

5 Governing the UK agri-food system post-Brexit

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Introduction

There are growing societal concerns about how food is produced and the impact of producing food on the environment, and on people who work in the agri-food sector. Producers worldwide are increasingly being challenged to improve the sustainability of their businesses (Hubbard et al., 2020). However, achieving sustainability is difficult as it requires an integrated approach and the consideration of trade-offs between its three pillars: social (people), economic performance and environmental (planet) (Purvis et al., 2019), all of which are interwoven and cannot be separated from each other (Arora-Jonsson, 2013). The degree to which such an approach is achieved depends on the ability of actors within the food system to come together and reach compromise.

Following its exit from the EU, the UK is, for the first time in nearly 50 years, responsible for developing its own agri-food and environmental policies. Achieving 'sustainability' is a key policy goal (DEFRA, 2018a, 2018b; DAERA, 2021; Food Standards Scotland, 2021). However, the debate about which aspects of sustainability should be prioritised is heated and polarised, and the UK's highly fragmented policymaking environment makes achieving consensus across the four nations difficult. This challenge is compounded by the fact that regional goals for the future direction of the UK agri-food sector do not necessarily align with each other, nor with the UK government's post-Brexit vision of the country as a liberal, free-market player on the international trade stage.

This chapter considers some of the challenges the UK faces in moving towards a more 'sustainable' food system post-Brexit. Drawing on theories of governance, it aims to shed light on the ways different actors in the UK food system interact with this debate and shape policy. It first summarises what 'sustainable' food systems are, and general challenges faced in governing these. It then examines these challenges in the post-Brexit UK context by outlining the UK food governance apparatus and the actors within it, and discussing some of the specific issues this presents in achieving a sustainable food system outside the EU.

(Sustainable) food systems

The term ‘food system’ is a complex and multi-dimensional concept that has no universal definition. To date, the literature reveals multiple perspectives. For example, Ericksen (2008, pp. 234–235) defines a food system broadly as comprising activities ranging from production to consumption, involving “...the interactions between and within biogeophysical and human environments, which determine the activities themselves ... [and the] outcomes of the activities (contributions to food security, environmental security, and social welfare) and other determinants of food security”. Both Fanzo et al. (2020) and the OECD (2021) similarly define food systems as being made up of not just human actors, but also all institutions, environments, infrastructure and activities related to food production (from primary production through to consumption). Capone et al. (2014) stress the overlap of food systems with agricultural systems at global, national and regional level, highlighting the key role of and the interactions between the actors within the system. They also reinforce the link between food security and food sustainability. Adopting the work of Ericksen (2008), and in line with Capone et al. (2014), Eakin et al. (2017) reemphasise the link between food systems and food security, pointing out that achieving food sustainability is one of the key challenges of the 21st century.

Despite these various definitions, a common occurring theme is that any food system is expected to ensure food security, that is, “when all people at all times have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life” (UN FAO, 2012). This should be achieved within a ‘sustainable’ food system that uses resources with care, supports healthy ecosystems and good animal welfare, promotes fairness amongst actors within the system, and provides goods and services that meet the needs and desires of current society, without jeopardising those of future generations (UN FAO, 2012). However, while food security may be the principal outcome of any food system, it is clear that food systems are simultaneously integrated social and ecological systems. Hence, the role played by various institutions in intermediating processes and resources between these systems is important.

In achieving a ‘sustainable’ food system, a key challenge for governments is to determine how best to balance the competing priorities and trade-offs associated with food production. Alongside determining how to meet food security needs, there are also multiple, sometimes contradictory policy channels to consider (Barling et al., 2002; Candel et al., 2016; Kuhmonen, 2018; Milbourne and Coulson, 2021). For example, there is a clear need for farmers to produce sufficient food at competitive prices, but also a parallel and competing need to mitigate agriculture-related environmental degradation. There are also concerns about, *inter alia*, the promotion of ‘healthy’ diets, treatment of workers within the food system, preserving a countryside that people are culturally attached to, and maintaining a vibrant rural community.

Many of these challenges, and others associated with food production, are what Churchman (1967) and Rittel and Webber (1973) call ‘wicked’: they can neither be understood nor addressed in isolation, and solving one food production ‘problem’ generally creates others (Candel, 2014; Candel et al., 2016; Kuhmonen, 2018). Therefore, there is no one ‘solution’ to the multiple, intersecting problems associated with the ways in which we feed ourselves, and solutions that are presented are often fiercely contested (Barling et al., 2002; Candel et al., 2016). Moreover, it is difficult, if not impossible, to maximise all desired outcomes simultaneously – each of which is critical to achieving at least one aspect of sustainability (environmental, social, economic). Trade-offs need to be considered, which can create conflict among food system actors. This situation is further complicated by policy gaps produced by competing policy channels – gaps that different interests can take advantage of to maintain or improve their relative position. Theories of governance can help explain some of the complexities inherent in navigating these trade-offs. They also facilitate an understanding of how actors interact within the policymaking arena to influence policy outcomes.

