

REAPING THE REWARDS

CULTIVATING A FAIR TRANSITION FOR FARMING

Becca Massey-Chase, Lesley Rankin, Luke Murphy and Stephen Frost

July 2023

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IPPR's Fair Transition Unit (FTU) was established in June 2022 as a new landmark initiative to carry forward the work of IPPR's cross-party Environmental Justice Commission and award-winning work on environmental breakdown.

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The Environmental Justice Commission drew on views and recommendations from citizens from across the country in a way that has genuinely shaped policy thinking and had tangible policy and media impact. Building on this legacy, the FTU puts the public at the heart of its work through extensive public deliberation.

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SUMMARY

Climate change and biodiversity loss are a major driver of food insecurity both in the UK and around the world. As a key emitter of greenhouse gases and a driver of biodiversity loss, current agricultural practices in England can and must change so that our land sequesters more carbon than it emits, and biodiversity is restored to farmed landscapes. The current backsliding on land use change ambition has consequences - deeper emissions cuts will be required elsewhere or the UK will fail to meet its emissions targets, or both.

Environmental action and food security are two sides of the same coin. Contrary to many headlines, climate change and biodiversity loss are among the biggest medium to long-term risks to UK domestic food production as well as soil degradation and water quality. Environmental action is a means to deliver food security, not a barrier to it. Yet responsibility for the transition to climate and nature-friendly farming cannot be left up to farmers alone who are already grappling with a system that does not fairly reward them for their produce.

Our food system has become increasingly wasteful, processed and environmentally damaging. A highly concentrated and powerful retail sector has great influence on the farming sector, and change isn't easy. Supermarkets are only part of the picture of the consumer environment. From takeaway cafes to food delivery services, the out-of-home food sector is expanding. To address the negative outcomes that arise from our supply chains for consumers, farmers, and the environment, we need to look more broadly at how we buy and eat our food in England today.

Food poverty is just one element of the wider patterns of poverty associated with problems such as low pay, unemployment, housing costs, poor transport accessibility, inadequate welfare provision and inequitable access to a good education. Lower-income households spend a higher proportion of their income on food and are disproportionately affected by food price rises.

Trade deals struck since Brexit are undercutting British farmers and our climate and nature efforts. They are also exporting the UK's ecological footprint elsewhere in the world. Leaving the European Union presented an opportunity to set an ambitious new farming agenda including on trade, but the government has thus far moved in the opposite direction. Yet the public want trade deals that uphold food and animal standards, protect the environment, and protect British farmers.

We need a long-term vision for the future of land and agriculture. To create that vision, we convened several community panels who developed nine key guiding principles for addressing the climate crisis and restoring nature in a way that is fair to farmers, farmworkers, and the public.

- **1. Act now, for future generations**. We need urgent action to put us on a path that gives them hope and provides a better life for all.
- 2. Educate people about nature, climate change and food, and inspire them to act. We can all do something, but we need more information and support.
- **3. Connect people with where their food comes from.** We must create a more direct relationship between the public and the food they eat.
- **4. Do more to promote local food.** We need more local food, accessible to everyone, and to cut out unnecessary transport, processing, and packaging.

- **5. Government must step up.** If the public is being asked to make changes, and farmers are being asked to do things differently, then the UK government must show that they are serious about acting and take the lead.
- **6. Trust farmers and support them to make the changes needed.** All farms and farmers are different and will need plans put in place that are tailored to them, realistic and fair.
- 7. Responsibility for action falls on everyone, but it does not fall equally. Those with more power need to do more and cannot be allowed to get away with not acting.
- 8. Raise interest in farming, support people getting into the industry, and keep talent local. Encourage people to join the farming sector and celebrate these jobs. The image of farming needs to go beyond stereotypes.
- 9. Everyone, from all parts of society, should be able to access and afford healthy, sustainable food. People should not be forced to think about food as a matter of survival, but as something they have a choice over.

OUR PLAN FOR A FAIR TRANSITION FOR FARMING

Our research, grounded in the lived experience of farmers, farm workers and the public, finds that **the significant shift we need will not happen without a robust intervention from government**.

Our overarching recommendation is for the UK government **to step up and bring forward an industrial strategy for food and farming**. It should provide farmers with more support and greater certainty, intervene to rebalance risk and power across the whole supply chain, build a renewed connection between the public and their food, and ensure everyone can afford a healthy, sustainable diet. This must include:

1. A farming sector that works for food, nature, and climate.

- Government strategy should reflect the desirability of reducing meat and dairy production's land share. The horticulture sector should be supported to increase sustainable domestic fruit and vegetable production.
- Land data should be aggregated and made available in a format that can support land use decisions.
- Appropriate funding for environmental protection agencies should be restored. We recommend an annual increase in Environment Agency funding of £58 million to achieve this, restoring funding to pre-austerity levels in real terms.

2. Government needs to lead and invest for a fair transition.

- Farmers need a greater long-term budget to deliver nature restoration and carbon sequestration than is currently offered by ELMS. This must include support for peer-to-peer networks delivering training, advice, and information sharing. We recommend that the government allocate £2.4 billion a year for the next decade in England for environmental land priorities.
- To maximise the public good and ensure value for money for the taxpayer, this long-term commitment in funding should be accompanied by a strengthening of the regulatory baseline for farming in the UK in line with aims and targets for net zero and the recovery of nature on land (as proposed in Nyman et al 2021).
- The government should end subsidies in the form of de-linked payments to farms with over £100,000 net annual profit from food sales, starting in 2024.
- Private markets for nature and carbon should be regulated to ensure efficacy and sensible land choices, by a new Office for Carbon Removal.

3. Food supply chains should be fair and sustainable, in the UK and internationally.

- The creation of supply chain codes of conduct should be fast-tracked, and local authorities should support local retailers and shorter supply chains to support local economies.
- Food waste disclosure for large food businesses should be mandatory. This must account for waste through the whole supply chain, so businesses do not get away with 'hiding' waste behind the farm gate.
- New primary legislation should subject food imports to core environmental and animal welfare standards. This would ensure imports are produced to the same environmental, climate, animal welfare, workers' rights, and food safety standards as domestic produce.

4. Communities need access to nutritious, sustainable food.

- Every local authority should create a food partnership for their area, and there should be higher standards for public procurement, to increase the market for nutritious, nature and climate-friendly food.
- Free school meals should be universal. Government should introduce a nonessential food levy on products with excessive sugar, salt, and fat levels, and implement a total ban on advertising for ultra-processed meat products.
- Government should assess measures to control food price inflation, learning lessons from France's temporary food price caps. Costs should not be passed to farmers, who are coping with significant increases in input costs.

5. Communities should be more involved in how their food is produced.

- A government public information campaign on role of food and farming in climate and nature crises.
- Raise awareness of 'educational access' payments for hosting farm visits available under current mid and higher-tier countryside stewardship and for the payments to also be included in the ELMs countryside stewardship plus and sustainable farming incentive.
- Government should increase its apprenticeships offer to invest in the future workforce and promote the sector as a desirable career choice.

1. INTRODUCTION

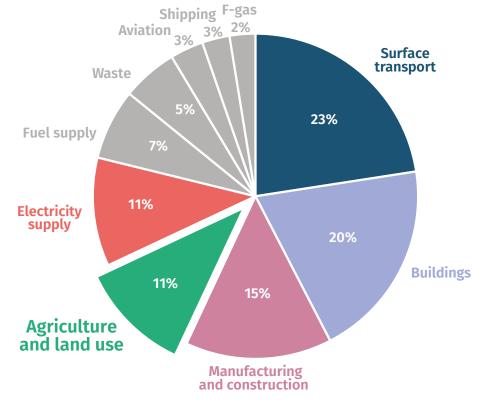
AGRICULTURE AND THE CLIMATE AND NATURE CRISES – A VICIOUS CYCLE

Around 72 per cent of land in the UK is used for agricultural production and emissions from agriculture represent 11 per cent of greenhouse gas emissions, the fourth largest contributor (CCC 2022, see figure 1.1). Although UK land has the potential to be a net 'sink' of carbon, it is currently an overall carbon emitter (CCC 2020b). Farming contributes around 50 per cent of the UK's methane emissions and 70 per cent of nitrous oxide emissions (Defra 2022).

Agriculture also accounts for 88 per cent of UK ammonia emissions, emitted during storage and spreading of manures and slurries and through inorganic fertilisers (Defra 2019a). Ammonia damages sensitive natural habitats and contributes to particulate pollution in urban areas that is damaging to human health. Beyond the farmgate, emissions also arise from food transport, manufacturing, packaging, and retail.

FIGURE 1.1: AGRICULTURE AND LAND USE ARE THE FOURTH LARGEST CONTRIBUTORS TO GREENHOUSE GAS EMISSIONS IN THE UK

Greenhouse gas emissions in the UK by sector, 2021



Source: IPPR analysis of CCC 2022

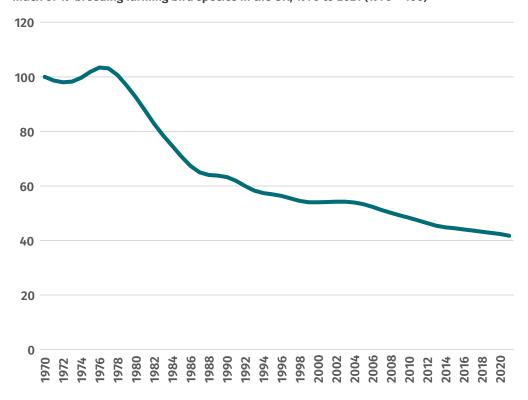
¹ Of these emissions, 53 per cent are derived from animals, predominantly from the digestive processes of cattle, sheep and goats, 21 per cent from soil management such as fertiliser application, 16 per cent from manure and waste management, and 8 per cent from agricultural machinery (Albanito et al 2022).

Farming is also damaging nature. Current agricultural management practices are the main driver of biodiversity change in the UK (Burns et al 2016). Farm practices such as fertiliser and pesticide use, the decline of mixed farming and changes in crop rotations, increased field size and the removal of hedgerows have contributed to precipitous declines of animal and insect populations (Hayhow et al 2019, Boatman et al 2007).

