, challenges and opportunities. In particular, stakeholders stressed the need for greater focus to be placed on broader regional governance and infrastructure that supports meaningful rural-urban linkages with specific attention on rural economic

development for rural producers and communities. The Combined Authority could take the lead to empower local communities to co-design regional food policy and drive food system transition to more equitable, fairer and sustainable relations and practices both within the region and beyond.

Key Findings:

- a) Sustainable Food and Farming Policy Remains Overlooked at the Regional Level
- b) Prioritise Food Citizenship and Empower Workers and Communities to Support Just Food System Transformation

a) Sustainable Food and Farming Policy Remains Overlooked at the Regional Level

In the North East region, Newcastle, Durham and Middlesborough have been creative innovators developing crosssector Local Food Partnerships. There is, however, currently no coordinated regional food system strategy and action plan for the North East of England to drive a just and sustainable food transition. Given the interconnected challenges facing the food and farming

system, a holistic approach to food policy that moves beyond sectoral silos and inter-regional administrative boundaries has never been more urgent to overcome 'policy disconnects' across the complexity of food systems (Parsons, 2021) and act as a first step towards the development of integrated policies that empower communities to shape food system transformation.

As highlighted by research, food has often been a traditionally overlooked area of urbanfocused policy; however, it links with a wide range of key policy areas such as climate change, transport, procurement, and health and wellbeing (Sonnino, 2016; Coulson and Sonnino, 2019). Moreover, food systems play a critical role in achieving numerous United Nations Sustainable Development Goals (UN SDGs), including Zero Hunger (SDG 2), Good Health and Wellbeing (SDG 3), Decent Work and Economic Growth (SDG 8), Responsible Consumption and Production (SDG 12) and Climate Action (SDG 13)⁶⁰.

Comprehensive sustainable food policy is also largely absent at the UK national level⁶¹ and frequently ignored at the local level. But the interconnected and complex nature of food-related issues such as diet-related ill-health, food poverty, food waste and the declining quality of farming livelihoods means that a systemic approach to food policy that moves beyond sectoral silos has never been more urgent. As a workshop participant who has been involved with developing local food policy discussed:

⁵⁹ See: https://www.nourishscotland.org/projects/food-justice-workshops/

⁶⁰ See: https://sdgs.un.org/goals for a full list of the 17 UN SDGs.

⁶¹ The lukewarm response by the current UK Government to the National Food Strategy Independent Review (Dimbleby, 2021) highlights the lack of government interest in adopting an integrated food system approach to national food and farming policy in England. This is in contrast to the Scottish Government's long-term commitment to becoming a 'Good Food Nation'.

"food policy should be at the centre of policy-making - and it **never is**, it's always at the outside, but it impacts everything. So actually, it should be right at the centre. So doing something like that at least draws attention to it. My experience is that people learnt through the process. We did loads of consultations with all different sectors. Things are changing and people are starting to realise the impact of food on their area of work be it in health or climate, or whatever, it's just so central to so many things, but it gets side-lined all the time." (smallholder)

As Parsons (2021) has argued, a fragmented approach to policymaking in relation to food in England creates 'policy disconnects' - situations of 'redundancy' (i.e., duplication, or unnecessary activity) because of overlapping responsibilities, or gaps where potentially constructive links appear to be missing — across a range of policy areas from climate change and land use to trade. Crucially, Parsons (2021) argues that there needs to be recognition that while some policy disconnects are logistical, some arise from ideological or political differences, which require open acknowledgement and continuous negotiation.

The research for this report highlighted that there is an overwhelming feeling that the food system is still not well understood or prioritised by sub-national (i.e., local) policy and is often taken for granted, with no strategic plan to increase the sustainability, inclusivity and fairness of the food system at the regional level. There also is currently no regional food system strategy and action plan for the North East of

This can be addressed by convening a region-wide consultation on adopting a 'food system approach' (i.e., there is a focus on diverse food issues together such as agriculture, nutrition and local economic development) to embed food more firmly

in the civic remit at the local and combined authority level. This would also involve

England to drive a just food transition.

mapping existing local food systems and identifying key areas that can be supported, such as those identified in this research, for example, climate-friendly farming, sustainable food procurement and tackling food poverty.

Moreover, charting what gaps exist in regional food infrastructure that currently impede the development of sustainable food systems and outlining what actions can be taken to improve the situation to maximise the benefits of locally produced and processed food, were discussed by stakeholders as important tasks that must be completed to support a just and inclusive sustainable food transition.

b) Prioritise Food Citizenship and Empower Workers and Communities to Support Just Food System Transformation

Developing new regionally-oriented mechanisms that facilitate effective social dialogue, co-designed strategies and collective implementation of a 'localised' approach to just food systems transition can empower workers and communities and increase food citizenship. The Combined Authority can coordinate the development of a cross-sector Regional Food Partnership (or Food Policy Council) that brings together policymakers, farmers, growers, businesses, civil society, trade unions, industry bodies, academia and other actors at the regional level to enable better cooperation on food-related issues and adopt a holistic, place-based and systems approach to support just and inclusive sustainable food and farming transformation.

Policymakers have a key role to play in co-creating new regionally-oriented mechanisms and bodies that facilitate effective social dialogue, co-designed strategies and collective implementation of a 'localised' approach to just food systems transition. As a small-scale farmer described, facilitating dialogue between (food) policymakers and rural producers and building trust amongst actors in the food system is vital:

"...we haven't done much in the way of getting people together to talk about these things in some detail, and to persuade farmers in particular, but other people in the food systems world do work together, they need to trust each other and they need to be together in one place to explore ideas. So, as a first step, investment, facilitation, support for those sorts of things are needed... certainly coming at it from a farming point of view, owned by people in farming, I think it is really important, but with a very specific focus on localising food systems and not being hung up about selling all your beef to Marks and Spencer or things like that."

As a smallholder reflected upon in an agricultural workshop, rural farmers and stakeholders "can often be left out of urban food policy discussions" given that it is primarily cities that are enacting food strategies, particularly in the UK. As stated by another farming participant, greater focus can be placed on broader regional governance and infrastructure that supports meaningful rural-urban linkages with a specific focus on rural economic development.