Governing food systems

Food governance has been defined as “the formal and informal interactions across scales between public and/or private entities ultimately aiming at the realization of food availability, food access, and food utilization, and their stability over time” (Candel, 2014, p. 598). The agri-food system comprises a complex, often disconnected network of actors (e.g., input suppliers, primary producers, processors, consumers, politicians, civil society actors, among others) with diverse and frequently competing interests, responsibilities and decision-making abilities (Díaz-Méndez and Lozano-Cabedo, 2020). Power relationships among said actors are often unequal (Marsden, 2013; Pereira and Drimie, 2016; Díaz-Méndez and Lozano-Cabedo, 2020).

Within the UK and the European Union (EU), the agri-food sector has historically been treated as ‘exceptional’, in governance terms (Cox et al., 1985; Grant, 1995; Skogstad, 1998). Exceptionalist policy approaches occur where a sector is perceived to contribute significantly to the delivery of societal benefits (Daughbjerg and Feindt, 2017). In agriculture, it is believed that state intervention is warranted due to the sector being different from most other economic sectors: agricultural producers face unpredictable natural and economic risks, and agriculture is seen to contribute to broader national interests such as food security and maintenance of ‘the countryside’ (Skogstad, 1998; Daughbjerg and Swinbank, 2012; Daughbjerg and Feindt, 2017). As part of this exceptionalist approach, a relatively closed network of farm ministries and powerful farm groups was traditionally responsible for developing agriculture policies (Smith, 1990; Woods, 2005; Daughbjerg and Feindt, 2017; Keating, 2018).

Increasingly, there is a shift away from agricultural exceptionalism in policy-making. Although the agri-food sector remains important, agriculture is no longer only about food and fibre production. The role of agriculture as ‘multifunctional’

(a widely accepted concept developed by the OECD, 2001) – that is, providing non-commodity outputs such as public goods – is a central research and policy focus (Persson, 2007; Marsden and Sonnino, 2008; Renting et al., 2009; Daugbjerg and Feindt, 2017; Keating, 2018). There is also an expansion of actors who are active within the sector, including processors, suppliers, retailers, NGOs and consumers/consumer organizations (Ingram et al., 2013; Lawrence et al., 2015; Benoit and Patsias, 2017; Tosun, 2017; McCarthy et al., 2018; Díaz-Méndez and Lozano-Cabedo, 2020).

Power distributions among actors within the sector are changing as a result of this expansion. However, the inclusion of a broader range of actors does not necessarily result in equal power sharing among them. Rather, the expansion typically leads to strategic positioning of individuals or partners (Skogstad, 1998). In recent decades, retail corporations and food processors have assumed an increasingly privileged position globally as they integrate food systems and occupy political and economic leadership roles (Clapp and Fuchs, 2009; Attorp and McAreavey, 2020; Díaz-Méndez and Lozano-Cabedo, 2020). Many argue that because of this concentration of control in corporate hands, existing food governance systems are no longer fit for purpose due to questions of legitimacy, power, resources and interactions of relevant actors (Clapp and Fuchs, 2009; Hinrichs, 2014; Attorp and McAreavey, 2020). Further, as Díaz-Méndez and Lozano-Cabedo (2020) argue, the shift away from ‘traditional’ (i.e., exceptional) forms of agri-food governance has created friction among actors in the agri-food system. As the rights and responsibilities of existing actors have changed, and new actors have become involved, it is increasingly difficult to reach a consensus on what a ‘sustainable’ food system looks like and how to achieve it.

As the UK charts a new path for agri-environmental policy outside of the EU, the challenge of reaching a consensus on how to achieve sustainability in its food system has been brought into sharp relief. Both Brexit and the fragmented nature of agri-environmental policymaking in the UK further complicate an already difficult process. The remainder of this chapter considers this challenge in further detail.