Bird populations are considered a key indicator of the wider state of the health of the UK's wildlife and there have been significant declines in the numbers of farmland birds since the 1970s (see figure 1.2). The impact of intense agricultural practices from industries such as dairy, maize and egg production have significant impact on the health of the country's waterways; virtually all the UK's rivers are polluted beyond their legal limits (EAC 2022a; EAC 2022b). Climate change and biodiversity loss are highly interdependent; in 2022, the IPCC published a report identifying climate change as a key cause of global biodiversity loss (IPCC 2022). In turn, ecosystems play a key role in climate regulation.

FIGURE 1.2: UK FARMLAND BIRD POPULATIONS DECLINED BY MORE THAN HALF BETWEEN 1970 AND 2021





Source: IPPR analysis of BTO and RSPB for DEFRA 2021

Meanwhile, the climate and nature crises are having a direct impact on farmers. Livestock are increasingly exposed to heat stress, growing seasons are changing, pests and diseases are living longer in warmer winters, droughts are impacting crop and grass growth – with knock-on impacts for yield and winter animal feed, and heavy rain and flooding is affecting soil runoff and erosion and activities such as drilling and harvesting (Garry et al 2021). These issues will only worsen if the UK, and the rest of the world, do not rapidly reduce their emissions.

WE'RE NOT REDUCING OUR EMISSIONS FROM FARMING QUICKLY ENOUGH

As the Climate Change Committee (CCC) chief executive Chris Stark has said, "We can't meet the government's 2050 net zero target without major changes in the way we use the land, the way we farm, and what we eat" (Harrabin 2020). However, we are currently not on track. The food sector is decarbonising at half the pace of the wider economy, and farming emissions have not reduced in a decade (CCC 2022).

In their latest progress report to parliament (ibid), the CCC finds that UK government policy is 'not credible' on reducing food and farming emissions in line with the Paris Agreement. Recent reports suggest that the Department for Environment and Rural Affairs (Defra) is the furthest behind in meeting its emissions reductions, lagging 24 per cent behind its official target (Helm 2023).

THE FALSE CHOICE OF FOOD SECURITY VERSUS SUSTAINABILITY

Over the last half century, successive governments have steered farmers to produce the highest yields from the most intensive agricultural methods and bring every available acre into agricultural production.

Sustainable, regenerative agriculture is seen by some as a threat to food production. As one farmer with whom we spoke put it:



I really fear that the journey many of us have been on towards more sustainable production is about to take a step back and there is a large group of people who want to go back to the binary choice of food versus environment

Yet as we highlight in this report, it is the climate and nature crises that are putting food security at risk, not action to address them. Only by minimising agriculture's contribution to the climate and nature crises and restoring the health of the ecosystems in which farming operates and upon which food production relies, can we hope to increase the resilience of our food system.

OUR RESEARCH APPROACH

Our research was guided by input from many different types of experts, including people whose expertise was rooted in their lived experiences of food and farming.

The project was guided by an advisory panel of stakeholders with a rich understanding of the environmental challenges, the farming context, and the policy landscape, to provide feedback and advice on project design, policy recommendations, and influencing opportunities.

Our research had a core deliberative component, in which we focussed on three counties in England. Taking a place-based approach to this part of our research meant that we were able to gain a deeper understanding of the challenges and opportunities facing three counties with very different farming contexts. Participants also had shared experience of living in the same areas, and we provided them with information tailored to their local contexts.

We chose to focus on Somerset, Kent and Cumbria and held three online community panels with participants in these locations. We also held a farmers and farm workers panel, which brought together participants from across the three locations into one panel. Both our research process and findings were informed by the two deliberative online evening workshops we held with these farmers and farm workers. Their perspectives on what they wished the public knew about farming were particularly instructive, and helpful for developing content for the community panels.

See appendix for more details on how these panels were run.

FIGURE 1.3: COMMUNITY PANEL LOCATIONS

Map of the three counties where IPPR hosted deliberative events

Cumbria is the third largest county in England, and farming is central to this largely rural economy. It is also home to the Lake District national park. Grazing livestock – sheep and beef – is the main farming activity, determined by the character of the physical environment. Farms in the North West are typically smaller than average (Defra 2023e), and upland farm businesses have suffered from low incomes (Mansfield 2011). Public subsidy reforms and changing market conditions contribute to **Kent** has a high number of farms and challenging conditions for these farmers, with smallholdings, the most in the South many operating on the margins of financial East region (Defra 2023c). More than viability (Defra 2019b). The loss of Newton Rigg half the agricultural holdings in Kent College - the only land-based college in (52.6 per cent) are involved in growing Cumbria - has exacerbated concerns about of plants and vegetables (Kent County skilling up the future workforce (FFCC 2022). Council 2019). With one of the warmest climates in the UK, 50 per cent of England's small fruit (such as berries) and 44 per cent of England's top fruit (tree-grown fruit such as apples) are grown in the South East (Defra 2023d). It's an area that faces flooding as well as drought risks (Kent County Council 2020). With much of the work available being temporary and seasonal, many farms have relied on migrant workers and are now struggling with recruiting and retaining the workforce they need. Somerset has more farmers and food producers than any other UK county (NFU 2021), directly employing more than 19,000 people and supporting many other businesses down the supply chain (ibid). 39 per cent of England's dairy herd are in the South West, and 33 per cent of cattle (Defra 2023b). Plants, flowers, and poultry are also important to the regional economy. The Somerset Levels are one of the lowest areas in the UK, and these areas, which would once have absorbed and stored surplus water-flows, have been historically drained

Source: Authors' analysis

for agricultural and residential purposes.

2.

RESULTS FROM THE GROUND

Our three community panels were held online, each over one weekend. All groups were tasked with the same question to frame their discussions:

"How should farming in [Kent/Somerset/Cumbria] change to address the climate crisis and restore nature in a way that is fair to farmers, farmworkers, and the public?"

Each panel created a set of principles for a fair transition for farming. Below, we have consolidated these into one set to capture the key ideas across the groups. We have kept as close as possible to the words our panellists used.

COMMMUNITY PANELS' PRINCIPLES FOR A FAIR TRANSITION FOR FARMING

We believe that responses to the nature and climate crises must follow these principles to be fair to farmers, farm workers and the public:

- Act now, for future generations. Government, business, and the public have all been too slow to act on these urgent crises, and the consequences of this inaction are being felt now. Change cannot be left to our children or our children's children. We need urgent action to put us on a path that gives them hope and provides a better life for all.
- Educate people about nature, climate change and food, and inspire them to act. People need to hear about climate change and nature loss, what is being done to address them and what they can do to help, and they need this to come from respected sources. These messages need to reach people through many different channels from soaps to the news to signs on bus stops. Change can be made in lots of different ways, from how we use our voices to how we spend our money. We can all do something, but we need more information and support.
- Connect people with where their food comes from. We must create a more
 direct relationship between the public and the food they eat. This means
 more hands-on, practical experience, such as opportunities to visit farms
 and see what's growing. We need a stronger relationship between farms
 and communities.
- Do more to promote local food. We need more local food, accessible to everyone, and to cut out unnecessary transport, processing, and packaging. The quality and cultural significance of local food should be celebrated. More could be done to increase interest in home-grown produce with better marketing. The public can play their part by eating more seasonally. Big buyers in the public and private sector should prioritise local food and more should be done to link up local produce with projects supporting vulnerable people in the community.
- Government must step up. If the public is being asked to make changes, and farmers are being asked to do things differently, then the UK government must show that they are serious about acting and take the lead. Governments are in a unique position to be able to tackle the whole food system and must take responsibility for changing things in a way that is fair. Local and national governments need to do more to earn the trust of farmers and the public, and the people with on-the-ground knowledge should be more involved in decision making, with more decisions made away from Westminster.

- Trust farmers and support them to make the changes needed. All farms and farmers are different and will need plans put in place that are tailored to them, realistic and fair. Farmers are experts in their own land. The schemes put in place to support them should be easy to access and flexible. Farmers need the incentives and support to adapt and take on these new challenges. When farmers are struggling, government needs to step in and support them, especially with ensuring they protect the environment.
- Responsibility for action falls on everyone, but it does not fall equally. Those with more power need to do more and cannot be allowed to get away with not acting. Where we have companies that are doing harm to the environment, or failing to invest to protect our futures, then the government must force them to change. Big companies and supermarkets must play their part and some profits need to be put back into supporting farmers, reducing food costs, and investing in communities to support environmental action. We need to see less advertising of products that creates demand for things we never needed.
- Raise interest in farming, support people getting into the industry, and keep talent local. Encourage people to join the farming sector and celebrate these jobs. The image of farming needs to go beyond stereotypes, and more is needed to support new entrants to overcome financial barriers; this includes looking at land ownership. Create more local education and work opportunities in agriculture and nature conservation, and more support for apprenticeships.
- Everyone, from all parts of society, should be able to access and afford healthy, sustainable food. People should not be forced to think about food as a matter of survival, but as something they have a choice over. Everyone should have enough money to afford decent food, and quality food should be accessible wherever in the country you live. Food should be valued and not wasted, and leftover food should go to those in need. It should be easier and cost-effective for people to buy only what they need.

3.

ENVIRONMENTAL ACTION AND FOOD SECURITY ARE TWO SIDES OF THE SAME COIN

"I like how we farm, with soil health in mind. We are getting good yields using a lot less inputs."

Farmer panellist

THE CLIMATE AND NATURE CRISES ARE PUTTING FOOD SECURITY AT RISK

In 2019, the CCC said climate change would make it harder for the government to ensure the resilience of the UK's food supply (CCC 2019). They identified risks to food security such as extreme weather events causing damage to crops, livestock, and fisheries, damaging farming infrastructure, and adversely affecting productivity. In 2020, UK wheat yields dropped by 40 per cent because of heavy rainfall and droughts (Defra 2021a). In its 2021 UK food security report, the government concluded climate change and biodiversity loss are among the biggest medium to long-term risks to UK domestic food production, alongside other factors, including soil degradation and water quality (ibid).