A place-based approach to regional food system policy and practice grounded in inclusivity and justice is needed to avoid reinforcing existing inequalities and creating new ones. By placing farmers at the centre of regional policy enables focus to be located on the challenges and opportunities facing agriculture and food production, while also recognising that whole food system change is required to address the many problems that leave farmers without

a fair deal for their labour and produce, especially given the concentrated power that permeates the retail environment (Lang, 2020).

There is now a significant global movement of city and city-regional food policy partnerships that are leading the way in developing sustainable food systems through innovative and inclusive place-based governance to stimulate transformative food agendas at the municipal level (see Box 22). Indeed, there has been a proliferation of cross-sectoral, collaborative food governance mechanisms across the world, where a growing number of cities and city-regions are developing multi-stakeholder food systems governance platforms such as Food Policy Councils (FPCs), Food Partnerships and Food Coalitions.

BOX 22: THE MILAN URBAN FOOD POLICY PACT (MUFPP)

The Milan Urban Food Policy Pact (MUFPP) was launched in 2015 and was led by the Mayor of Milan, who worked with a group of 46 cities to agree on its content. The MUFPP is the first international protocol through which city leaders agreed to develop sustainable food systems. It has been signed by over 250 cities across the world. A key feature of the MUFPP members is proactive government leadership and political bravery to develop cooperative, multi-sector food partnerships to take a holistic approach to tackling the climate, nature and food crises. In the UK, Brighton & Hove, London, Bristol, Birmingham, Greater Manchester and Glasgow are signatories. For more information see: https://www. milanurbanfoodpolicypact.org

Across the North East of England,
Newcastle (Food Newcastle),
County Durham (Food Durham) and
Middlesbrough (Middlesbrough
Food Partnership) are members of the
Sustainable Food Places Network (SFPN)62
and have already developed local food
partnerships for their areas. County Durham
is particularly notable because it took a
broader 'county-wide approach' moving
beyond the prevalent 'urban' focus (seen
across many SFPN localities) recognising
its significant rural character and farming
community.

However, this is an ad hoc development — often based on strong local political leadership and/or the presence of key 'food champions' in particular areas that drive co-ordinated local action — which means that there is uneven coverage, resulting in large areas of the North East of England that currently do not have a 'local food partnership'.

All local authority areas can **develop a Local Food Partnership** to collectively produce food strategies (i.e., local food policies, food charters) and deliver solutions to climate change and food embedded in their place-based context. Several participants discussed the possibility of Northumberland⁶³ in particular in developing a holistic local food and farming strategy given the importance of the sector to the region, as a farming stakeholder outlined:

"Northumberland as a county — with some of the landscapes it's got and farming, it should have been one of the top priorities the last 10-15 years, it's good that they are talking about it now, but that is one of the main resources they have, so it would be good to see it as a target priority in the area, for the regional economy".

Starting with a holistic view of the food system can help policy-makers carefully consider the diverse policy instruments and action that would be appropriate for their locale to reconfigure food systems to deliver a range of positive co-benefits (i.e., job creation, local food security, biodiversity conservation, climate change adaptation and mitigation etc.) and manage possible emerging trade-offs through the development of well-planned transition pathways, monitoring of key indicators and the implementation of targets at the local level

A key part of this could be to instate a Food Systems Officer with the necessary expertise and knowledge within each council to coordinate and lead local authority activity related to food and farming. This role could support capacity building and strengthen capabilities of citizens, workers, businesses and organisations to work collaboratively for just food system transformation.

Recent analysis by Sustain (2022) found that food and farming are missing from nearly two-thirds of council climate and biodiversity strategies. It was also revealed that councils with a Sustainable Food Partnership scored 11% higher on average within their assessment of local authority nature, climate and food strategies. The only local authority in the broader North East region found to have more 'developed and measurable plans on food and climate change' was Middlesbrough Borough Council⁶³. Therefore, there is significant room to develop the transformative capacity of local authority actors and institutions to support a just low carbon food transition. All local authority climate change and biodiversity strategies should therefore holistically consider food and farming systems – and local food partnerships can help formulate and embed measurable actionable plans on integrated food systems and climate change.

⁶² The Future of Farming Northumberland Inquiry Report (NCC and NU, 2022) also suggested the county council: "Coordinates the development and delivery of a Northumberland Food Strategy; that will build on the existing "Produced in Northumberland" brand, and champion the value of local produce to further economic growth and reducing ill-health and inequality".

⁶³ Northumberland was assessed as 'inadequate' despite having a significant farming base in the local authority area. This highlights the opportunities for the area to now embed food and farming into their climate and biodiversity strategies — and create a local food partnership and strategy. See the interactive map: https://www.foodfortheplanet.org.uk/every-mouthful-counts/?theme=5&area=E06000057

The Combined Authority can take inspiration from innovative policy and local partnership developments to ensure that the region is at the forefront of food governance collaboration and development, and therefore does not get left behind as other areas of the country continue to innovate and cooperate to facilitate an enabling environment for effective regional food system action and transformation. As a workshop participant described, there have been some early attempts to undertake a more collaborative regional approach to food strategies:

"I set up and ran Food Durham, and started to talk to Food Newcastle and Middlesborough on doing more on a regional basis but never really took off. The context has changed and the motivation might be higher with the Combined Authority and new mayor and hopefully that will take off." (smallholder)

Several participants outlined that the regional level of the Combined Authority is an appropriate scale to create a small Food Systems Team with Food Policy Officers because it has a parameter of action that is greater than a single local authority. Therefore, it is able to collaborate and coordinate action across the regional food system to tackle mutual concerns (such as reducing ill-health in the face of an ongoing public health crisis, particularly of non-communicable diseases, such as obesity) and growing food insecurity.

The Combined Authority therefore can consider establishing a dedicated, permanent small **Food Systems Team** consisting of, for example, Food Policy Officers and Sustainable Food Systems Advisors to work across the multiple thematic priorities that intersect with the food system (such as climate change, inclusive economy, rural prosperity) and develop collaborative connections across departments to deliver the transformative changes needed to support a more sustainable and just food system.

The NTCA (and any future expanded version of the Combined Authority) can take bold leadership on food and environmental action. It can **coordinate** the development of a cross-sector Regional Food Partnership (or Food Policy Council) that brings together policymakers, farmers, businesses, civil society, academia and other actors at the regional level to enable better cooperation on foodrelated issues and adopt a holistic, placebased and systems approach to support just and inclusive sustainable food and farming transformation. This could be a **key** element of the recently established Net Zero North East England partnership to "drive forward a greener, fairer and more sustainable region", given that agriculture, food and land use is one of their eight priority areas⁶⁴.