Governing the UK food system

When the UK joined the EU (then the European Economic Community [EEC]) in 1973, the Common Agriculture Policy (CAP) became the central policy underpinning agri-environmental governance in the country. Launched in 1962, the CAP was an exemplar of agricultural exceptionalism, originally aiming to support an increase in food production, stabilise markets, ensure food security, and secure a fair standard of living for farmers and reasonable prices for consumers. These were goals achieved through a set of market support measures, such as price support for certain products such as milk, cereals, beef and oil seeds; storage and withdrawals of surplus products when prices were considered too low; and export subsidies. But market intervention, particularly price support and import taxes, led to over-production, and food surpluses, not shortages,

became the problem. To this, issues such as food safety, environmental damage, declining farmers' standard of living (as real farm income dropped), and conflicts between member states were added to the EEC's concerns. Moreover, it is widely accepted that because of its protectionist and trade-distorting stance, the CAP was detrimental to world prices, thereby affecting the livelihood of millions of poor farmers around the globe.

In response to these challenges, the CAP underwent significant reform. First, in the 1980s, under ongoing pressure from the World Trade Organisation, there began a shift away from legislating protectionist tariffs and price supports towards offering farmers support via less market-distorting measures. Additionally, following the release of the 1988 'Future of Rural Society' report (European Communities Commission, 1988), support for environmental and rural development measures was included. Since then, the focus of the CAP has increasingly been placed on the latter (Harvey, 2015; Swinbank, 2017), with the concept of agriculture as 'multifunctional' underpinning this approach (O'Connor and Dunne, 2009; Renting et al., 2009).¹

Today, outside the EU, the UK is no longer legally required to adhere to CAP regulations. A degree of regulatory alignment with the bloc will likely continue to be necessary, given that it remains the UK's largest trading partner and will be for some time. However, as detailed in Chapter 4 of this volume, the UK government² is set to shift policy focus nearly entirely away from farm income support (CAP direct payments) to the delivery of environmental outcomes, with farmers expected to be rewarded for the provision of public goods. What it means for the UK food system to be 'sustainable' is changing, along with the way the UK food system is regulated.

The exact nature of this transformation is currently subject to lively debate, and reaching a consensus is difficult for multiple reasons. First, current agri-environmental policymaking is complicated and fragmented. Responsibilities for developing policy and regulating activities within the food system are spread across multiple departments and agencies within central government and across the UK's devolved nations. Further, actors within the UK food system do not necessarily share a common vision for the future of the food system and how best to achieve 'sustainability' within it. The policymaking environment has also become increasingly complex as an understanding of the 'wicked' problems associated with food production has grown, and the expectations about what agriculture should deliver have expanded. To understand what this means for the future of agri-environmental governance, it is, therefore, important that attention is paid to who is influencing policy, and how. If certain actors are afforded disproportionate influence, policy outcomes can be ineffective and are unlikely to be 'sustainable'. These challenges are discussed in turn below.

One food system, many government agencies

The policymaking environment in the UK is complex and fragmented, particularly as it relates to food system governance. Like elsewhere in the EU in the

mid-late 20th century, UK agri-environmental policymaking was centralised and ‘exceptionalist’ (Smith, 1990; Wales et al., 2006). But in the 1990s, the BSE crisis, changes in the CAP, a change in government (the beginning of the ‘New Labour’ era) and a move towards devolution provided grounds for a “radical shift in divisions of government responsibility” (Wales et al., 2006, p. 189). An ‘arms-length’ mode of governance emerged and UK agri-environmental policymaking became de-centralised and diversified.

There is a tradition of arms-length regulation in the UK, and there are multiple arguments for distancing public sector bodies from politics: it can help depoliticise decision-making, it affords agencies the freedom to focus on areas that might otherwise be low-priority within government, and can allow the government to more easily access external skills and expertise (Gash et al., 2010). However, there are concerns about this model, including – most relevant to arguments made in this chapter – the claim that an ‘arms-length body’ (ALB) system is highly complex and confusing (Gash et al., 2010; Freeguard, 2016; Parsons, 2020). This can create a highly fragmented approach to policymaking.

Parsons (2020) highlights that, within England, there are currently 16³ separate governmental bodies (including executive agencies, non-ministerial departments and ALBs) responsible for governing different elements of England’s food system. And there are further complexities within these. For example, the Department for Environment, Food and Rural Affairs (DEFRA), the key ministerial department responsible for food and the environment in England and Wales, currently relies on more than 30 agencies and public bodies to administer its remit (Freeguard, 2016; UK Government, 2021). Examples of these include the Forestry Commission, the Agriculture and Horticulture Development Board, the Environment Agency and the Drinking Water Inspectorate. Responsibilities are not always clearly defined among these, with overlap in responsibilities evident.