February 2023 saw food rationing caused by a combination of extreme weather events abroad and UK production impacted by the energy crisis. The CCC has argued that climate change is likely to result in greater volatility in domestic food prices unless the UK is able to adapt to these changes (CCC 2019). It said climate change could lead to a 20 per cent (mean) rise in food prices globally by 2050 (ibid). The Dasgupta review of the economics of biodiversity (Dasgupta 2021), also identified biodiversity loss as a risk to the world economy in general and to food security specifically.



Farmers and farm workers told us how the rising temperatures, droughts, flooding, and impacts of pests and diseases were all making their job as food producers more difficult

Farmers and farm workers told us how the rising temperatures, droughts, flooding, and impacts of pests and diseases were all making their job as food producers more difficult.

SUSTAINABLE FARMING PRACTICES ARE GOOD FOR FARMERS AS WELL AS THE ENVIRONMENT

We heard from farmers that changing to nature-friendly practices was having a positive impact on their businesses, as well as the environment. Some farmers told us that they were making these changes primarily because they made good economic sense.

One farmer we spoke to is concentrating on healthy soil – "it's all 'bout soil health. You want an alive soil". A benefit of dynamic soil biology is less fertiliser is needed – "people are being more...thoughtful about putting that nitrogen in the ground, as most of it ends up in the river". She had started with agroecology 10 years ago when

the farm took on more land, and needed more efficient methods to cope – "we did it to be efficient" – stopping ploughing, and using a direct drill to plant seeds.

The same farmer has started using a hoe to destroy weeds physically rather than chemically, pointing out that some of the benefits of intensive farming, such as pesticides and herbicides, have been short term: "you end up making more problems from long term use – resistant weeds, multiple resistance – it hasn't necessarily helped production". Upfront costs of transition were mitigated through inter-farm collaboration, sharing the cost of wide drills and hoes.

Another farmer had seen a significant drop in machinery fuel use and tractor hours by switching to a 'controlled traffic farming' method, which reduces soil compaction by limiting all farm machinery to fixed 'tramlines' in the field using satellite guidance technology. As a result, 80 per cent of the soil is not compacted, and he's seen a large increase in the number of worms in the soil, which aerate and mix up organic matter. Other than an increase in slugs which can eat the crops, he said – "what's not to like, I wouldn't go back".

LEGISLATION NEEDS TO BE ENFORCED

However, we also heard that poor enforcement of current legislation sent mixed messages and was disheartening for farmers 'doing the right thing'. Regulatory bodies responsible for policing polluters are currently ineffective in enforcing legally required environmental standards and penalising the major offenders.

In 2020, the chief executive of the Environmental Agency stated it "lacks the powers and resources to tackle farm pollution" (Salvidge 2020). In 2021, 721 inspections were carried out on 693 farms and more than half were breaking regulations (Environment Agency 2022). In the 10 years between 2009 and 2019, Environment Agency funding fell by 63 per cent, its staff numbers by 25 per cent, and prosecutions of businesses by 88 per cent (Rose 2020).

Through freedom of information requests to Defra and the Environment Agency, the charity River Action has found that the average number of full-time staff allocated to inspect England's 130,000 farms in 2020 in each of the EA's 14 regions is only 0.65 (River Action 2023). It would take current staff 200 years to visit every farm in Britain (Laville 2021).

IPPR analysis shows that if funding from Defra had kept pace with inflation, from 2010-2022 the Environment Agency would have received nearly 900 million - nearly 65 per cent - more for environmental protection. 2021/22 funding would have been nearly £70 million - almost 40 per cent - more².

Recommendation: Appropriately resource the government agencies tasked with environmental protection to deliver on their mandate, and in particular to ensure capacity to inspect, support and apply sanctions to farms, as needed. We recommend an annual increase in Environment Agency funding of £58 million to achieve this. This would restore funding to pre-austerity levels in real terms.

WE MUST CHANGE HOW WE USE AGRICULTURAL LAND TO MEET BOTH ENVIRONMENTAL AND FOOD NEEDS

The UK currently produces around 65 per cent of its food requirements, after accounting for import and export (Defra 2019c) and 85 per cent of UK farmland is used for feeding and rearing livestock (Dimbleby 2021). As well as being carbonintensive, this is an inefficient use of land for the calories produced. Growing plants for human consumption generates around 12 times more calories per hectare than using the land for meat production (ibid).

² GDP deflator-adjusted 2009/2010 funding (OBR 2023)

Currently about 55 per cent by weight of the UK's cereal production – wheat, barley, and oats – and almost all oilseed rape and maize production goes on animal feed (Plewis 2022). Internationally, growing soya for poultry feed takes up vast swathes of land; even when not linked to illegal deforestation, the environmental implications of this are significant. A 30 per cent reduction in meat is required to achieve the fifth carbon budget and the 30x30 nature commitment³ (NFS 2021b).

The CCC estimates that 21 per cent of agricultural land in England will need to change function – to forestry, energy crops, peatland or agroforestry – in order to meet our net zero commitments (CCC 2020a). We can maximise outputs for people, climate, and nature by working with the different characters of UK landscapes – using land for what it's good at.

Thankfully, different parts of England's diverse landscape are suited to complementary land use roles. The National Food Strategy Independent Review recommends a 'three compartment model', creating a mosaic of different landscapes: wild 'semi-natural' land; sustainable low-yield, low-intensity farmland; and sustainable higher-intensity, high-yield farmland. This integrates 'land sharing' (deliberately sharing farming land with nature) and 'land sparing' (freeing up land for environmental projects) (Dimbleby 2021). These three distinct categories are archetypes, and in practice the model would look more like a spectrum. Some of the areas that currently produce the least food are best suited to the twin purpose of nature restoration and carbon removal.

We can devote a significant amount of current agricultural land to nature and decarbonisation with only a very limited reduction in agricultural output. The most productive third of English land produces around 57 per cent of the total agricultural output of the land, while the least productive third only produces 15 per cent (Dimbleby 2021). Overall, the National Food Strategy Independent Review finds that by reducing food waste by 50 per cent, sustainably increasing farm yields by 15 per cent, and reducing meat consumption by 30 per cent, we could produce the same amount of calories from 30 per cent less land than we do now (Dimbleby 2021).

Calculating different land use scenarios, Green Alliance analysis shows that 57 per cent of farmland becomes semi natural habitat and meat and dairy consumption falls by 70 per cent, in order that use of bioenergy with carbon capture and storage (BECCS) is not required to offset carbon (Collas and Benton 2023). This pathway involves the least cost to the taxpayer. In another scenario that requires wastederived BECCS but not land-intensive BECCS, 32 per cent of farmland becomes semi-natural habitat (increasing over time: 10 per cent by 2030, 33 per cent by 2050), and meat and dairy consumption falls by 45 per cent (ibid).

For UK land to meet all our varied needs, we will often need to use the same piece of land for more than one function. A land use framework for the UK would help determine the best uses for land across the country. As part of its National Food Strategy (the response to Dimbleby's independent review), the government has announced a land use strategy for 2023. Any land use framework proposals put forward by the government should meet two key criteria: that they encourage multifunctional land use and mediate between conflicting land uses.

A land use framework should be set at and funded from the national level, with local control of delivery. This has been characterised by Green Alliance as a framework that is "more than advice, but less than command. Rather than dictating how land is used, it should show how the government proposes to fund the nature and climate outcomes that farmers and landowners can provide" (Elliott et al 2022).

³ A global target known colloquially as '30x30', which calls for 30 per cent of the world's terrestrial, inland water, and of coastal and marine areas, to be in effective protection and management by 2030.

⁴ Stakeholders have made detailed proposals for what this should look like – see the Food, Farming and Countryside Commission and National Food Strategy Independent Review, among others.

The framework should be used by central and local government in decision making, for example, to guide funding from environmental land management schemes (ELMs) for local nature recovery and landscape recovery (Dimbleby 2021). Stakeholders responding to the government's consultation on ELMs have made calls for improved use of data and evidence to determine local priorities, including land mapping data (Defra 2021b).

Horticulture has an important role to play in UK farming, but between 1985 and 2014 UK areas planted to fruit and vegetables declined 27 per cent, and imports increased significantly (Schoen and Lang 2016). The UK imports nearly half its vegetables and over four-fifths of its fruit, a third of which come from climate-vulnerable countries (Defra 2021a, English and Hughes 2023). The NFU has proposed 10 building blocks for horticulture growth, including: access to labour, water, and affordable and sustainable energy; an enabling planning policy; and supply chain fairness (NFU 2023a). The Sustainable and Healthy Food Systems research initiative proposes at least a 30 per cent increase in production by volume to 2032, to match the growth in consumption levels for health recommended in the National Food Strategy independent review (English and Hughes 2023, NFS 2021).

Recommendation: The national land use framework promised for 2023 needs to be delivered and should reflect the desirability of reducing land used for animal feed, meat, and dairy production. We recommend a target to shift 32-57 per cent⁵ of farmland by 2050 away from being used for rearing or feeding livestock, and towards nature restoration and natural carbon sequestration.

Recommendation: Shifting away from animal feed, meat, and dairy production should be accompanied by a **significant investment in horticulture** to support the agroecological production of more fruit and vegetables domestically, as well as measures to **create the right environment for private investment**. The government should recommence its work on the **horticulture strategy** for England.

Recommendation: Transparent land data mapping from the Geospatial Commission, designed to support investment decisions that encourage the right combinations of government-supported actions in the right places, should be expedited and made available at a local as well as national level.

LOCAL LEADERSHIP NEEDS TO DRIVE CHANGE

In addition to national leadership and the appropriate resourcing of environmental protection agencies, there is an urgent need for more leadership and better resourcing at a local authority level. Local authority spend on environmental and regulatory services fell by 31 per cent between 2009 and 2019 (Rose 2020). Food and farming are missing from nearly two-thirds of council climate and biodiversity strategies in the UK (Sustain 2022b).

The charity Sustain found that councils with sustainable food partnerships (cross-sector local food system bodies) scored 11 per cent higher on average in Sustain's assessment of their climate, nature, and food strategies (ibid). Local food partnerships, placed on a statutory footing, provide a vital platform for cooperation across different sectors and areas of government connected by food (Coleman et al 2021).