One central task could be to prioritise the consultation, development and implementation of a **Food and Farming Strategy for the region** that provides an integrated framework for local policy and decision-making. The newly established Regional Food Partnership's role can be to coordinate, develop and deliver a regional Food Strategy and Action Plan to support effective just food system governance and active food citizenship⁶⁵. Indeed, community participation and empowerment in food policy-making is vital for transformative change towards sustainable, healthy and more just food systems.

⁶⁴ See: https://www.netzeronortheastengland.co.uk/agriculture-land-use-and-food

⁶⁵ Food citizenship is based on understanding people as citizens rather than just 'consumers' in relation to the food system – a "food citizen is someone who wants to, can and does shape the food system for the better and encourages others to do the same" (New Citizenship Project and Food Ethics Council, 2017: 39).

Recommendation 11: A Regional
Food and Farming Strategy — The
Combined Authority could collaboratively
develop a holistic regional place-based
sustainable food systems strategy and
action plan for the North East region to
support a just transition for agriculture
and food. It can take bold leadership on
food and environmental action so that
no one is left behind in the low-carbon
policy transition and stronger forms of
collaboration between actors, sectors
and governance scales emerge. Actions
the Combined Authority could consider
include:

· 11.1: Increase Food System Expertise within Local/Regional Government: The Combined Authority can establish a dedicated, permanent small Food Systems **Team** consisting of, for example, Food Policy Officers and Sustainable Food Systems Advisors to work across the multiple thematic priorities that intersect with the food system (such as climate change, inclusive economy, rural prosperity etc.) and develop collaborative connections across departments to deliver the transformative changes needed to support a more sustainable and just food system. This is important because it was highlighted by participants that food system expertise within local government contexts in the North East region could be strengthened.

Potential Delivery Partners: NTCA, NEMCA.

Indicator: IMPLEMENT

11.2: Regional Food Partnership:
 The NTCA (and any future expanded version of the Combined Authority) could coordinate the development of a cross-sector Regional Food Partnership (or Food Policy Council) that brings together policymakers, farmers, growers, businesses, civil society, trade unions, industry bodies, academia and other actors at the regional level to enable better cooperation on food-related issues. This governance mechanism

would adopt a holistic, place-based and integrated systems approach to support just and inclusive sustainable food and farming transformation.

o This could be a key element of the Net Zero North East England partnership to drive forward a greener, fairer and more sustainable region in relation to its 'agriculture, food and land use' priority area.

Potential Delivery Partners: NTCA, NEMCA, local authorities, North East Local Food Partnerships (i.e., Food Newcastle, Food Durham), Net Zero North East England.

Indicator: IMPLEMENT

 11.3: Food and Farming **Strategy:** The Combined Authority could prioritise the consultation, development and implementation of a Food and Farming Strategy and Action Plan for the region⁶⁶ that provides an integrated framework for effective local policy and decisionmaking. A cross-sector Regional Food Partnership (see 11.2) could coordinate, develop and deliver the Strategy and Action Plan to support just and inclusive food system governance, and encourage active food citizenship amongst residents across the North East. The Strategy and Action Plan would help build an evidence base for the regional food system, with measurable indicators to demonstrate the changes implemented and, importantly, if they deliver better outcomes over different timescales.

Potential Delivery Partners: NTCA, NEMCA, local authorities, North East Local Food Partnerships (i.e., Food Newcastle, Food Durham), Net Zero North East England.

Indicator: IMPLEMENT

⁶⁶ Northumberland County Council have identified the first wave of projects that followed from the Northumberland Stewardship and Rural Growth Investment Plan. One of which is the development of a Northumberland Food Strategy and Action Plan and will look at the entire food chain, from field to fork, See: https://northumberland.moderngov.co.uk/documents/g2248/Public%20reports%20pack%2011th-Jul-2023%2010.00%20Cabinet.pdf?T=10 (page 39, section 38). This commitment could easily be expanded across the broader geographical NEMCA region.

Additional recommendations for key partners:

- All local authority areas could develop a collaborative Local Food Partnership to collectively produce food strategies (i.e., local food policies, food charters, and action plans) to help deliver solutions to climate change and food systems embedded in their place-based context to help them reach their net zero targets.
 - o A key part of this could be to instate a Food Systems Officer with the necessary expertise and knowledge within each local council to coordinate and lead local authority activity related to food and farming. This role can support coalition building and strengthen the capabilities of citizens, workers, businesses and organisations to work collaboratively for just food system transformation.

Potential Delivery Partners:

Local authorities, NTCA, NEMCA, Sustainable Food Places Network (SFPN).

Indicator: INFLUENCE

- All local authority climate change and biodiversity strategies should holistically consider food and farming systems.
 - o The development of local food partnerships could help formulate and embed measurable actionable plans on integrated food systems and climate change, which are sensitive to local context.

Potential Delivery Partners: Local authorities.

Indicator: INFLUENCE



SUMMARY

In conclusion, the research findings demonstrated the importance of focusing on farming and broader food systems to support a just low-carbon transition for the region. While national government has a critical fundamental role in creating a clear, coherent policy framework to ensure a fair and inclusive agroecological transition to addressing multiple interconnected crises (i.e., from climate change and biodiversity loss to public health and inequality) — local and regional planning, support, actions and facilitation will become increasingly vital to ensure effective, coordinated delivery of "public money for public goods". The Combined Authority can lead the way by implementing policies and actions to support farmers, regenerate nature and ensure affordable, nutritious food is available for all.

Agriculture is often side-lined in broader "just transition" discussions; however, a fair and inclusive transition cannot be accomplished without decarbonising the sector and supporting farmers, farm workers and land managers adopt sustainable practices to mitigate and adapt to climate change. Our research demonstrates the importance of placing agriculture on equal footing with other sectors such as energy, transport and construction when it comes to implementing and actively supporting low carbon sustainable transitions for a more comprehensive take on just transition.