Parsons (2021) argues that, in some cases, this fragmented approach to policymaking can cause ‘policy disconnects’, which can result in the development of ineffective policies and hamper policymakers’ ability to tackle complex and systemic problems, such as those clearly present in the food system. For example, in a review of food policy in England, Parsons (2021) identifies 14 key areas that lack coherence, including food supply chain policy, trade, climate change and hunger. Identified disconnects range from administrative and structural ones, such as departmental demarcations or failures in communication, to more fundamental ones, such as “...underlying (potentially ideological) tensions between food policy goals” or the omission (or exclusion) of “...important food system impacts [...] from the food policy agenda” (Parsons, 2021, p. 23). The latter raises questions about policy priorities and the power different actors hold and underscores the reality that political choices are inherent in addressing food system challenges (Parsons, 2021). Lack of cohesion and communication results in administrative inconsistencies that powerful actors can exploit to advance their interests, an issue returned to below.

Agri-environment policy: a devolved competency

Adding to this complexity is the fact that agri-environmental policy is a devolved competency within the UK, meaning each of the UK's devolved nations has some autonomy in determining how to best support its agri-food sector. Pre-Brexit this meant that devolved governments had independence in deciding how to apply CAP regulations in their jurisdiction. Post-Brexit they will continue to have autonomy in deciding how to support their respective agriculture sectors, including the ability to develop their own agri-environmental policies.

This arrangement reflects the different needs and goals of agriculture sectors across the UK, something McAreavey highlights in Chapter 2. The socio-political and geographical contexts for food production vary widely across the country's devolved nations. Agriculture (i.e., primary production) is relatively more important in Northern Ireland, Scotland and Wales than it is in England, both socially and economically. For example, while it accounts for only 0.6 percent of Gross Valued Added (GVA) and 1.1 percent of employment in England, in Northern Ireland the corresponding figures are 1.4 percent and 5.8 percent (Gravey et al., 2017). In Scotland, agriculture's contribution accounts for 0.8 percent of GVA and 2.5 percent of employment (Scottish Government, 2019).

The types of agriculture that can take place, and the economic viability of these, also differ across the country. Farms in England tend to be larger and more productive than elsewhere in the UK, with production centred on arable, horticultural and intensive livestock enterprises. These are relatively more profitable and less dependent on subsidy than enterprises in Northern Ireland, Wales and Scotland, which are typically more extensive and livestock-based (Coleman, 2017; Greer, 2017; Keating, 2018). While, in England, the contribution of CAP direct payments to the average farm business income (FBI) accounts for 61 percent, in Northern Ireland, Wales and Scotland it is 87, 80 and 75 percent respectively (Gravey, 2017; Greer, 2017; Keating, 2018). However, the share of direct payments varies significantly across farm types. Whereas poultry and horticulture farms depend very little on these payments (less than 10 percent of FBI), grazing livestock (beef and sheep) farms are almost totally dependent (over 90 percent) on them (DEFRA, 2021).

There are multiple reasons for these differences. First, there are climatic and topographical considerations. Only 17 percent of land in England is classified as 'areas of natural constraint',⁴ whereas this figure is 70 percent in Northern Ireland, 81 percent in Wales and 85 percent in Scotland (Greer, 2017; Keating, 2018). This means it is often easier to produce food and fibre at competitive market prices in England than it is elsewhere in the UK. Historical and socio-political contexts also vary widely. For example, in Northern Ireland, a pattern of extensive, small-scale landholdings is rooted in a historical struggle for the right to own land, grounded in socio-political conflict and the fight for political independence from Britain (Foster, 1988; Lee, 1989; Hannan and Commins, 1992). The social and political importance of family-owned smallholdings persists today, meaning that agriculture is more likely to receive political and policy support in Northern Ireland than it is in England (Attorp, 2021).

Moving forward, the discrepancies in farm support could create tensions among UK farmers. However, as the amount of money to be allocated to farming still lies with Westminster, the devolved governments may find themselves constrained on how they can use their own budget (Hubbard, 2020). Against this background, perceptions of what constitutes a sustainable food system looks like may differ across the UK's four nations. What kind of agriculture should be supported, and the exact nature of that support, is a contested matter, and developing agri-environmental policies that account for these divergent needs is a challenge complicated by the UK's policy environment. Brexit has brought this issue into sharp relief.