Recommendation: We recommend the creation of a food partnership and a council lead on food in every local area. These would support a significant uplift in local food strategies which account for local concerns and dynamics, and coordinate activities, aligned with national priorities and targets.

4.

PROVIDING FARMERS WITH MORE SUPPORT AND GREATER CERTAINTY

"I'm impressed to see farmers are stepping up. You tend to hear they are resistant to change, so I'm pleased they're taking it seriously."

"It has to be easy and cheap for farmers. And ongoing - not just linked to the government of the day."

Community panellists

A FAIR TRANSITION SHOULD IMPROVE THE PHYSICAL AND EMOTIONAL WELFARE OF FARMERS AND FARM WORKERS

The latest figures, from June 2021, put the total number of people working in agriculture in England at around 297,000 (Defra 2021c). So, what is it like to work on a farm in England? We heard a lot of respect and affection for the industry, despite its challenges. Those working as growers and pickers talked about their connection with nature and pride in being a food producer. However, lack of support and working conditions takes a toll on psychological and physical health of both farmers and farm workers:

"Emotionally I'm getting burned out, as you're expected to do so much for less than minimum wage. I want to go have a family. The job does matter to me that much that it's a hard question to ask myself [should I leave it to have children?]."



The actual lifestyle and working days of small-scale farming could appeal to a lot of people...But the main part of it is the pay, because it does limit you to how you can live your life

The Health and Safety Executive finds agriculture has the worst rate of worker fatal injury of all the main industry sectors, with the annual average fatal injury rate over the last five years around 21 times higher than the all-industry rate (HSE 2022). In 2021/22, 25 people were killed on farms in Great Britain – 22 farm workers and three members of the public (ibid).

The 2020/21 Big Farming Survey also showed a clear relationship between levels of mental health and business health among the farming community and found over a third of respondents had mental wellbeing scores to 'cause concern' (RABI 2021). Three people in agriculture and related trades died by suicide each fortnight in England in 2020 (ONS 2021b).

The farming sector is facing a lot of change, which is impacting farmers' and farm workers' resilience. In autumn 2018, 54 per cent of farms said they had introduced a significant change to their business in the previous year (Defra 2019b). Since then they have faced the trade, workforce and funding changes

that have come with Brexit, the Covid-19 pandemic, many extreme weather events, and changing technologies.

One panellist said farmers were having to think about climate adaptation faster than they thought they would need to. Another, a tenant dairy farmer, said he was preparing to change his farming practices due to increasing fertiliser bills and energy costs. We heard from our farmer and farm worker panel how the scale and pace of changes was overwhelming their capacity to adapt: "farming is facing lots of challenges from every direction".

Technology is also playing an increasingly import role in how farming is being done and will be done in the future. From artificial intelligence and machine learning to gene editing and alternative proteins, the potential for technology to alter how farming is done and who farms is profound.

Innovation on farm holds the possibility of improving climate and biodiversity outcomes as a complement to agroecology but could also bring downsides if not introduced responsibly. In the context of wider transitions for farming, we should focus on: research to understand the social impacts and consequences of technological innovation for farmers and rural communities; taking steps to bridge digital divides; and independent oversight and review to help us navigate new forms of controversial agricultural technology, to ensure safety, sustainability, and public trust (Nyman et al 2021).

Our panel offered their perspective on what they wished the public knew about farming. We heard how they wanted the people to better understand how physically challenging the work can be, out in all weathers: "you're already on your second coat at 10am in the morning". The farm workers in particular wanted the public to "understand how much effort and hard work goes in to getting the produce to the end consumer...People don't know the low wage that goes with it, or the graft... they have very little appreciation for what goes into it".

Empathy for farmers and farm workers from our community panels increased as they learnt more: "Farmers don't get the level of respect they deserve."

THE SECTOR NEEDS TO BECOME MORE INCLUSIVE AND ACCESSIBLE

British farmers and agricultural workers are an ageing workforce, with more than a third (38 per cent) aged over 65 and only 3 per cent aged under 35 (Gower et al 2022). The majority of farm holders in England are male (84 per cent in 2016, Defra 2019b). The farming workforce is one of the least ethnically diverse of any sector (ONS 2022b), and people of colour face rural racism and perceptions that visible minorities do not 'belong' in natural and rural spaces (Parker 2020).

In our interviews with farmers and farm workers, we heard from one grower that they had experienced racism even in grassroots farming social spaces. With lower average incomes and wealth, and with a far lower likelihood of inheriting land in the UK from family members, people of many ethnic minority groups face additional barriers to working in farming.

For those without land of their own, farming on tenanted land can be precarious. Tenant farmers we spoke to said there should be protection from short contracts and rising rents that can incentivise intensive farming, and the Tenant Farmers Association is disappointed with the government's response to the Rock Review of tenant farming (Clarke 2023).

Land values, too, are making the industry ever more exclusive. In a 2020 survey of 156 new farming entrants by the Land Workers' Alliance, 61 per cent struggled to access land (LWA 2020). Savills estimates that the price of low and average grade

livestock land increased 8.8 and 8.7 per cent respectively in 2021, driven by demand for new land uses to meet environmental objectives (Elliott et al 2023, Harrison and Norton 2022). Forestry values jumped by 60 per cent in the same period (ibid). In Q1 2023, the average price of farmland was a record high of £8,728 an acre (Knight Frank 2023).

Done badly, there is a risk that the transition to ELMs, alongside high land prices, will cause smaller farms to be sold to industrial farming enterprises or for corporate offsetting. Farmers should be supported to stay in the sector, but it would be a failure of policy if the sale of land by those who wish to leave farming resulted in a further concentration of land ownership in the hands of a few people and companies.

County farms are farms owned by local authorities; they are a lever that local authorities can use for helping new entrants into farming, support the economic viability of local farming, promote innovative farming methods, and deliver environmentally sustainable farming (Graham et al 2019). Yet, as local authorities face economic pressures to sell off public land, their acreage has halved in the last 40 years (ibid). Our Cumbria panel were alive to the challenges facing new entrants and expressed a desire for local government to take a more active role:

"We risk this being an increasingly closed community, where only the wealthiest investors and larger farms can afford to take on the risks of acquiring farms and land... The government should consider taking ownership of farms themselves and working with local councils to create more community farms, where food is still produced but they also put a focus on teaching people about farming and training the farmers of the future. More cooperative and community models of land ownership should also be encouraged, with people who give their time to working on farms having the opportunity to become shareholders and members who are part of making decisions about the future of the land."

The model of public-common partnerships could help promote broader ownership of land and share the burden of higher land prices. Conceived as an alternative institutional design to market or state organisation structures, public-common partnerships involve co-ownership and governance between relevant state authorities and community-owned organisations, perhaps with relevant third parties such as trade unions and experts (Milburn and Russell 2019).

Small scale horticulture should in theory be a good option for new entrants to farming, but many barriers make this a difficult option. A Somerset grower we spoke to said many advertised plots are far too big for new entrants to handle. Short term tenures make it harder to invest in crucial infrastructure, or crops which take longer to yield profit: "five to ten-year farm business tenancies are what we dream of".

We heard from the same grower that high quality sites may be reserved for development rather than food production: "it would be great if we weren't offered sites next to motorways, but clean accessible sites". Insurance, such as for injury and climate impacts, can be difficult to obtain, and with small margins, loss from extreme weather can cause a small business to close. Co-ops could support small scale growers, by pooling resources for administrative and non-farming tasks like farm maintenance and sales.

Recommendation: Local authorities should be prevented from reducing the overall acreage of county farm estates. An 'acre-for-acre' policy would allow for buying and selling land to rationalise assets, as CPRE has proposed (Graham et al 2019).

Recommendation: Supported by a new Defra funding scheme, local authorities, community organisations, and public-common partnerships should be granted right of first refusal to buy farming land for sale, to rebuild county farms or similar structures for the benefit of new entrants and local community access to land and sustainable food growing.

THE IMPORTANCE OF LOCAL EDUCATION AND TRAINING

Our Cumbria panel also told us that they wanted to see better local education and work opportunities in agriculture and nature conservation so "the county doesn't get left behind": "We should reopen the local agricultural college, and bigger farms should provide more support for apprenticeships and have on-farm schools for young people".

Likewise, in Somerset we heard that "apprentices need incentives to work on farms, and accessible transport and accommodation, and farmers need to be encouraged and supported to take on apprentices and people new to farming. There should be more opportunities for local people, particularly in things like cheese production that preserve historic local skills and celebrate things that we're famous for in Somerset."

Training and development opportunities need to be career-long, especially in such a rapidly changing sector. A new T Level in agriculture, land management and production, to be rolled out next year, is welcome. Peer-to-peer networks, such as the Nature Friendly Farming Network, are a trusted and cost-effective approach to delivering guidance and support (Nyman et al 2021).

Recommendation: Increase investment in future farmers and farm workers through investing in local apprenticeships and training colleges and doing more to promote the sector as career choice to a wider range of people.

GOVERNMENT SUPPORT FOR FARMERS MUST GO FURTHER

Many farming businesses stay viable because they are supported by public direct payments. Every year, £3.2 billion is paid to UK farmers, of which £2.4 billion is spent in England. Historically, farmers have been rewarded for bringing every additional acre of land into agricultural production, regardless of the suitability of the land for farming. This, coupled with low profit margins has encouraged unsustainable farming practices to maximise yields but resulted in increased emissions and damage to nature.

Most payments still simply reward landowners for their area of farmland – an annual payment per hectare of farmland, with a low compliance requirement to maintain the land in good condition. These funds come from the basic payment scheme (BPS), which the government has committed to phase out by 2027.

These are being replaced by the government's environmental land management scheme (ELMs). Funding opportunities for farmers include the sustainable farming incentive (SFI), which provides farmers with a range of paid actions, for example to manage hedgerows for wildlife, plant nectar-rich wildflowers or manage crop pests without the use of insecticides. There is also the countryside stewardship scheme, which rewards farmers for taking coordinated action, working with neighbouring farms and landowners to support climate and nature aims, and the landscape recovery scheme, which supports large-scale nature recovery projects, protected sites and habitat creation.