The exit from the EU CAP was and still is an opportunity to reconfigure agricultural policy that is more supportive of the rural communities in which agriculture takes place and embed just and inclusive sustainability at its core. The composition and direction of the post-Brexit agricultural policy transition is now highly dependent on clear national government steer and appropriate frameworks and regulations, but the success of enabling a revitalised, multifunctional farming sector will depend on local delivery. Therefore, local and regional planning, support, actions and facilitation will become increasingly vital to ensure effective, coordinated delivery of "public money for public goods".

Shifting farming systems to lower carbon models that address climate change, restore nature biodiversity and ensure food security is **challenging and highly prone to disagreements** because it encompasses a range of issues from farmer livelihoods and occupational identity, land ownership and management, rural wellbeing and socio-cultural values of 'eating well' and dietary change. In particular, the low carbon transition will be **complex for farmers and farm workers** because of the many existing injustices and "policy disconnects"

or incoherencies that permeate the food system (Parsons, 2021). However, supporting a **just transition in agriculture** will mean that workers and communities that might otherwise resist climate action can become powerful **advocates for change**.

The Combined Authority therefore has a central role via regional governance frameworks to support and nurture the collective political will and capacity, capabilities and resilience of all parties with a stake in the future of food and farming. Drawing upon the evidence highlighted in this report that a 'just agricultural transition' is constantly evolving and prone to different interpretations based on different perceptions of what is 'just' - a key job for policymakers is to minimise the disruption as much as possible for workers and **communities** and support farmers through a smooth sustainability transition. This includes avoiding job losses and retraining those employed in the sector for lowcarbon, highly-skilled, well-paid agricultural

Moreover, it has a critical responsibility to empower citizens as co-creators of transformative holistic local and regional food system policies that link localised delivery measures to national environmental and carbon targets and food security issues. It is hoped this report provides comprehensive evidence and examples as a first step to drive further dialogue and action towards a fair and inclusive transition for agriculture across the region.

Based on a review of academic and policy material and findings that emerged from the participatory workshops and stakeholder interviews, the overarching key recommendations can be summarised as:

01

Recommendation 1: Address Uncertainty in a Complex Policy Landscape — The transition to a post-Brexit agricultural policy landscape has created significant concern for the farming community across the region, particularly in relation to financial viability. The Combined Authority could help address this uncertainty through collaboratively establishing clear strategies and targeted interventions with relevant partners to support farm businesses in the North East that may be vulnerable to the low-carbon agricultural transition (e.g., high-carbon, high-input subsectors such as intensive livestock agriculture).

02

Recommendation 2: Support a Just and Sustainable
Transition for Farmers, Farm Workers and Farming
Communities — The Combined Authority could support those
working in the farming sector on their journey to net zero through
the low-carbon transition to adopt more sustainable farming
practices. Specifically, the Combined Authority could examine
opportunities to co-design comprehensive fully-funded holistic
business support packages for farmers, in order to increase
resilience and sustainability at the farm-level.

03

Recommendation 3: A Place-Based Multifunctional Approach to Land Management — The Combined Authority could adopt a place-based multifunctional approach to land that balances land-based objectives and supports farmers to deliver multiple functions (i.e., nature restoration, food production and carbon sequestration) that are sensitive to local context and land characteristics.

04

Recommendation 4: A Flourishing Tenanted Sector — The Combined Authority could help support a thriving tenanted farming sector through the rollout of new post-Brexit agrienvironmental schemes and ensure that tenant voices are heard and actioned upon by local government.

05

Recommendation 5: Worker and Community Wellbeing -

The Combined Authority could collaborate with partners to help promote, roll-out and pilot mental health and wellbeing support for the farming and broader rural community, ensuring that mental health services are co-designed by farmers for farmers to ensure they are appropriate, relevant and accessible.

06

Recommendation 6: Education, Skills and Training -

The Combined Authority could support accessible, flexible opportunities for new entrants to learn agricultural and sustainable land-based skills in the region and help upskill existing workers by encouraging peer-to-peer learning and knowledge exchange.

07

Recommendation 7: Access to Land — The Combined Authority could facilitate access to, and collective ownership of, land by taking a progressive and facilitative role to support citizens gain access to appropriate land for sustainable food production. They could also help citizens access land to develop collaborative experimental farms to drive innovation that can inform a just transition for farming.

08

Recommendation 8: Agroecological Farming Practices and Collective Enterprises — The Combined Authority could support and encourage collective and community-focused agroecological initiatives to produce nutritious, sustainable food for their local communities and deliver diverse co-benefits.

09

Recommendation 9: Localised Food Systems — The Combined Authority could nurture the expansion of locally produced food and promote the benefits of local food systems in order to create new economic opportunities and routes to market for farmers via short supply chains and improve community food security.

10

Recommendation 10: Access to Good Food for All – The Combined Authority could promote and co-develop strategies and support action to ensure that everyone can access affordable, sustainably produced, nutritious food.

11

Recommendation 11: A Regional Food and Farming

Strategy – The Combined Authority could collaboratively develop a holistic regional place-based sustainable food systems strategy and action plan for the North East region to support a just transition for agriculture and food. It can take bold leadership on food and environmental action so that no one is left behind in the low-carbon policy transition and stronger forms of collaboration between actors, sectors and governance scales emerge.

The overall suggestion underpinning the successful delivery of recommendations 1 to 11 is to **take bold leadership and prioritise collaboration**. It is crucial to expand existing programmes and develop new innovative initiatives that take a holistic food systems approach to mitigate the negative impacts of the agricultural transition and amplify the positive opportunities (outlined in this report) that supporting a fair, inclusive and sustainable transition for farming and the broader rural economy can create for the North East region.