Devolved versus reserved policies: conflicting goals

Although devolved nations have the right to develop agri-environmental policies that suit their specific needs post-Brexit, their ability to do so is constrained by the UK and international law. As Dobbs (2022, p. 19) details, Westminster retains parliamentary and budgetary sovereignty and can, where it considers it “necessary or expedient”, act to, for example, ensure legal coherency across the UK, protect the UK's internal market, or facilitate international trade deals. The UK's fully reserved trade policy is likely to place particular constraint on the devolved nations' ability to pursue their own agri-environmental policies (Gravey and Whitten, 2021; Dobbs, 2022). It is outside the scope of this chapter to discuss this conflict in detail, although various authors provide overviews of the range of issues faced as the new UK–EU relationship is developing (e.g., Burns et al., 2016; Diamand, 2017; Gravey, 2017; Gravey et al., 2017; House of Lords, 2017; Burns et al., 2018; Keating, 2018; Jordan and Moore, 2020; Gravey and Whitten, 2021).

The devolved nations' freedom to develop their own agri-environmental policies is further constrained by international law (e.g., the UK's commitments under the Paris Climate Agreement and the World Trade Organisation's Agreement on Agriculture) and the new UK–EU relationship (Gravey and Whitten, 2021; Dobbs, 2022). This is particularly the case for Northern Ireland, which, under the Northern Ireland Protocol, is legally obliged to maintain regulatory alignment with the European Union (UK Cabinet Office, 2021). The protocol aims to avoid a hard border between Northern Ireland and Ireland (something which is imperative in protecting the 1998 Good Friday Agreement⁵) and preserve the integrity of the EU's single market while simultaneously maintaining unfettered access to trade in goods between NI and Great Britain (NIDIRECT, 2021). As a result, Northern Ireland (but not the rest of the UK) effectively remains in the EU's single market for goods, thereby allowing goods to move between Northern Ireland, Ireland and the rest of Europe without customs checks or tariffs. By extension, Northern Ireland must continue to apply EU rules in this domain and remains under the supervision of EU institutions for compliance with relevant rules⁶ (Gravey and Whitten, 2021; NIDIRECT, 2021). Included in this are rules pertaining to the environment and agri-food standards.

In short, the complex and fragmented nature of the UK's regulatory environment makes the already difficult challenge of regulating food production's 'wicked problems' even more sticky. The UK's exit from the EU has compounded this. Ongoing negotiations surrounding policy arrangements dictating the relationship between the UK and the EU will introduce multiple new competing policy channels and complicate existing ones. This will likely increase the number of policy gaps that different actors can use to advance their own interests. To understand the potential implications of this dynamic, it is important to examine the actors involved. Therefore, we provide a brief overview of central actors in the UK food system, before concluding with a discussion of how their influence may impact food system governance in the post-Brexit era.

Actors in the UK food system: an overview

The range of actors involved in the UK agri-food sector has grown in recent decades, as it has globally. Alongside this, power distributions within the UK food system have changed. As discussed above, in the late 20th century, UK and EU agri-food policymaking was controlled by a handful of powerful farm ministries and farm groups. As a result, policy focused mainly on supporting primary producers.

Through the 1980s and 1990s, supermarkets became increasingly dominant players in the UK food provisioning system and began integrating the food supply chain in an unprecedented way (Wales et al., 2006). This, alongside the aforementioned shift towards arms-length agri-food governance in the UK, helped transfer power away from primary producers towards retailers. As supermarkets are highly sensitive to consumer behaviour, this trend shifted power closer to the consumer as well (Wales et al., 2006). Since then, retailer power has become even further concentrated. Although there are currently ten large food retailers in the UK, only three of these account for 42 percent of market share⁷ (Hasnain et al., 2020). Ninety-eight percent of British shoppers use a supermarket or hypermarket for their grocery shopping (IDG, 2020, *in* Hasnain et al., 2020).

Alongside this, as public awareness and concern about environmental and social issues grow, both government and the agri-food industry are under increasing pressure to be seen to be doing something about food production's negative impacts. Recent decades have seen significant growth in the number and influence of civil society organisations involved in food governance (Candel, 2014; Moragues-Faus, 2017). Campaigns, often led by such organisations, have resulted in influential trends such as 'plant-based' eating, and have helped force issues like climate change onto the agri-food policy agenda. The influence wielded by these organisations reflects the increase in power afforded to consumers in general as retailers have become central players in food supply chains.

Food supply chain integration has also afforded processors great power and influence. In an increasingly globalised, competitive food system, many industries remain economically viable by intensifying. Often, this means moving towards a vertically integrated production model under which growers share costs and risks

of production with the integrator, i.e., a corporate food processor (Weis, 2007; Winders and Ransom, 2019).³ In such a system, power typically resides with the processor. As will be discussed further below, this trend may increase as the UK moves towards a more free-market-oriented trade regime post-Brexit.

