

Net Zero requires bold government interventions to curb meat and dairy production, eliminate food waste and shorten supply chains, now

Policy response to the Committee on Climate Change recommendations to reach net zero emissions by 2050

May 2019

Summary

'Demand-side' food system policies to mitigate Greenhouse Gas (GHG) emissions and other dangerous environmental impacts – that is to say, those that aim to change how food is distributed and consumed, as opposed to 'supply-side' measures which aim to improve agricultural practices directly - present several policy double or even triple wins.

Shifting consumption towards sustainable, plant-based foods offers co-benefits in terms of improved public health. **Reducing supply chain and household food waste** offers opportunities to shrink the UK's agricultural footprint and local environmental impacts such as nitrogen pollution, while sparing land for afforestation and rewilding. Meanwhile, **nurturing the UK's horticultural food production to shorten supply chains and encouraging public institutions to source food from their region** offers opportunities to increase employment opportunities in the UK food sector, and cultivate regional prosperity and resilience.

Feedback recommends that in interpreting the Committee on Climate Change (CCC)'s advice on reaching a net zero target, the government considers the significant potential of 'demand-side' measures for both reaching this target and delivering environmental benefits in line with the 25 Year Environment Plan and the ambition 'to leave our natural environment in a better state than we found it' (HM Government 2018a).

In addition, we argue that demand-side measures can play a role in rapidly scaling up the UK's ambition to reach Net Zero much sooner than 2050. Ambitious policy and public action on food, agriculture and land use, could set the conditions for response to the huge urgency we face to decarbonise our economy and society, and avert global warming of more than 1.5°C (IPCC 2018).

Introduction:

The UK has a reputation for leading the way on international climate commitments. After playing an instrumental role in the 2015 Paris Agreement, the UK government has generally aimed to set ambitious decarbonisation targets, and in October 2018 the governments of the UK, Scotland and Wales asked the CCC to provide advice on whether and when the UK should commit to reaching net zero greenhouse gas emissions. The CCC published that guidance on 2 May 2019, recommending that the UK commit to 'clear, stable and well-designed policies' to reduce emissions to net zero by 2050, including a 20% reduction in consumption of beef, lamb and dairy, zero biodegradable waste



to landfill by 2025, and afforestation of around 30,000 hectares per year. In addition the CCC points out that changes in diet and land use are essential to facilitate the greater ambition from an 80% fall in GHG emissions by 2050, to net zero by 2050 (CCC 2019).

Feedback welcomes these recommendations. An ambitious net zero target, alongside measures to curb the massive ecosystem damage and biodiversity loss caused by human activities, is essential to all national efforts to avert devastating climate change and environmental destruction. However, government action must go further in terms of fully recognising the role of the food system in driving environmental breakdown, and concretising policy measures which target the unique potential it has to alleviate environmental pressures and regenerating nature.

The CCC has rightly spotlighted the land use sector in the UK in their report published in October 2018. Internationally, the Inter-Governmental Panel on Climate Change (IPCC) will publish its own recommendations on agriculture and land use later in 2019. Meanwhile, in an unexpected but welcome move, the UK's National Farming Union has committed to a net zero target by 2045.

Yet so far, while supply side land sector measures, such as sustainable intensification, and to some degree ecological farming methods like agro-forestry, have been discussed, few concrete policy recommendations have been made to take advantage of the massive potential of demand-side measures in mitigating environmental breakdown. The CCC's recommendations for a 20% reduction in beef, lamb and dairy consumption take a step in that direction – but could go much further.

This policy brief presents the case for a focus on effective demand-side measures which could contribute to tackling four issues driving high emissions and other environment damage caused by the food system: specifically reducing food waste by 50% by 2030 in line with Sustainable Development Goal 12.3; shifting public diets to cut meat and dairy consumption (and in particular reducing intensive and industrially produced meat and dairy) by 50% by 2030; and shortening supply chains by scaling up regional food production and consumption. These so far neglected policy areas hold massive potential for achieving fast, effective and long-lasting decarbonisation of the food system and agriculture sector, as well as considerable co-benefits to conservation and ecosystem restoration, human health, prosperity and wellbeing.