With the BPS, the largest 1 per cent of farms receive as much support as the bottom 50 per cent; half the funding goes to 12 per cent of farms (Dowlin and Carter 2016). Billionaire James Dyson received £1.9m in such payments in 2016 (ibid).

Most farms on highly productive land don't require current BPS subsidies to be profitable, but they have been receiving 40 per cent of these payments (Collas and Benton 2023). Instead, these farms should be incentivised through ELMs to change their agricultural practices, so that yields remain high while environmental damage is minimised (see description of three compartment model, above).

Farms on lower-yield land are less likely to be profitable without current subsidies (Collas and Benton 2023). Government can support these farms to be viable through publicly-funded nature restoration alongside private farming income (ibid).

Paying farmers on the poorest quality land to create semi-natural habitats, could actually see their incomes increase compared to BPS (Collas and Benton 2023). With the least productive fifth of land producing less than 3 per cent of food, this would not significantly decrease food production. The NFU welcomed a recent announcement that Defra would increase ELMs payments to upland farmers in line with lowland farm payments (NFU 2023b).

Farmers are custodians of the land; they are also food producers, and we heard from farmers that many in the industry would not want to let go of that identity to perform purely environmental work. Managing land for nature and climate is crucial work, and we should value this work as highly as food production.

As ELMs ramps up and nature restoration and carbon sequestration take their place alongside food production as major parts of UK land use, technical success in meeting net zero and nature targets will depend on human creativity and collaboration, and pride in the positive outcomes this work produces may come to equal farmers' current pride in feeding the nation.

The shift to paying farmers and land managers for carrying out actions that provide environmental and climate goods and services, rather than on the basis of land acreage, is welcome, but many have significant concerns about how ELMs is developing. From the farmer perspective, even after the update announced by Defra in February 2023, Minette Batters, president of the National Farmers' Union, warned that progress on developing the scheme was "stuttering and partial" and "there is a worrying lack of transparency on how the budget is being spent" (Evans 2023).

The farmers and farm workers we spoke to supported climate and environmental action and wanted up-front and long-term funding to reflect the real cost of transformation and maintenance of environmental measures. A recent survey of NFU members shows declining farmer confidence in ELMs and phasing out of BPS (White 2023), however, with 82 per cent saying the phasing out of current farm support payments was negatively affecting business confidence. Over half were concerned about the introduction of new government support, and those saying they would engage with one or more ELMs schemes was down to 55 per cent, from 68 per cent in 2022. The recent Farm to Fork summit, held with farmers at Downing Street, was described as an "empty meeting", and did not factor in the relationship between climate and food security, either in domestic production or trade (Partride and Butler 2023, Lines 2023).

The ELMs offering to upland farmers has recently been improved, but horticulture farmers have concerns that ELMs does not have enough provisions for them. In May 2023 the government announced it would abandon the Horticulture Strategy, announced in the Government Food Strategy in June 2022 and intended to replace the EU Fruit and Vegetable Regime. One challenge we heard from stakeholder interviews was that carrying through the restrictions on farm size from the BPS –

⁶ See IPPR blog 'Farmers and environmentalists agree – food security is only possible if farming is environmentally sustainable' (Rankin et al 2022)

excluding farms below five acres – was particularly impacting horticulture, which can be highly productive even on small areas of land.

Every field on every farm is different, and the best measures to take for sustainable food production, carbon sequestration and nature restoration will vary significantly across the country. Farmers know their land best, but they cannot be expected to make complex decisions affecting their business without the right information and advice. We heard from farmers and farmworkers that they want peer-to-peer advice, case study examples, and a bottom-up approach to change – well-informed advice with farmer discretion over implementation, rather than the "top-down, heavy-handed approach" they had experienced in the past.

There are also concerns about ELMs from the environmental perspective. While there is recognition that the schemes need to be attractive to farmers, environmental groups we spoke to are concerned that the payments to incentivise farmers, such as the up to £1,000 SFI management payment to compensate farmers for the administrative costs of participation, are not yet complemented by enough measures that will really make a difference in terms of carbon and nature. We heard calls for 'bundling' SFI standards into the combinations most effective for climate and nature goals, and giving farmers more targeted direction rather than the current free-choice set up. We also heard that ELMS needs to ramp up faster, and BPS be wound up more quickly, as a wasteful use of resources going towards potentially unhelpful activities.

Analysis suggests a budget of £2.42 billion per year for England (£4.4 billion for the UK) is needed to support farmers to ensure carbon and wildlife outcomes to meet climate and nature commitments and policy priorities (Rayment 2023). This excludes other investments for public access or educational access (such as duckboards for peat bog access, and maintaining stiles and woodland paths), and for pollution control or farm waste management (such as investments in slurry storage and treatment, farm buildings, infrastructure and machinery).

The ramp up of ELMS is mirrored by the phase out of BPS, which will continue in the form of 'delinked payments' from 2024-2027. As long as a farmer activates BPS entitlements by 2023, they will not need to farm or hold farming land to receive these wind-down payments from 2024-2027 (Defra 2023g).

Recommendation: A package of support for farmers that includes a long-term budget for farming and land management payments based on environmental need, targeted support for those most affected by energy price increases, a plan to move to renewable energy sources, and more support for training and advice, through the development and expansion of peer-to-peer environmental farming networks. We recommend that the government allocate £2.4 billion a year for the next decade in England for environmental land priorities, excluding access and farm pollution and waste control.

Recommendation: To maximise the public good and ensure value for money for the tax payer, this long-term commitment in funding should be accompanied by a strengthening of the regulatory baseline for farming in the UK in line with aims and targets for net zero and the recovery of nature on land (as proposed in Nyman et al 2021).

Recommendation: End government subsidies in the form of de-linked payments to farms with over £100,000 net annual profit from food sales, starting in 2024.

HARNESSING THE POTENTIAL OF PRIVATE MARKETS REQUIRES PUBLIC SECTOR LEADERSHIP AND INCREASED REGULATION

In addition to government agricultural payment schemes, farmers and landowners can also access payments for carbon sequestration and storage on their farms through private markets. For example, a farmer could apply for a tree-planting project on their land to be accredited with the Woodland Carbon Code and through this external verification can demonstrate that the project delivers carbon benefits that can then be sold to other businesses in the form of carbon credits.

The challenge for farmers in this emerging market, particularly those operating outside of government-backed codes, is the absence of robust guidance, protocols, and industry experience. There is currently no guidance on using land best suited for the proposed function. Carbon offsetting may also make it harder for farmers to accurately account for their carbon emissions, when their sequestered carbon is on the balance book of the 'buyer' of carbon credits (Smith 2021).

The starting point must be to decarbonise business models, with offsetting considered only for residual emissions. In Wales, many farms have been bought for tree planting offsetting, with decisions made over the heads of local communities, leading to accusations of 'corporate land grabs'. The forthcoming government land use framework should include mechanisms to arbitrate issues such as these.

We heard from stakeholders that there is great potential for the private sector to better support farmers in action for climate and nature, and that the potential flexibility and ability to leverage significant funds was an exciting prospect. However, at present these markets can be hard to navigate and we also heard calls for the public sector to do more to create the conditions for private markets to fall into place behind. The 2023 government green finance strategy set out principles to accelerate carbon market development: a cohesive regime of interventions across government and the private sector; clear regulatory responsibilities and proportionate regulations; and high-integrity voluntary markets (HMG 2023).

The government's target for private investment into nature recovery in England is to raise at least £500 million per year by 2027, rising to over £1 billion per year by 2030. Announced in the government nature markets framework in March 2023, Defra are working with the British Standards Institution (BSI) to develop a range of nature investment standards to prevent greenwashing and build confidence (BSI 2023). Defra's core principles to ensure integrity and value in nature markets are additionality (a gain beyond existing measurements), no double counting, robust quantification, lasting benefits, transparency, and verification (Defra 2023f).

Recommendation: Government should prioritise work outlined in the green finance strategy and nature markets framework so that viable markets are realised as soon as possible.

Recommendation: The creation of an **Office for Carbon Removal,**⁸ as proposed by Green Alliance, to regulate the carbon market and the legitimacy of offsetting offers and create trust in the market for investors (Elliott and Ritson 2020).

Recommendation: The forthcoming government land use framework should contain mechanisms to **discourage unsuitable offsetting activity** and further agglomeration of land ownership, and to give local communities a say in land use in their area.

⁷ Green Alliance estimates that the yearly value of the carbon that could be sequestered on UK land would be £1.7 billion at £50 per tonne (Benton et al 2022)

⁸ The Green Finance Strategy says that "Regulatory responsibilities should be clarified, and regulations introduced in a proportionate manner where there is clear evidence that doing so would improve the integrity and scale of the UK market".

5. ADDRESSING UNFAIRNESS THROUGHOUT THE SUPPLY CHAIN

"If someone said fairness, [that means] everyone at every stage in the chain isn't exploited: from those working on farms, to packaging, to supermarket workers selling it, to the consumer at the end. Whether it's the level of pay to do the job, the conditions, the treatment of animals on the farm, those that use habitat alongside farmland, everyone in each sector is still accounted for, able to work and be in a fair environment; no-one's backed into a corner."

Community panellist

FARMERS ARE NOT GETTING A FAIR RETURN FOR THEIR PRODUCE FROM THE MARKET

A key challenge for many farmers is that it is difficult to change their practices, grow different crops, regenerate their soil, and reduce their impact on nature whilst their produce generates so little economic value for them. Many are not making the kinds of profit margins that would allow for investment in the necessary changes to their farming practices. Pricing structures, supermarket deals such as price promotions and discounts, and product specification requirements (eg no wonky vegetables) make it hard to get a fair return and then invest in higher standards (Sustain 2022a).



The financial situation is pretty bad and it's hard because of the amount you need to sell your vegetables for. For what you get, the boxes are a reasonable price, but it's disheartening that three people aren't getting minimum wage

Farm worker panellist

In 2015, the average price paid for milk to farmers was 24p per litre – the same price paid in 1995. That is in spite of 20 years of inflation increasing the costs of many goods and services by about 70 per cent in the same time period. The most recent official figures show that over the past year the cost of a pint of milk has risen by 7p to 49p – a 17 per cent increase. However, the price of milk in shops in 2022 was lower than in 2012, even though production costs have increased. In 2022, Britain's largest dairy co-operative, Arla, increased its farm-gate prices by 31 per cent to nearly 38p a litre, but costs are still increasing (Wood 2022).