This does not mean that UK farmers no longer have power. Agricultural landscapes retain strong social and cultural importance in the UK, and farmers are still considered the most 'legitimate' custodians of the countryside (Daugbjerg and Feidnt, 2017; Attorp, 2021). That they will continue to be subsidised with public money to manage land in the UK is evidence of this. However, the 'farming lobby' no longer has the influence it once had. Control of supply chains lies with retailers and processors, and the interests of consumers typically take precedent over those of producers. Moreover, in many cases, public subsidies that maintain many farming enterprises on the land are indirectly being captured by processors further down the supply chain, who benefit from not having to pay suppliers the full cost of the food and fibre they produce.

It is important to note that these trends are not uniform across the UK. Because of differences in production systems and socio-political situations across the country, power distributions among actors differ somewhat in the devolved nations. Nevertheless, trends outlined here can be at least somewhat generalised. The main point is that, while the UK food system was once governed by a small, closed network of actors concerned mainly with supporting primary producers, the network has now become more diverse, and power has shifted within it. By extension, expectations about how the UK food system should operate and what it should deliver have changed. This has implications for what a 'sustainable' UK food system looks like and how it is achieved.

Governing the UK food system post-Brexit: how can food sustainability be achieved?

As discussed in the introduction to this chapter, sustainability is commonly considered to comprise three 'pillars': social, economic and environmental (Purvis et al., 2019). Although there are multiple definitions of sustainable food systems, most account for all three pillars in some fashion. They also share a focus on food security. Therefore, it can be concluded that, for a food system to be truly sustainable, it must account for all these elements. As Parsons (2021) argues, when designing policies, the omission of any element or component of a sustainable food system is likely to impede the achievement of sustainability. Such omissions are more likely to occur when certain actors within the system are afforded disproportionate influence.

The current direction of travel for UK agri-environmental policymaking, in which a shift towards 'public money for public (environmental) goods' is evident, makes clear that both free-market principles and the environmental aspects of sustainability are a central policy focus for UK policymakers. Given the many environmental challenges associated with food production, this is arguably positive. However, Dobbs (2022, p. 24) argues that government objectives are "skewing

the approach to sustainability [...] towards environmental sustainability". For example, she highlights that the initial 2018 Agriculture Bill "did not address food quality, food security, public health and other social objectives" (p. 24).

The 2020 Agriculture Act addresses some of these issues to a certain extent. For example, the government has a duty to report to Parliament on UK food security; a multi-annual financial assistance plan must be prepared at least once every five years; and within the bill, there are provisions for increases in productivity, transparency and fairness in the supply chain, and assistance during exceptional market conditions (Hubbard, 2020; UK Parliament, 2020). However, the Act still fails to account for broader social objectives, and it lacks any reference to the quality and safety standards of future imported food (Hubbard, 2020). Clearly, not all elements of sustainability have been accounted for. This raises questions about the ability of the UK government's strategy to achieve food security and food sustainability more generally, and about who benefits from the strategy. We consider some of these here.

Food security

The UK has not been threatened by food insecurity since the Second World War. The country currently produces approximately 60 percent of its own food (Lang, 2020), and its food imports come mainly from suppliers who are very stable economically and politically (mostly, EU member states). New trade deals signed with Japan, Australia and New Zealand aim to reinforce this (Hubbard, 2020). Thus, it can be argued that, even if Brexit results in less food being produced in the UK and more being imported from elsewhere, the threat of food insecurity remains low. However, recent logistical supply chain problems, including significant labour shortages in horticulture, meat processing and logistics, have exposed weaknesses in the current provisioning system (Barbulescu et al., 2021; DEFRA, 2021; Holmes, 2021).

The UK relies on a just-in-time (JIT) food supply system, whereby necessary items in the supply chain arrive just when they are needed (Hasnain et al., 2020). This system is a product of the vertical integration that has occurred as supermarkets and processors have gained dominance in the food provisioning system. A JIT system's chief benefit is increased efficiency along the supply chain, achieved by keeping inventories low. This reduces costs related to storage and labour, and limits spoilage, as produce is not usually left sitting around for long periods (Lai and Cheng, 2009). However, as Hasnain et al. (2020) write, such systems "...are at the mercy of even minor disruptions where the impacts flow through and magnify on their journey". Further, cost savings are not evenly distributed among actors involved in food production; they are mainly accrued by actors towards the end of the supply chain, e.g., processors and retailers.