LIST OF ABBREVIATIONS

BFAWU	Bakers, Food and Allied Workers Union
BPS	Basic Payment Scheme
CAP	Common Agricultural Policy
ССС	Climate Change Committee
CH₄	Methane
CLTs	Community Land Trusts
CO ₂	Carbon dioxide
CPRE	Campaign to Protect Rural England
CS	Countryside Stewardship
CSA	Community-Supported Agriculture
Defra	Department for Environment, Food & Rural Affairs
ELC	Ecological Land Cooperative
ELMs	Environmental Land Management schemes
EU	European Union
FBI	Farm Business Income
FBTs	Farm Business Tenancies
FONE	Farming Opportunities for New Entrants
FPC	Food Policy Councils
GHG	Greenhouse Gas
GPS	Global Positioning System
На	Hectares
HLS	Higher Level Stewardship
JIT	Just-in-time
JRF	Joseph Rowntree Foundation
LEAF	Linking Environment and Farming

LFA	Less Favoured Area
LWA	Land Workers' Alliance
MUFPP	Milan Urban Food Policy Pact
N ₂ O	Nitrous oxide
NCC	Northumberland County Council
NE LEP	North East Local Enterprise Partnership
NEMCA	North East Mayoral Combined Authority
NFU	National Farmers' Union
NHS	National Health Service
NTCA	North of Tyne Combined Authority
NU	Newcastle University
R&D	Research and Development
RABI	Royal Agricultural Benevolent Institution
SFI	Sustainable Farming Incentive
SFPN	Sustainable Food Places Network
SME	Small and Medium-sized Enterprise
TFA	Tenant Farmers' Association
TIAH	The Institute for Agriculture and Horticulture
UK	United Kingdom
UTASS	Upper Teesdale Agricultural Support Services

REFERENCES

Agriculture Act (2020) United Kingdom. Retrieved from:

https://www.legislation.gov.uk/ukpga/2020/21/contents [Accessed: 31 March 2023].

Alkon, A.H., and J. Agyeman (eds.) (2011) Cultivating Food Justice: Race, Class, and Sustainability. Cambridge, MA: MIT Press.

BFAWU (2021) The Right to Food: A Law Needed by Food Workers and Communities Across the UK. Available at:

https://drive.google.com/file/d/1h_FU55hhDyVrCiocEsoJDklb1DYvqAkM/view [Accessed: 17 May 2023].

BFAWU (2023) Food workers on the Breadline: The Impact of the Cost of Living Crisis on BFAWU Members. Available at: https://www.bfawu.org/foodworkers-on-the-breadline/[Accessed: 17 May 2023].

Bhatia, G. and Katakam, A. (2021) Tractors to Delhi: How Thousands of Farmers Marched on Indian Capital. Reuters [online], 29 January 2021. Available at: https://www.reuters.com/world/india/tractors-delhi-how-thousands-farmers-marched-indian-capital-2021-01-29/ [Accessed: 15 October 2022].

Born, B. and Purcell, M. (2006) Avoiding the Local Trap: Scale and Food Systems in Planning Research. Journal of Planning Education and Research. 26(2): 195-207.

Brotherton, P. (2023) State of Nature https://naturalengland.blog.gov.uk/2023/09/29/state-of-nature/ [Accessed: 6 October 2023].

Burns, F., Mordue, S., al Fulaij, N., Boersch-Supan, P.H., Boswell, J., et al. (2023) State of Nature 2023. The State of Nature Partnership. Available at: www.stateofnature.org.uk [Accessed: 11 October 2023].

Cattan, S. and Farquharson, C. (2021) At their peak, Sure Start centres prevented 13,000 hospitalisations a year among 11- to 15-year-olds. Institute for Fiscal Studies. Available at: https://ifs.org.uk/news/their-peak-sure-start-centres-prevented-13000-hospitalisations-year-among-11-15-year-olds [Accessed 16 August 2022].

CCC (Climate Change Committee) (2020) Land Use: Policies for a Net Zero UK. Available at: https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/[Accessed: 15 April 2023].

CCC (2022) CCC Monitoring Framework: Assessing UK Progress in Reducing Emissions. Progress Report. Chapter 7: Agriculture and Land Use. Available at: https://www.theccc.org.uk/publication/ccc-monitoring-framework/ [Accessed: 30 January 2023].

CCC (2023) A Net Zero Workforce. Available at: https://www.theccc.org.uk/wp-content/uploads/2023/05/CCC-A-Net-Zero-Workforce-Web.pdf [Accessed: June 2023].

Chiarello, T. and Libert, L. (2019) French farmers clog highways to protest at "agribashing". 27 November 2019. Available at: https://www.euronews.com/2019/11/27/french-tractors-roll-into-paris-to-protest-agri-bashing [Accessed: 15 October 2022].

Clarke, P. (2021) Farmer numbers expected to plummet as BPS is taken away. Farmers Weekly, 24 June 2021. Available at: https://www.fwi.co.uk/news/farm-policy/farmer-numbers-expected-to-plummet-as-bps-is-taken-away [Accessed: 2 September 2022].

Clarke, P. (2023) Defra's 'Partial' Plans for Tenancy Reform in England 'Disappoint'. Farmers Weekly, 24 May 2023. Available at: https://www.fwi.co.uk/business/business-management/tenancies-rents/defras-partial-plans-for-tenancy-reform-in-england-disappoint [Accessed: 12 June 2023].

Coffey, B. (2016) Unpacking the Politics of Natural Capital and Economic Metaphors in Environmental Policy Discourse. Environmental Politics. 25(2): 203-222.

Coulson, H. and Milbourne, P. (2022) Agriculture, Food and Land: Struggles for UK Post-Brexit Agri-food Justice. Geoforum, 131: 26–135.

Coulson, H. and Sonnino, R. (2019) Re-scaling the politics of food: Place-based urban food governance in the UK. Geoforum, 98: 170-179.

CPRE (2022a) Building on our Food Security.

CPRE (2022b) Reimagining Council Farms: A Vision for 2040. CPRE, New Economics Foundation and Shared Assets.

Defra (2016) Agricultural Labour in England and the UK. Farm Structure Survey 2016. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/771494/FSS2013-labour-statsnotice-17jan19.pdf [Accessed: 13 March 2023].

Defra (2018a) Moving Away from Direct Payment — Agriculture Bill: Analysis of the Impacts of Removing Direct Payments. Government Statistical Service. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740669/agri-bill-evidence-slide-pack-direct-payments.pdf [Accessed:18 December 2022].

Defra (2018b) A Green Future: Our 25 Year Plan to Improve the Environment. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf [Accessed: 12 November 2022].

Defra (2020) The Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/954283/agricultural-transition-plan.pdf [Accessed: 16 September 2022].

Defra (2021) United Kingdom Food Security Report 2021: Theme 4: Food Security at Household Level. Available at: https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2021/united-kingdom-food-security-report-2021-theme-4-food-security-at-household-level#fn:25 [Accessed: 18 June 2023].

Defra (2022a) Agriculture in the UK Evidence Pack. September 2022 Update. Government Statistical Service. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1106562/AUK_Evidence_Pack_2021_Sept22.pdf [Accessed: 24 January 2023].