Research by Sustain finds that farmers can be paid more without retail prices rising. Whilst this does vary across food types and level of processing, "an increase in farmgate price, even a doubling, would not have a huge impact on shelf price given the very small portion of the costs that relate to farming" (Sustain 2022a). There is room for savings across processing, packaging, storage, and transportation – all moments where profits also get made.

"We have a hugely problematic supply chain in terms of costs, complexity and extracting value. Farmers get a tiny portion of the final product price and little or even no profits from selling into mainstream supermarket supply chains. That bears too little relationship to the efforts they must make."

Sustain 2022a

GOVERNMENT INTERVENTION IS NEEDED TO CHANGE FOOD RETAIL PRACTICES

The UK's food system is dominated by ten multiple retailers who control between 95-98 per cent of the market (Sustain 2022a). Supermarkets buy at discount and sell at volume, delivering a lot of food at low prices.

As charity Sustain describes it, it is an approach characterised by overproduction, high turnover, and high food waste caused by over ordering, poor forecasting, and cosmetic specifications (ibid). Pressures to keep food cheap means small profit margins even for large retailers, but the scale at which many operate makes it easier to cut overheads. Alcohol, tobacco, and confectionery are major earners and fresh food prices are artificially low to get customers through the door (Jack 2021).

We heard from one higher-end retailer how, to some extent, all food prices are anchored against the cheapest options – Aldi and Lidl – and going much higher than these would result in lost custom. We heard from the same interview how firmly retailers' business models are rooted in economies of scale, with little tolerance for variation:

"It is very expensive for any retail company to act alone. As soon as you start to do things differently, needing bespoke systems etc, then costs rocket. If everyone did it together then the costs wouldn't be that high. Scale is everything."

Retailers told us that they wanted to see more legislation to force them to act in consort: "politician should legislate it, so everyone has to do it". They wanted to see better legislation, as "this is the best way to create change at a market or system-level". Retailers do a significant amount of pre-competitive cooperation. On themes such as antibiotic reduction and palm oil, many come together to help develop solutions, as well as collectively press government for change. For example, supermarkets backed the new due diligence requirements on businesses regarding deforestation created by the Environment Act. There is a valuable role they can play in providing political cover for harder decisions. Fears about competition law compliance can both legitimately and erroneously put companies off collaborating, but the Competition and Markets Authority has indicated new plans to tackle genuine and perceived barriers from competition law to collaboration in response to the climate crisis (George 2023).

Intermediaries between producers and retailers are often large companies that could also play a vital role in creating change:

"Go far enough back, the list of companies we all work with are the same. Tesco will use some of the same supply chain as Waitrose. It's a hugely interconnected and interdependent supply chain. To make an impact further up the supply chain needs a critical mass of demand downstream."

Interviewee, food retail

Some of the major brand manufacturers make more significant profits after tax and interest than producers or retailers, or other intermediaries (Sustain 2022a). Alongside the existing Groceries Code Adjudicator, which covers the relationships between supermarkets and their immediate suppliers, the Agriculture Act (2020)

(regulation 29) provides for a new body to regulate the rest of the supply chain, yet to be created.

Many interviewees acknowledged that the risk burden for farmers is currently too high. Longer-term contracts can give farmers confidence to invest in improving standards, which is a choice some retailers make at the expense of commercial advantage lost through reducing flexibility. Risk sharing in supply chains can be contractual; it can also be about access to finance. For example, UK supermarkets Tesco, Sainsbury's and Waitrose have invested \$11 million in a new system of financial incentives for farmers in Brazil who commit to deforestation-and-conversion-free soy cultivation. Such international examples could provide inspiration for domestic interventions – providing new opportunities for farmers to access capital.

Crucially, farmers need greater power when negotiating prices and deals. The Agriculture Act 2020, goes some way to supporting this in providing "Powers to collect and share data from those within or closely connected to the agrifood supply chain ... [that] will help ... producers to manage risk and market volatility". The results of this legislation have yet to be felt, however, and increased transparency, whilst welcome, is not however sufficient to reset the scales of power.

Recommendation: Using powers established in section 29 of the Agriculture Act (2020), the UK government should fast-track the creation of new statutory codes of conduct for fair supply chain practice across agriculture and food manufacturing. These new codes should establish minimum standards, tackle 'just in time' approaches and cosmetic specifications that create waste, and include legally binding rules on price negotiations, overseen by an independent adjudicator with resources to undertake own investigations, the ability to maintain confidentiality, and the ability to fine.

Recommendation: Mandating food waste disclosure for large food businesses. This must account for waste through the whole supply chain, so businesses do not get away with 'hiding' waste behind the farm gate.

TRADE DEALS SHOULD NOT UNDERCUT BRITISH FARMERS AT THE EXPENSE OF BRITISH STANDARDS

A key challenge for farmers is being undercut by international competitors in a global food market:

"Arla who buy most of our milk have done a lot of work with supermarkets making sure they buy British, whereas with fruit, there is not that allegiance. The supermarkets say they have to protect consumers, so go to Poland and buy cheaper."

Farmer and farmer worker panellists

Following departure from the EU, the UK government is pursuing a series of new free trade agreements, in addition to that already signed with the EU and the rollover deals transferred over from its membership of the bloc. This has included deals that British farmers have argued undercut their sector, such as the one struck with Australia in 2022.

When food produced to lower environmental standards than apply to domestic farmers has unfettered access to UK markets, we risk both undermining climate and nature efforts domestically and exporting the UK's ecological footprint elsewhere in the world (Nyman et al 2021). Public polls consistently show that most people support blocking importing food produced to lower standards than domestic products (Conservative Environment Network 2020). In a recent poll, 63 per cent agreed it is more important that the government stands up for British farmers and

their high standards, even if this leads to higher food prices for consumers (More in Common 2023). In the same poll, over 75 per cent thought government should walk away from trade deals with countries that don't uphold British standards on farmers' rights, and 65 per cent thought the same on animal welfare (ibid). The Trade and Agriculture Commission final report (2021), following the suggestion of the National Food Strategy (2021), has proposed the creation of 'core standards' based on the compliance of traded agricultural goods with key environmental, animal welfare and safety requirements to ensure imports are held to the same standards as domestic produce.

The UK Trade and Business Commission and WWF have called for these core standards to be set in domestic legislation (UKTBC 2023, WWF 2021). This would apply to imports from all countries, including those with which the UK has existing free trade agreements.

World Trade Organisation (WTO) rules require that countries treat imports from different countries the same – known as 'most favoured nation' principle, and that imported products not be treated less favourably than domestic products (except for tariffs, which are a border measure) – known as the 'national treatment' principle.

Although setting core standards for imports might obey the WTO rules in principle, they may result in de facto discrimination, if some countries are disadvantaged in practice, or if the standards are a pretext for protectionism, as has been the reaction to EU plans to hold third countries' food imports to its own sustainability standards (Foote 2022).

'WTO GATT Article XX general exceptions', however, exempts measures from being considered WTO violations based on various domestic policy goals, including protection of human, animal or plant life or health, and conservation of exhaustible natural resources. Meeting the core standards may be particularly challenging for developing nations; the UK should consider appropriate financial support, transition periods, and exemptions.

Recommendation: New primary legislation should subject food imports to core environmental and animal welfare standards. This would ensure imports are produced to the same environmental, climate, animal welfare, workers' rights, and food safety standards as domestic produce. This should be done with sensitivity, such as a transition period to give trade partners time to adjust, and countries of the global south should be supported logistically and financially to meet the standards.

A FAIR TRANSITION FOR FARMING DEMANDS AN INCREASED FOCUS ON THE FOOD-TO-GO SECTOR

Tackling unfairness in the markets farmers access means looking beyond just food retail. Just under half (45 per cent) of food and beverage expenditure is spent on restaurants and other out-of-home food services (Statista 2020), and the sector is rapidly expanding. The food-to-go sector generally is more diverse than supermarkets, with many SMEs and franchise businesses.

The standards to which food retail are held is generally much higher than in the food-to-go sector. For example, manufacturers and retailers of packaged foods are held to higher health and sustainability standards than the requirements placed on manufacturers and retailers of unpackaged food (Food Standards Agency 2022).

We heard that regulation of the food-to-go sector is seen as harder because of the diversity of businesses within it. Some small-to-medium businesses might struggle to manage new legislation. However, we also heard that it is often the medium-

sized businesses that have the furthest to go, with some big businesses, such as major restaurant chains, exemplifying good practice in procurement.

Recommendation: New regulations with adequately resourced local enforcement are needed to raise standards in the food-to-go sector – increasing parity with food retail. This is an area ripe for further research and investigation; it is a neglected part of the supply chain in sustainability conversations.

PUBLIC SECTOR BUYING POWER SHOULD BE HARNESSED TO SUPPORT LOCAL. SUSTAINABLE FOOD PRODUCTION

Across the public sector, more can be done to influence the market and ensure public spend supports higher standard British farming and climate-friendly diets. The public sector spends around £2.4 billion a year on catering, providing a direct way government can drive demand and reshape supply chains in the public interest (Defra 2021d). UK councils have opportunities to encourage localised purchasing and switch to a higher proportion of sustainable produce, such as vegetables, pulses and grains, across a range of locations such as schools, meals in the community, and social services catering.

There is still a long way to go. The government's School Fruit and Vegetable Scheme provides roughly 450 million pieces of fruit a year to 2.3 million children, but just 15 per cent of apples and 5 per cent of pears provided through this scheme are British grown (Soil Association 2019). The 2019 Farming Food and Countryside Commission final report called for public bodies to source 40 per cent of their food from local sources by 2021 and escalate the target to 80 per cent local and sustainable sources in seven years (RSA 2019).