Although integrated JIT supply chains confer obvious advantages, many argue that over-reliance on them may compromise UK food security in the long run as factors such as geo-political instability and climate change make global supply chains increasingly volatile (Garnett et al., 2020; Hasnain et al., 2020;

Lang, 2020). Additionally, because they are controlled by, and primarily benefit, processors and retailers, they also continue to consolidate these actors' power. As discussed above, this is often to the detriment of other actors in the food supply chain, and of the sustainability of the food system as a whole. Further orienting UK agricultural production towards international markets post-Brexit will only increase reliance on this model of provisioning, and further consolidate processor and retailer power, with potentially negative sustainability outcomes.

Greater focus on market competitiveness may also reduce the UK's food self-sufficiency. As discussed above, it may become increasingly difficult for some sectors, e.g., beef and sheep, to remain viable post-Brexit. This may lead to farmers exiting the sector, which, in turn, may result in less of these products being supplied by UK farmers and more being imported from elsewhere. From an economic viewpoint, this is not inherently bad (i.e., it makes the most sense for such products to come from countries that have a comparative advantage in producing them). Moreover, decreased self-sufficiency is by no means an automatic threat to food security (Hubbard and Hubbard, 2013). Nevertheless, it is important that policymakers and researchers ask questions about the impact decreased national self-sufficiency may have on food security in the UK. Greater consideration must also be given to the social impact of these policies. Some, including challenges related to farmer livelihoods and identity, rural society, devolution and the future of the UK's rural landscape, are considered here.⁹

Social and economic sustainability

As discussed above, agriculture industries in the UK's devolved nations rely much more heavily on beef and sheep production than in England. In addition, primary agriculture contributes more to devolved nations' economies and is more important socially. Should Brexit compromise these sectors' viability, the social and economic costs of job losses in these sectors will, therefore, not be felt evenly across the UK. Because agri-environmental policymaking is a devolved competency, devolved nations have the freedom to continue to support their agri-food sectors more directly (e.g., with some form of direct payments) than is planned in England. However, this is unlikely to fully compensate for major shifts in industry viability. Related to this, the devolved nature of agri-environmental policies could create further social and economic tensions. Farmers are already concerned about the potential for different farm supports being implemented across devolved nations, complaining of a lack of a 'level playing field' within the UK's single market (Hubbard, 2020).

The 'public money for public goods' approach¹⁰ is meant to address the challenge of sustaining farmer livelihoods to a degree, replacing direct payments with environmental subsidies. However, if conservation and public good delivery become the main objectives of much of the UK's agriculture, this raises questions about the role of farmers. For many, farming – in particular, food production – is a way of life and part of personal identity. The impact on individuals of losing that role should not be taken lightly. Further, it is unlikely all farmers will be able to

remain in the industry, even with this support. This will have knock-on effects for the many other rural businesses that support primary agriculture. Currently, there are no major proposals for how these challenges should be addressed. The social and economic cost of significant job losses in the agriculture sector needs to be considered much more seriously, as does the impact these will have on the social fabric of rural societies across the UK. More attention should also be paid to determining how to ensure the UK single market remains 'fair' in subsidy terms.

These changes also have implications for the UK's landscape. Over 70 percent of the UK's landmass is currently used for agriculture, and 'traditional' agricultural landscapes are part of many people's social and cultural identity (Hynes and Campbell, 2011; Howley et al., 2014). However, if farmers choose to exit the sector because agriculture is no longer economically viable, or adopt more consolidated, 'industrial' farming practices to remain competitive, these landscapes could change: fewer extensive farms, more intensive ones. Such a shift may benefit processors and retailers, further transitioning UK agriculture to suit the integrated, global supply chain. It might also be a boon to consumers in the form of less expensive food. Yet, many members of the public have a negative perception of intensively farmed landscapes (Soliva et al., 2010; Hynes and Campbell, 2011; Howley et al., 2014). And, intensive agriculture often, although not always, creates greater environmental pressures than more extensive systems.

This underscores the often-contradictory nature of what is demanded from agriculture, and the 'wicked' nature of food production's problems. It also highlights the challenge of discerning whose priorities matter and achieving balance among competing ones. As argued above, if certain actors have disproportionate power in a system, it is unlikely all elements of sustainability will be given adequate weight in policymaking, with the result that sustainability is not truly achieved.

Environmental sustainability

Finally, despite assertions that post-Brexit agri-environmental policies are overly focused on the environmental aspects of sustainability, it can be argued that the UK's focus on supporting 'environmentally sustainable' food production at home does not adequately address the environmental impact of food production throughout its supply chain. Again, given the current direction of UK trade policy, it is likely that more, not less of the UK's food will come from abroad. In the absence of quality and safety standards for imported food, there is no mechanism for addressing agriculture's negative externalities (e.g., water pollution, greenhouse gas emissions, etc.) created elsewhere. In effect, the UK will merely be exporting these externalities to other countries, rather than adequately addressing them at home. Indeed, this challenge extends beyond environmental externalities. For example, labour standards in many countries are lower than in the UK (although the situation for agri-food labourers in the UK is far from perfect [e.g., Lawrence, 2016; Milbourne and Coulson, 2021]). Again, there are no tangible measures in place to address this issue.