Defra (2022b) Government Food Strategy. Policy Paper. Available at: https://www.gov.uk/government/publications/government-food-strategy/government-food-strategy [Accessed: 18 April 2023].

Defra (2023a) Environmental Improvement Plan 2023. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1168372/environmental-improvement-plan-2023.pdf [Accessed: 19 June 2023].

Defra (2023b) Structure of the Agricultural Industry in England and the UK at June. Available at: https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june [Accessed: 17 September 2023].

Defra (2023c) National Statistics: Farm Business Income in England, 2022-23 Forecast. Available at: https://www.gov.uk/government/statistics/farm-business-income/farm-business-income-in-england-202223-forecast [Accessed: 4 May 2023].

Defra (2023d) Nature Markets: A Framework for Scaling up Private Investment in Nature Recovery and Sustainable Farming. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147397/nature-markets.pdf [Accessed: 19 June 2023].

DESNZ (2023) UK Local Authority Greenhouse Gas Emissions Estimates 2021.

Dimbleby, H. (2021) National Food Strategy Independent Review: The Plan. Available at: https://www.nationalfoodstrategy.org/the-report/

DLUHC (2022) North East Devolution Deal. Department for Levelling Up, Housing and Communities. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1144144/North_East_Devolution_deal.pdf [Accessed: 23 May 2023].

EAT-Lancet Commission (2019) Health Diets From Sustainable Food Systems: Food, Planet, Health https://eatforum.org/content/uploads/2019/07/EAT-Lancet_Commission_Summary Report.pdf [Accessed: 10 May 2023].

Eden District Council (2023) Grants and Support to Go Green. Eden District Council Website. Available at: https://www.eden.gov.uk/environment/zero-carbon-eden/grants-and-support-to-go-green/ [Accessed: 8 June 2023].

Farm for Scotland's Future (2023) Sharing knowledge, sharing meals: a peer-to-peer learning approach to agroecology. Farm for Scotland's Future. Available at: https://farmforscotlandsfuture.scot/2023/05/22/sharing-knowledge-sharing-meals-a-peer-to-peer-learning-approach-to-agroecology/?mc_cid=e7a7f85466&mc_eid=8be10ce730 [Accessed: 8 June 2023].

Farm Safety Foundation (2021) Tackling the biggest hidden problem facing farmers today. YellowWellies.org.

FFCC (2023) Land Matters: Learning from Research about Land Use Frameworks. Briefing October 2023. Available at: https://cdn2.assets-servd.host/ffcc-uk/production/assets/downloads/LUF-Report-Briefing-FINAL_2023-10-03-110410_jufg.pdf?dm=1696331050 [Accessed: 9 October 2023].

Flanigan, S. and Sutherland, L-A. (2015) Buying Access to Social Capital? From Collaboration to Service Provision in an Agricultural Co-operative. Sociologia Ruralis, 56(4): 471-490.

Flanigan, S., Blackstock, K. and Hunter, C. (2015) Generating Public and Private Benefits through Understanding what drives different types of Agritourism. Journal of Rural Studies. 41: 129-141.

Galt, R. E. (2013) The Moral Economy is a Double-Edged Sword: Explaining Farmers' Earning and Self-Exploitation in Community-Supported Agriculture. Economic Geography. 89(4): 341-365.

Goudie, S. (2023) Child Food Insecurity Doubles Fuelling Calls for Urgent Expansion of Free School Meals. The Food Foundation. Available at: https://foodfoundation.org.uk/publication/child-food-insecurity-doubles-fueling-calls-urgent-expansion-free-school-meals [Accessed: 27 June 2023].

Graham, K., Schubsole, G., Wheatley, H. and Swade, K. (2019) Reviving County Farms. CPRE: The Countryside Charity.

Greenfield, P. (2023) Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows. The Guardian. Available at: https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe [Accessed: 13 July 2023].

Gurran, N. and Shrestha, P. (2021) Airbnb, Platform Capitalism and The Globalised Home. Critical Housing Analysis. 18(1): 107-118.

Harris, L. (2020) Land in your area 2020: North East England. Farmers Weekly. Available at: https://www.fwi.co.uk/business/markets-and-trends/land-markets/land-market-in-your-area-north-east-england [Accessed: 15 February 2023].

Hasnain, S., Ingram, J. and Zurek, M. (2020) Mapping the UK Food System – A Report for the UKRI Transforming UK Food Systems Programme. Oxford: Environmental Change Institute. University of Oxford.

Hayhow D.B., Eaton M.A., Stanbury A.J., Burns F., Kirby W.B., Bailey N., et al. (2019) State of Nature 2019. The State of Nature partnership. Available at: https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf [Accessed:10 September 2022].

House of Commons Environmental Audit Committee (2021) Biodiversity in the UK: Bloom or Bust? Available at: https://committees.parliament.uk/publications/6498/documents/70656/default/ [Accessed: 6 June 2023].

House of Commons Environment, Food and Rural Affairs Committee (2023) Rural Mental Health. Available at: https://committees.parliament.uk/publications/39991/documents/195139/default/ [Accessed: 10 June 2023].

HSE (Health and Safety Executive) (2017) Farmwise: Your Essential Guide to Health and Safety in Agriculture. Available at: https://www.hse.gov.uk/pubns/priced/hsg270.pdf [Accessed: 18 June 2022].

James, D. (2023) Analysis: How can the small abattoir sector be saved? Farmers Weekly. 28 February 2023. Available at: https://www.fwi.co.uk/business/markets-and-trends/meat-prices/analysis-how-can-the-small-abattoir-sector-be-saved [Accessed: 8 June 2023].

JNCC (2022) Area of Land in Agri-Environment Schemes. Available at: https://jncc.gov.uk/our-work/ukbi-b1a-agri-environment-schemes/ [Accessed: 8 May 2023]

JRF (Joseph Rowntree Foundation) (2023) Guarantee our Essentials: reforming Universal Credit to ensure we can all afford the essentials in hard times. Available at: https://www.jrf.org.uk/report/guarantee-our-essentials [Accessed: 18 June 2023].

Just Fair (2014) Going Hungry? The Human Right to Food in the UK. Available at: https://justfair.org.uk/wp-content/uploads/2018/05/Going-Hungry-The-Human-Right-to-Food-in-the-UK.pdf [Accessed: 12 August 2022].