There are international precedents for this. Copenhagen has transformed its public procurement and its local supply chains by setting targets for organic purchasing and now 72 percent of all food on Copenhagen's public plates comes from organic producers (Food Nation 2019). Denmark has pushed up the quality of its food system by setting ambitious targets for organic produce. It set and has now surpassed its 90 per cent public procurement target for organics, at no extra cost. This drive led by public institutions created new reliable markets for agroecological farming. France has set up a National Institutional Catering Council to ensure that at least 50 per cent of the food bought by the public sector is organic, sustainable, or high quality (Ministry of Agriculture and Food 2019).

In February 2023, Labour leader Keir Starmer promised Labour would reform public sector procurement by ensuring that 50 per cent of all food purchased is produced locally and sustainably. This is similar to the UK government proposal for a new set of food procurement standards for the public sector, although the target of 50 per cent of public sector food spend is for either food produced locally or food certified to higher environmental production standards, not both. How broad the definition of 'local' is – UK-wide, regional, or local area – matters too.

Recommendation: Create higher food standards for public procurement to increase market opportunities for high welfare, nature and climate-friendly food. This should involve tightening the definitions of 'locally sourced' and 'higher environmental standards', as used in the government's current commitments.

FARMERS NEED NEW ROUTES TO MARKET

Different routes to market could increase fairness across the supply chain. Support for infrastructure beyond the farmgate, such as on more local/regional processing, food hubs, and marketing, will be needed. For every pound of turnover, local food businesses create roughly three times as many jobs as a supermarket (CPRE 2012). For every £1 spent in a veg box or farmers' market there is £3.70 in economic, social,

and environmental returns (Jaccarini et al 2020). A not-for-profit wholesale system can return three times as much to farmers compared to supermarket systems (Sustain 2022a).

There is a role for local authorities to do more to support food producers to sell their products locally, for example by reducing stall hire fees, coordinating with different local food producers to sell their produce in one store, providing low costs space for food hubs and processing facilities, and reducing business rates for empty high street shops. Digital platforms, such as Dynamic Food Procurement, allow small volumes of produce from multiple smaller producers to be aggregated into large volumes, giving small producers access to larger contracts. From the consumer point of view, platforms could give easy access to produce from a range of suppliers (Sustain 2022c).

Recommendation: Invest in local retailers and shorter supply chains through mechanisms that also support high street regeneration, such as tackling high local business rates.

6. CHANGING OUR RELATIONSHIP WITH FOOD

"I didn't know that food consumption contributed to climate change."

Community panellist

THE PUBLIC ARE NOT AWARE OF THE SCALE OF THE PROBLEM

Whilst we need a radical shift in how we use our land, plans to decarbonise the agriculture sector in the net zero strategy are currently too reliant on the take-up of low-carbon farming practices and productivity improvements:

"A reluctance to consider demand-side measures (ie encouraging healthier diets with reduced consumption of meat and dairy) as a complementary measure therefore puts both emissions reduction from agriculture and removals from land at risk."

CCC 2022

Common to all the community panels was a sense that they were "surprised at the scale of what we have to do"; "someone should have intervened before this point". Whilst everyone knew about the climate and nature crises, most had only limited engagement with the issues and hadn't thought about the link between these crises, what they eat and how the land around them is used: "Before this weekend I had no idea. It has completely opened my eyes to a lot of things".

There was a strong sense that on learning these things for themselves, they now wanted everyone else to have the same information. They believed educating young people was essential, but that "adults need educating as well"; we need "more public information".

Whilst our community panels were keen on better information to support their choices, they also wanted the options available for them to choose from to change. In particular, they wanted 'bad options' to be removed – for businesses not to sell products that don't meet the kinds of environmental and welfare standards they expect, and to take more responsibility for shaping consumer choice through pricing and advertising.

As one panellist put it "It annoys me whenever anyone talks about this kind of thing, individuals being told stop eating meat buy locally, and everyone will be better... It's put on us, but the government should put more legislation on supermarkets... There's only so much we as individuals can do personally."

The CCC is clear that we need to cut meat and dairy consumption by at least 20 per cent by 2030, and 35 per cent by 2050, and reduce food waste by 20 per cent (CCC 2022; CCC 2020). This should not be left to consumer choices and behaviours; changes within the supply chain are fundamental to creating the conditions for public behaviour to shift.

Recommendation: A government public information campaign on role of food and farming in climate and nature crises, delivered through IPPR's previously recommended GreenGo scheme (EJC 2021).

Recommendation: As called for by IPPR previously (Coleman et al 2021), establish **nationally agreed targets to reduce UK consumption of meat and dairy and improve the quality of meat and dairy consumed.** The strategy for delivering on these targets should be focused on supply-side as well as demand-side measures.

Recommendation: To create competitive pressure and support a meat and dairy consumption reduction target, IPPR supports the National Food Strategy's recommendation to introduce **mandatory reporting for large food companies**, of sales of food types (vegetables, fruit, protein including meat, dairy, fish and alternative sources, and food and drink high in fat, sugar or salt) and major nutrients (fibre, saturated fat, sugar and salt), by value and volume.

WE NEED A RENEWED CONNECTION WITH FOOD AND THE LAND IT COMES FROM

Many community panellists felt that people had "lost touch with how food's produced" and that practical hands-on experience would make a big difference, especially to young people. They thought this would help increase awareness of seasonality of produce; "a lot of problems we have are down to wanting strawberries in December". They worried about the environmental impacts of moving food around, about the fragility this introduced into supply chains that might not withstand global shocks: "importing less [means] being less beholden to others".

They also wanted to access and celebrate good local produce and support their local farmers. They saw supermarkets as having a key role in developing the market for local food – "I'd like to walk into a supermarket and see a section of local produce. And for people to be excited about it". They wanted to see more farmers' markets and local farm shops, open at convenient times, accessible to get to and stocking affordable products – "I go to Tesco because it's easier".

We heard that they would like to see stronger relationships between local farmers and their communities, with community and charitable initiatives better linked up with local farms. They wanted to see more "community-based opportunities, opportunities for people to come together".

Our panels also wanted a fundamentally different relationship with the food they eat, and the farms that produce it. They want a much closer relationship with local food production and want to engage more with local farms and farmers. One of the systemic barriers to this is that a significant proportion of the general public are disconnected from rural land. Land ownership in the UK is highly unequal. One per cent of the population own half of all land in England (Shrubsole 2019). Trespass laws mean much of the countryside is out of bounds for the public, and access to national parks is unequal, with people from minority communities experiencing racism, and people on low incomes excluded by lack of affordable transport provision.

Our panels wanted to feel more involved and included in how they land was used, and for the community to be more involved in supporting their local farms:

"It should be easier for people to invest in supporting smaller farms and take a stake in how the land is used in Kent. Communities could raise money to support farmers with the cost of cleaner energy and nature-friendly projects."

"Would be nice for them to let the public know what they're doing and what people can come down and get involved in."

Recommendation: Improve the link between public and farms – including raising awareness of 'Educational Access' payments for hosting farm visits available under current mid and higher-tier countryside stewardship and for the payments to also be included in the ELMs countryside stewardship plus and sustainable farming incentive.

Our community panels talked about how "society is not set up to make it easy to buy the things that you know are better for you, the environment, and local farms." What and how we eat matters for human health and wellbeing; it is also central to people's identities. Almost a third of British adults are eating alone 'most or all of the time' (Fleming 2019), with single-occupancy homes the second-most-common household size in Britain (ONS 2022). Two-thirds of our calories typically come from highly processed foods (Food Foundation 2016); the UK has the highest consumption of ultra-processed foods in Europe (Soil Association 2021). Around a quarter of the calories we consume are eaten outside the home (DHSC 2021). We are eating processed food, and on the go. This is a market situation, and culture, distinct from the rest of Europe.

Ultra-processed diets are far removed from the products our farmers grow. Ultra-processed diets are fuelling both the planetary and human health emergencies (Soil Association 2021). As identified in a landmark Lancet paper in 2019, at a global scale, obesity, malnutrition, nature loss and global heating are all crises which share common underlying societal causes, and ultra-processed foods are one of the leading drivers (Swinburn et al 2019).

We can look to international examples for other governments taking steps to discourage consumption of ultra-processed foods. Israel, for example, uses food labelling to help consumers to identify and avoid highly processed food and France has introduced a percentage reduction target for ultra-processed foods in the national diet (Soil Association 2021).

We heard from our panels they wanted to see less advertising of "products that create demand for things we never needed", and more focus on stocking and selling produce that is better for people's health and the environment. Due to come into force in January 2023, the UK government has now pushed back to October 2025 the ban on television and online advertising for foods high in fat, salt and sugar before the 9pm watershed (DHSC 2022).

Recommendation: Introduce a non-essential food levy on products that contain excessive levels of sugar, fat, and salt. We recommend an 8 per cent levy on non-essential foods with a calorie density greater than 275kcal/100g.

Recommendation: Government should **implement a total ban on the advertising of ultra-processed meat products**. This would support both a shift away from ultra-processed food and a reduction in meat consumption, focused on the kinds of meat products that it is easiest to replace with plant-based alternatives.

⁹ Ultra-processed foods typically contain little or no whole foods, are ready-to-consume or heat up, and are fatty, salty or sugary and depleted in dietary fibre, and made using industrial additives and processes that wouldn't be found in a household kitchen (Soil Association 2021).

7. ENSURING EVERYONE CAN AFFORD A HEALTHY, SUSTAINABLE DIET

"We need a society where people have enough affordable food... We shouldn't have politicians celebrating the opening of foodbanks. It's immoral"

Community panellist

IT'S NOT AS SIMPLE AS FOOD BEING TOO CHEAP OR TOO EXPENSIVE

From some stakeholders we heard that the cost of food is too low and needs to rise to reflect its true value. Some farmers talked about wanting to break the public's addiction to cheap food. Through conversations with the public we heard a desire to pay farmers fairly but keep costs down for the consumer, and worries that good quality, healthy food is not currently affordable for all. They reflected on the accessibility as well as cost of food and the challenges of living in places where access to shops with healthy and affordable fresh food is limited.