Why a demand-side measures approach

The CCC estimates that emissions from land use, excluding settlements, were 46.9MtCO₂e in 2016, around 10% of the UK's total emissions and nearly equivalent to the total emissions of Denmark in the same year (Brandmayr et al. 2019.). Of this, cattle and sheep directly accounted for 58% of agriculture emissions (CCC 2018). Various modelling has been undertaken by different organisations to estimate pathways towards net zero emissions from land use, most recently by the Green Alliance, based on CCC data. These models have found that demand-side measures, in particular food waste reduction across the supply chain and dietary changes towards much less meat and dairy, and a switch towards non-animal proteins such as legumes, are necessary elements of decarbonising agriculture in the UK.

From a land use perspective, research has shown that globally cutting food waste by half could reduce the area of global cropland by 14% compared to a scenario achieving optimal yields through sustainable intensification alone (Bajželj 2014), while dietary shifts towards low or no meat and dairy diets could delivery GHG emissions savings globally of between 29 and 56% (Springmann et al 2018). Given the pressing imperative of adopting afforestation policies to begin removing large quantities

of CO₂ from our atmosphere, it is also vital to consider how demand-side options can contribute towards releasing land for tree planting and rewilding. Helen Harwatt calculates scenarios under which pasture land and cropland could be converted to provide significant levels of Carbon Dioxide Removal through afforestation, while still providing the UK population with sufficient healthy, plant-based foods (Harwatt and Hayek 2019). The Green Alliance’s report ‘Cutting the climate impact of land use’ (Brandmayr et al 2019) makes several policy recommendations to rapidly scale up afforestation and other climate mitigation measures such as peatland restoration.

The 2017 UNEP Emissions Gap report also pointed out the high potential contribution of cutting food waste and shifting to plant-based diets, with up to 3.37GtCO₂e emissions reductions potential per year, comparable to the emissions reductions delivered by all supply-side measures considered combined (UNEP 2017). Meanwhile, Project Drawdown has listed halving food waste and cutting meat and dairy consumption as the third and fourth most effective routes to combatting climate change.

Table 1. Project Drawdown Top Five ‘Solutions by rank’. Results depicted represent a comparison to a reference case that assumes 2014 levels of adoption continue in proportion to the growth in global markets.

Solution	Total atmospheric CO₂e reduction (GT) by 2050
Refrigerant management	89.74
Onshore wind turbines	84.60
Reduced food waste	70.53
Plant-rich diets	66.11
Restoring tropical forests	61.23

Project Drawdown

The CCC’s ‘Land use: reducing emissions and preparing for climate change’ report outlined scenarios including a 20-50% reduction in emissions due to cuts to food waste, and large reduction to red meat, lamb and dairy consumption. Under the CCC’s ‘high emissions reductions from land use’ scenario, dietary changes would be by far the most effective policy measure considered at freeing up land, which could be put to alternative, carbon-mitigating uses such as afforestation and rewilding (CCC 2018).

Less attention has been paid to the potential of strengthening regional supply chains in reducing the environmental burden of the food system. Feedback is currently researching the possible role of public procurement in particular, using North West England as an example. At an individual level, shopping locally or regionally produced food can be very challenging, given the preeminent role of supermarkets in our food purchasing behaviour in the UK (Feedback 2018), and the major challenges many communities face in accessing fresh, healthy foods. At an institutional level, however, much can be done in terms of both supporting the development of community-owned or cooperative food production, and in ensuring that locally-anchored institutions such as hospitals, schools and universities, use their purchasing power to regenerate the regional food economy, providing the security for regional food production to scale up.

Taking demand-side measures seriously

Climate change mitigation of the agriculture sector has been curiously absent from the policy debate, while much attention has focused on the energy transition and other sectoral changes such

as aviation and public transport. Unsurprisingly, agricultural emissions have lagged, with the CCC acknowledging that little or no progress has been made through existing voluntary decarbonising policies for agriculture (CCC 2019). And it is certainly the case that demand-side measures, and particular dietary measures, have received even less attention. Why is this?