Kay, A. (2023) Defra offer on educational farm access 'not credible'. Farmers Weekly. Available at: https://www.fwi.co.uk/business/payments-schemes/defra-offer-on-educational-farm-access-not-credible [Accessed: 30 April 2023].

Lamie, R. D., Chase, L., Chiodo, E., Dickes, L., Flanigan, S., Schmidt, C., and Streifeneder, T. (2021) Agritourism around the globe: Definitions, authenticity, and potential controversy. Journal of Agriculture, Food Systems, and Community Development, 10(2), 573–577.

Lang, T. (2020) Feeding Britain: Our Food Problems and How to Fix Them. London: Pelican.

Lepper, J. (2022) More than 1,000 children's centres closed over last decade. Children and Young People Now. Available at: https://www.cypnow.co.uk/news/article/more-than-1-000-children-s-centres-closed-over-last-decade [Accessed: 14 December 2022].

Long, M. (2022) Four UK Supermarkets trail environmental labelling system. Food Matters Live. 6 June 2022. Available at: https://foodmatterslive.com/article/sainsburystesco-morrisons-co-op-trial-environmental-labelling/ [Accessed: 11 June 2022].

LWA (Land Workers' Alliance) (2017) Why We Need Small Farms. Available at: https://landworkersalliance.org.uk/wp-content/uploads/2018/10/whyweneedsmallfarms.pdf [Accessed 10 October 2022].

LWA (2019) Food, Farming, and the Climate Crisis: How we Can Feed People and Cool the Planet. Available at: https://landworkersalliance.org.uk/wp-content/uploads/2018/10/Farming-Food-and-the-Climate-Crisis_v2.pdf [Accessed: 11 June 2022].

LWA (2020) Survey of New Entrants to Agriculture and Land Based Work. April – June 2020. Available at: https://landworkersalliance.org.uk/wp-content/uploads/2020/09/New-Entrants-Survey-Summary-of-results.pdf [Accessed: 19 April 2023].

Menzies, B., Wood, D., and Dimambro, M. (2020) Assessing the Viability and Sustainability of Mobile Abattoirs in Scotland. The Scottish Government.

NAEI (National Atmospheric Emissions Inventory) (2021) Local Authority GHG Map. Available at: https://naei.beis.gov.uk/laghgapp/ [Accessed: 11 July 2023].

Natural England, Environment Agency and Forestry Commission (2023) Press Release. Pioneering nature projects launched to test carbon capture methods in fight against climate change. Available at: https://www.gov.uk/government/news/pioneering-nature-projects-launched-to-test-carbon-capture-methods-in-fight-against-climate-change [Accessed: 6 June 2023].

Nettle, C. (2014) Community Gardening as Social Action. Farnham: Ashgate.

New Citizenship Project and Food Ethics Council (2017) Food Citizenship: How thinking differently can change the future of our food system. Findings from the Future of Food: A Collaborative Innovation Project.

New College Durham (2023) Skills Bootcamps in Green Skills. Available at: https://www.newcollegedurham.ac.uk/adults/bootcamp/skills-bootcamps-in-green-skills#gaccordion0item6 [Accessed: 18 August 2023].

New York Times (2022) 52 Places for a Changed World. Online. Available at: https://www.nytimes.com/interactive/2022/travel/52-places-travel-2022. html#northumberland [Accessed: 27 June 2023].

Newell, P. and Mulvaney, D. (2013) The Political Economy of the 'Just Transition', The Geographical Journal. 179(2): 132-140.

NFU (National Farmers' Union) (2016) Delivering Britain's Clean Energy from the Land. Available at: https://www.nfuonline.com/archive?treeid=69296 [Accessed: 4 July 2023].

NFU (2019) Achieving Net Zero: Farming's 2040 Goal. Available at: https://www.nfuonline.com/archive?treeid=137544 [Accessed: 19 June 2022].

NFU (2021a) Net Zero and Agriculture in the North East – A Guide for Local Authorities. Available at: https://www.nfuonline.com/archive?treeid=150210 [Accessed: 10 September 2022].

NFU (2021b) Levelling Up Rural Britain. Available at: https://www.nfuonline.com/media/hsdeoknc/levelling-up-rural-britain.pdf [Accessed: 16 May 2022].

NFU (2023a) Delivering For Britain: The Role of Upland and Tenant Farmers and the Future of Agriculture in the North of England.

NFU (2023b) NFU Welcomes Positive Changes to ELMs for Upland Farmers.

Available at: https://www.nfuonline.com/media-centre/releases/press-release-nfu-welcomes-positive-changes-to-elms-for-uplands-farmers/ [Accessed: 2 June 2023].

NFU (2023c) T-Levels: Vocational Training in Agriculture is Changing. Available at: https://www.nfuonline.com/updates-and-information/t-levels-vocational-training-in-agriculture-is-changing-in-england/ [Accessed: 18 June 2023].

NICRE (2022) Farm Business Performance: Planning, Adaptation and Resilience, National Innovation Centre for Rural Enterprise, State of Rural Enterprise Report No.3.

Norrie, R. (2017) The Two Sides of Diversity: Which are the most Ethnically Diverse Occupations? Policy Exchange. Available at: https://policyexchange.org.uk/wp-content/uploads/2017/03/The-two-sides-of-diversity-3.pdf [Accessed: 14 December 2022].

North East LEP (2022) North East Evidence Hub: Decarbonisation. Available at: https://evidencehub.northeastlep.co.uk/decarbonisation [Accessed: 12 March 2023].

Northumberland County Council (NCC) and Newcastle University (NU) (2022) Future of Farming Northumberland. Inquiry Report.

Northumberland National Park (2023) Farming. Available at:

https://www.northumberlandnationalpark.org.uk/about-us/looking-after-the-park/farming/[Accessed: 1 April 2023].

NTCA (2022) Getting Stuff Done. Annual Report 2021. North of Tyne Combined Authority.

ONS (2023) Cost of Living Insights: Food. 6 October 2023. Available at:

https://www.ons.gov.uk/economy/inflationandpriceindices/articles/costoflivinginsights/food [Accessed: 10 October 2023].

Parsons, K. (2021) How connected is national food policy in England? Rethinking Food Governance Report 2. London: Food Research Collaboration.