The UK is seen as having cheap food. The proportion of household income on food has more than halved over the past 60 years, according to the Office for National Statistics (ONS 2022a). Households spent an average of 14 per cent of their weekly income on food and non-alcoholic drinks in the year to March 2021 (ibid), in contrast to 30 per cent in the 1950s (Defra 2019b). There are more low-cost food options available now than in the past. Aldi and Lidl have 16 per cent of the UK's grocery market (Parr 2022), making it much harder for other supermarkets to raise their prices. This has created a huge competition for customers, putting ever more pressure on farmgate prices. However, while more cheap food is now available, the change in average household spend is not only influenced by the cost of food. It also reflects incomes increasing, the size of households going down, and costs in other areas of our lives going up. Whilst the proportion of income we spend on food has decreased, how much we spend on housing and transport has significantly increased, for example.

In 2018, research by the University of East Anglia found that food consumed in the UK is the cheapest in Western Europe – costing 8 per cent less than the EU average, according to EU statistical body Eurostat (Chakraborty and Dobson 2018). However, international comparisons on food spend made using the USDA Economic Research Service's dataset find that compared to other countries of a similar GDP per capita our share of spend on food is not particularly abnormal, and in absolute terms is comparable to countries like Spain and Canada (AHDB 2020).

As we heard from stakeholders, the public are also generally not aware of the extent to which they are in fact paying for their food in a number of different ways – for example through taxes paying for the externalities arising from the current food system, such as flooding, pollution, and poorer public health. Under the current

system of direct payments, every taxpayer in England pays £83 to a landowner each year, on top of what they spend on food (Collas 2022).¹⁰

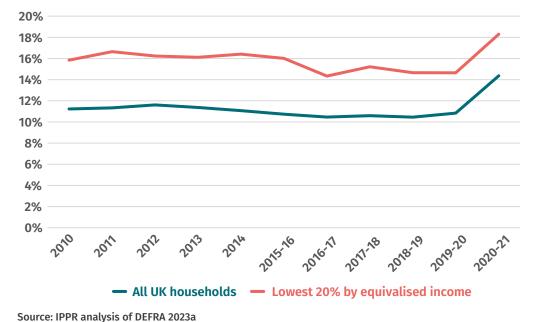
Is our food too cheap for farmers to make a decent living? Returns for farmers could increase through shorter supply chains and a fairer distribution of profit through the supply chain, without the price for consumers rising (Sustain 2022a). However, there are some food products which are priced so low – such as carrots – that margins across the supply chain are tiny (ibid), and therefore some level of price increase feels an appropriate mechanism for ensuring the farmer sees fair reward for their produce. This should not, however, be a blanket approach; there are plenty of instances where margins are sufficiently high or where value is unnecessarily lost within the supply chain. Tackling food affordability needs to be about more than the price of food.

IT'S HARD FOR LOWER-INCOME FAMILIES TO AFFORD A GOOD DIET

While there is a lot of cheap food available in the UK, this food isn't always good food. The Eatwell Guide is Public Health England's official guidance on a diet that meets standard nutrient requirements. Analysis by the Food Foundation showed that the poorest 50 per cent of households who wanted to eat a diet following Eatwell guidelines would need to spend close to 30 per cent of their disposable income on food. The lowest 10 per cent of households by income would need to spend almost 75 per cent (Scott et al 2018). As figure 7.1 shows, lower income households already spend more than average on food and drink. The co-existence of unhealthy diets and food insecurity is a logical consequence of the UK's food system, where healthy nutrient-rich foods are three times more expensive than unhealthy ones (Jones et al 2014).

FIGURE 7.1: LOWER INCOME HOUSEHOLDS SPEND MORE THAN AVERAGE ON FOOD AND DRINK

Trend in share of spend going on food and non-alcoholic beverages in low income and all UK households, 2009 to 2020/21



¹⁰ As we shift to a new system, this money will go less towards straight-forwardly subsidising food production and more towards nature and climate friendly interventions.

Due to a combination of pressures from the climate crisis to the war in Ukraine, the cost of food in the UK has risen over the last year. Food and non-alcoholic drinks inflation has been at least 16.4 per cent since October 2022, reaching a high of 19.1 per cent in April (ONS 2023b) (the rise in prices for the lowest-cost grocery items has been similar to overall price increases (ONS 2022d)). At the beginning of 2023, food price inflation was the second largest contributor to the annual rate (ONS 2023a).

Because the proportion of income spent on food is higher for lower income households, they are disproportionately affected by food price rises. This is impacting people's ability to buy enough to feed themselves. In September 2022, a quarter of households with children had experienced food security in the past month (Food Foundation 2022).

Meanwhile, supermarkets and food manufacturers' profits have been increasing. Together, the big supermarkets' profits rose 30 per cent in 2021 compared to 2019 (Unite 2023), with the top three supermarkets nearly doubling their combined profits to £3.2 billion over the same time period (ibid). Eight of the top UK food manufacturers made a combined total of £22.9 billion in 2021, up 21 per cent on 2019 (ibid).

As already discussed, there is a relative lack of transparency and comparability of the accounting for overheads and profit margins in much of the food chain (Sustain 2022a). As such, it's hard to tell where profits come from. While wholesale price increases will be playing a part, the high profit rates suggest big supermarkets have been able to raise prices more than the increase of their costs (Unite 2023). It's also possible increased profits may be coming from beyond groceries, such as petrol sales (ibid).

In response to ongoing food inflation, government has discussed voluntary price limits for basic foods with retailers. A possible model for this is France, which, in a voluntary agreement with retailers, has introduced a temporary cap on many food prices, making April to June 2023 an 'anti-inflation quarter' (Le Monde 2023). Spot checks are intended to ensure retailers do not pass on the cost to suppliers.

UK SOCIAL SECURITY LEVELS NOW FALL FAR SHORT OF WHAT IS NEEDED TO MEET AN ACCEPTABLE BASIC STANDARD OF LIVING

Basic benefits given to low-income households are at least £140 a month below the real cost of food, energy, and everyday basics (JRF 2023). 15 years of wage stagnation, in combination with recent inflation including of food prices, are making for increasingly low living standards, and are curtailing people's food choices, with consequences for public health, climate and nature.

Recommendation: Government should assess potential **measures to control food price inflation**, learning lessons from France's temporary food price caps. Costs should not be passed to farmers, who are coping with significant increases in input costs.

Recommendation: As IPPR have called for previously (Hochlaf and Thomas 2020), the government should **universalise free school meals and remove the benefit caps** that restrict the total welfare support a household can receive to below the average earnings of a working household, **including removing the two-child benefit cap**.

Recommendation: In the longer term, **the government should increase core benefit levels**, strengthening universal credit so everyone can afford nutritious, climate- and nature-friendly food.

8. CONCLUSION

Farming needs to change to reduce carbon emissions and protect and restore nature. In doing so, the situation for our farmers and agricultural workers can and should also be improved, whilst the public's access to food that is healthy and affordable, as well as sustainable, should increase.

Tackling the problems with how the UK farms is non-negotiable. How this is done matters not just for ensuring we meet the challenges of the climate and nature crises, but for the welfare of farmers and the public too.

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APPENDIX

ADVISORY PANEL MEMBERS

- Jonathan Baker, programme policy, engagement and strategy, Future Farming and Countryside Programme, Defra
- Dustin Benton, policy director, Green Alliance
- Ben Goldsmith, chief executive officer, Menhaden Capital Management LLP
- Dr Andrea Graham, head of policy services, NFU
- Alice Groom, senior policy officer, agri environment and environmental land management schemes, RSPB
- Baroness Sue Hayman, House of Lords
- · Vicki Hird, head of sustainable farming, Sustain
- Martin Lines, UK chair, Nature Friendly Farming Network
- Stuart Roberts, adviser to Liberal Democrats, former NFU deputy president and Hertfordshire farmer
- James Woodward, sustainable farming officer, Sustain

We met with this group online three times over 2022-2023, and several gave us further support by connecting us with other experts and providing additional context and insights.

FARMER AND FARM WORKER PANEL

The panel met twice online in August and September 2022, and was recruited through a combination of an independent agency and an application process advertised through IPPR's networks, and approaches to relevant stakeholders, such as local farmers' clubs.

The group of 16 participants included landowners, farm managers, land managers, tenant farmers, fruit pickers, a farm shop worker, a soft-fruit technician, at least one new entrant farmer and at least one farmer whose family had been farming for generations. They all managed or worked on or with farms of varying sizes, producing a range of arable crops, horticulture, livestock, and diary. The group comprised nine women and seven men, from a range of age groups. Four were based in Cumbria, six in Somerset and six in Kent. Thirteen identified as white.

COMMUNITY PANELS

Community panels bring together a group of people with a range of views and lived experiences. Together, they learn about an issue, discuss it with one another, and make recommendations about what change they would like to see, drawing on the group's practical knowledge and experiences.

Our panels met online over November-December 2022, and learnt about the climate and nature crises and the relationship between these crises and farming in England, discussed what was important to them about where they lived and what their hopes are for the future, reflected on their perceptions of farming, and considered what fairness means to them, and who needs to be involved in creating change.

The three panels all followed a similar structure – a weekend of deliberation covering a grounding in the climate and nature crises and the relationship between these and farming in their area, reflections on how they felt about where they live

and their hopes for the future, the opportunity to hear and ask questions from experts in climate, nature, and farming, including farmers and farmworkers, and time to consider and discuss what they think a fair response to the challenges laid out would be.

Participants were recruited through an independent agency and represented a mix of ages, genders and ethnicities. They had a mix of voting histories, a range of income levels and worked in a variety of different industries, including the food, retail and hospitality sector. Some had children; others did not. Some had family members who worked in farming; others did not. We had 14 participants for each of the three panels, with no dropouts.

Across the three panels, speakers included:

- Vicki Hird, head of sustainable farming, Sustain
- Tom Kimber, Somerset chair, National Farmers' Union
- Professor Lois Mansfield, professor of upland landscapes, and director of Centre for National Parks and Protected Areas, Cumbria University
- Holly Purdey, farmer, Horner Farm
- Lee Schofield, senior site manager, RSPB Haweswater
- Simon Stainer, ecologist, Oxygen Conservation
- James Wallace, chief executive, River Action
- James Woodward, sustainable farming officer, Sustain



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