In part, measures like dietary shifts towards low meat diets are regarded as politically uninviting. In late 2018, Claire Perry, Minister of State at the Department for Business, Energy and Industrial Strategy, distanced herself from any suggestion the government could take a role in encouraging people to eat less meat (Harrabin 2018). Yet extensive government interventions in dietary habits are not unusual, in particular in relation to public health. Age restrictions for alcohol and cigarette purchase, health warnings on energy drinks, bans on junk food advertisements and healthy start vouchers, are all targeted at altering purchase and consumption patterns.

In the case of food waste, there appears to be an assumption that the current voluntary targets and arrangements will be sufficient. While undoubtedly a leader in terms of state-supported voluntary targets to reduce food waste, data suggests that the UK's food waste reduction may have stalled (WRAP 2017; Tesco 2018), and a ramping of regulatory enforcement of waste reduction is now necessary to kick start action, as the Government's Resources and Waste Strategy acknowledges (HM Government 2018). In addition, the Food Use hierarchy, which guides effective reduction of edible food waste and disposal of edible food waste, is not strictly followed by businesses, which continue to send large quantities of edible food to Anaerobic Digestion (Feedback 2018).

Given the broad overlap between diets which are conducive of both public health and of planetary health, there is a strong case for intervention. Chatham House research into public attitudes in 2015, covering Brazil, China, the US and the UK, found that nudges and new information highlighting the connection between meat consumption and climate change is unlikely to produce behaviour change. Modifications to choice architecture was the most popular policy measure among research participants, with a sense across participants that public resistance to change would fade and that it is government's role to act on this issue. The authors conclude: "Combined approaches that raise awareness of the importance of dietary change and facilitate access to alternatives, while also removing incentives for the consumption of meat and dairy products, are likely to be the most successful and most accepted options." (Wellesley et al. 2015).

Recommendations

As the CCC's recommendations make clear, overall half if not more of the emissions reductions needed to meet Net Zero will require some action by the public: we are moving into a period where it will be up to all of us, with the help and leadership of government, to make the change that is needed. In order to realise the full potential of the food system's contribution to mitigating climate change, avoiding or reversing ecological damage and improving public health and wellbeing, Feedback recommends:

Public diets – cutting meat and dairy consumption by 50% by 2030

1. Implement a cross-government set of public dietary targets focused on shifting the public towards plant-based proteins, reducing public consumption of meat and dairy by 50% by 2030, and adopting a 'less and better' approach as advocated by Eating Better.
2. Apply these targets to public procurement guidelines in order to shift public food procurement towards a 'less and better' approach and model behaviour change needed.

3. Create an industry agreement to implement dietary shift targets across retailers, food service and hospitality, similar to the Courtauld 2025 targets on food waste.
4. Impose a ban on advertising of meat products across all mediums, including online, similar to the ban on tobacco advertising.
5. Implement behaviour change campaigns targeting a broad section of the public, focused on the well-evidenced health benefits of a plant-based diet.
6. Create new environmental labelling schemes in order to give customers clear guidance on 'better' meat and dairy

Food waste – cutting food waste across the supply chain by 50% by 2030

1. Implement a binding national target to halve food waste across the entire supply chain (including at farm-level) by 2030, backed up by rigorous measurement of food waste at all stages of the supply chain.
2. Require all food businesses over a certain size to report on their food waste generated throughout the supply chain.
3. Tighten regulations to require food businesses to comply with the food use hierarchy, including penalising breaches of the food use hierarchy, such as the practice of sending edible food to Anaerobic Digestion for disposal.
4. De-regulate the ban on feeding food waste to pigs and implementing regulation to guide the safe processing, treatment and feeding of pigs using food surplus which cannot be safely redistributed to human consumption (Feedback 2018b).

Shortening supply chains

1. Local government should facilitate new food business entrants to the procurement marketplace, prioritising those with regional operations, and that have local ownership or a cooperative ownership structure (e.g. using the Social Value Act 2012). This could include seeding new employee-owned businesses to meet local demand.
2. Facilitating the engagement of a larger number of smaller suppliers by providing centralised services such as transport hubs that reduce the number of delivery journeys required in and out of major procurement centres
3. Implementing a procurement scorecard or weighting system which prioritises environmental outcomes, including food waste reduction and meat and dairy reduction, in food service delivery contracts for public institutions.

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