RABI (2021) The Big Farming Survey: The Health and Wellbeing of the Farming Community in England and Wales in the 2020s.

Rock Review (2022) Working Together for a Thriving Agricultural Tenanted Sector. Defra. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1110805/The_Rock_Review_-_Working_together_for_a_thriving_agricultural_tenanted_sector.pdf [Accessed: 18 December 2022].

Rose, D. C. and Chilvers, J. (2018) Agriculture 4.0: Broadening Responsible Innovation in an Era of Smart Farming. Frontier in Sustainable Food Systems. 2(87): 1-7.

Rose, D. C., Budge, H., Carolan, M., Hall, J., Hammersley, C. et al., (2023) Farming Wellbeing Through and Beyond COVID-19: Stressors, Gender Differences and Landscapes of Support. Sociologia Ruralis, 63(S1): 3-10.

Royal Society (2023) Multifunctional Landscapes: Informing a Long-term Vision for Managing the UK's Land. Available at: https://royalsociety.org/-/media/policy/projects/living-landscapes/DES7483_Multifunctional-landscapes_policy-report-WEB.pdf?la=en-GB&hash=D36F2F088ABAC901405BFA865F2FA581 [Accessed: 1 September 2023].

RPA and Defra (2023) Guidance: Delinked Payments: Replacing the Basic Payment Scheme. Avilable at: https://www.gov.uk/guidance/delinked-payments-replacing-the-basic-payment-scheme (Accessed: 16 September 2023).

Schaart, E. (2019) Angry Dutch farmers swarm The Hague to protest green rules. Politico, 16 October 2019. Available at: https://www.politico.eu/article/angry-dutch-farmers-swarm-the-hague-to-protest-green-rules/ [Accessed: 15 October 2022].

Scottish Government (2023) Women in Agriculture: Leadership Programme Development Research. Available at: https://www.gov.scot/publications/womenagriculture-leadership-programme-development-research/documents/[Accessed: 14 May 2023].

Seymour, M. and Connelly, S. (2023) Regenerative Agriculture and a More-than-Human Ethic of Care: A Relational Approach to Understanding Transformation. Agriculture and Human Values. 40: 231-244.

Shortall, S., McKee, A. and Sutherland, L-A. (2020) The Performance of Occupational Closure: The Case of Agriculture and Gender. Sociologia Ruralis, 60(1): 40-57.

Shortland, F., Hall, J., Hurley, P., Little, R., Nye, C., Lobley, M. and Rose, D. C. (2023) Landscapes of Support for Farming Mental Health: Adaptability in the Face of Crisis. Sociologia Ruralis. 63(S1): 116-140.

Sleigh, J. (2023) Support Growing for Livestock Mart Health Checks. The Scottish Farmer. 10 March 2023. Available at: https://www.thescottishfarmer.co.uk/news/23375150.support-growing-livestock-mart-health-checks/ [Accessed: 4 June 2023].

Smith, J., Andersson, G., Gourlay, R., Karner, S., Mikkelsen, B., Sonnino, R. and Barling, D. (2016) Balancing competing policy demands: the case of sustainable public sector food procurement. Journal of Cleaner Production, 112(1): 249-256.

Sonnino, R. (2016) The new geography of food security: exploring the potential of urban food strategies. The Geographical Journal, 182(2): 190-200.

Sovacool, B. K., Iskandarova, M. and Geels, F. W. (2023) "Bigger than Government": Exploring the Social Construction of Net-Zero Industrial Megaprojects in England. Technological Forecasting & Social Change. 188: 122332.

Stacey, K. (2023) Labour Plans to Allow Local Authorities to Buy Land Cheaply for Development. 29 May 2023. The Guardian. Available at: https://www.theguardian.com/politics/2023/may/29/labour-allow-local-authorities-buy-land-cheaply-for-development [Accessed: 4 June 2023].

Sustain (2022) Every Mouthful Counts: How UK Councils are Tackling the Climate and Nature Emergency through Food.

Sutherland, L-A., McKee, A. and Hopkins, J. and Hasler, H. (2023) Breaking Patriarchal Succession Cycles: How Land Relations Influence Women's Roles in Farming. Rural Sociology, 88(2): 512-545.

The Scottish Government (2023) Just Transition in Land Use and Agriculture: A Discussion Paper. The Scottish Government. Available at: https://www.gov.scot/publications/transition-land-use-agriculture-discussion-paper/ [Accessed: 10 September 2023].

TIAH (2021) 2021-2026 Strategic Plan. Available at: https://beta.tiah.org/our-plan [Accessed: 19 August 2023].

Tower Hamlets Council (2023) Council first in country to roll out universal free school meals in secondary schools from September 2023. Tower Hamlets Council Website. Available at: https://www.towerhamlets.gov.uk/News_events/2023/May/Council-first-in-country-to-rollout-universal-free-school-meals-in-secondary-schools-from-September-2023.aspx [Accessed: 27 June 2023]

United Nations (2015) Paris Agreement to the United Nations Framework Convention on Climate Change.

Wachsmuth, D. and Weisler, A. (2018) Airbnb and the rent gap: Gentrification through the sharing economy. Environment and Planning A: Economy and Space, 50(6), 1147–1170.

White, K. (2023) NFU data outs farmer confidence at lowest since before Covid. The Grocer. 3 May 2023. Available at: https://www.thegrocer.co.uk/sourcing/farmer-confidence-plunges-in-face-of-rising-costs-and-bureaucracy/678837.article [Accessed: 14 May 2023].

Women in Agriculture Taskforce (2019) Final Report of the Women in Agriculture Taskforce. The Scottish Government. Available at: https://www.gov.scot/publications/final-report-women-agriculture-taskforce/ [Accessed: 18 March 2023].

WRAP (2019) Food Waste in Primary Production in the UK. Available at: https://wrap.org.uk/sites/default/files/2020-07/WRAP-food-waste-in-primary-production-in-the-UK.pdf [Accessed: 12 May 2023].

WRAP (2022) Food Surplus and Waste in the UK – Key Facts. Available at: https://wrap.org.uk/sites/default/files/2023-01/Food%20Surplus%20and%20Waste%20in%20the%20UK%20Key%20Facts%20December%202022.pdf [Accessed: 12 May 2023].