This is not a new phenomenon. Many argue that, across Europe, food productions' environmental and social externalities have been exported and distanced for decades (Marsden, 2013; Pretty and Bharucha, 2014; Garnett, 2015; Lang, 2020). Nonetheless, if the UK and devolved governments truly wish to address environmental sustainability, it must be tackled along the length of the supply chain, not merely offshored. Closing aforementioned policy gaps is a start. More honest conversations about what the current focus on environmental sustainability is actually achieving – and who it is benefitting – are also necessary.

Conclusions

Previously, a concentration of power in the hands of primary producers in the UK and the EU contributed to a host of environmental and social problems. In recent decades, a shift in policy focus towards greater market orientation and environmental objectives – reflective of a transfer of power away from primary producers towards processors, retailers, and consumers – has helped overcome some of these challenges. In the UK, this trend has been intensified by Brexit. However, as is a classic of 'wicked' problems, solving some of the UK's food system sustainability challenges has created new ones, many of which are exaggerated by new power imbalances and the complexity of the UK policymaking environment. In particular, the social element of sustainability appears to be missing from the current approach. Moving forward, if the UK food system is to become truly sustainable, all of sustainability's pillars must be given equal weight. This means redressing some of the (new) power imbalances that exist in the system. Further, there is likely no fixed point at which sustainability will be fully accomplished. Achieving and maintaining a balance among actors' competing goals will require ongoing concerted effort.

As with all wicked problems, it is not possible to simultaneously maximise all actors' desired outcomes regarding 'sustainable' food production. Reaching compromise should therefore be a key policy goal. However, this is difficult because food systems are highly complex, involving many actors with competing goals. In the UK context, the challenge is amplified because of the fragmented policy environment. The UK's devolved nations' unique socio-political and environmental contexts necessitate devolved policy competencies, including those related to food production, but this need has the potential to create significant friction among food system actors, particularly producers who must still operate within a single UK market. Brexit has introduced even more complexity.

Now outside the EU, the UK has an opportunity to think anew about how it supports food and agriculture. For the first time in nearly 50 years, it has direct control of policies in this arena. Asking questions such as those proposed here may help ensure such a balance is reached, but these are only a start. Whichever questions policymakers ask, the direction UK agri-environmental policy takes in the years to come will depend on the degree to which true compromise is realised.

Notes

- 1 Today, the CAP delivers three main types of payment support to farmers under two financial pillars. So-called ‘Pillar 1’ support includes (i) Direct Payments, comprising a Basic Payment Scheme (area-based income support payments) and payments for ‘greening measures’ (30 percent of Direct Payments), as well as (ii) a small number of market management measures such as import tariffs and crisis management support payments. The much smaller ‘Pillar 2’ support mechanisms provides funding for (iii) rural development schemes and agri-environmental initiatives (European Commission, 2017).
- 2 Although not all UK nations are set to take the same approach – discussed below.
- 3 Seven of these have significant and direct roles in regulating the food system, nine have less-direct or supporting roles (Parsons, 2020).
- 4 Formerly ‘less favoured’. Land that is considered difficult to produce food and fibre on, e.g., because of land base or topography.
- 5 The Good Friday Agreement, or the Northern Ireland peace deal, brought an end to three decades of conflict (‘The Northern Ireland Conflict’, or ‘The Troubles’) between Republicans and Unionists in Northern Ireland. Central to this was an agreement between The UK and Ireland to maintain an open border between Ireland and Northern Ireland. McGarry and O’Leary (2004) offer a comprehensive overview of the conflict and the GFA.
- 6 A complete list of these rules is listed in Annex II of the NI protocol. See UK Cabinet Office (2021).
- 7 Tesco commands 21 percent of market share, followed by Sainsbury’s at 11 percent and Asda at 10 percent.
- 8 Companies own the inputs (e.g., feed and chicks) and the outputs (e.g., meat, eggs), while the growing is outsourced to farmers (Weis, 2007; UN FAO, 2014).
- 9 Various other social challenges exist, including those related to public health, nutrition and labour, and are also hugely important, but it is not possible to cover them all in this chapter.
- 10 So far, mainly being adopted in England.

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