

Eco-social food policy design: getting food systems inside the doughnut

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Introduction

One of the most pressing challenges in eco-social policy design is bringing about a reform of the global *food system*.¹ As food system activities, from primary production to consumption, account for approximately a third of global greenhouse gas emissions, food system reform is vital to effective climate change mitigation (Crippa et al, 2021). Agriculture is a primary driver of land use change, causing the collapse of terrestrial ecosystems and a rapid decline of global biodiversity (Van der Esch et al, 2017), while overfishing endangers marine and freshwater ecosystems. Moreover, the food system's functioning is associated with water and air pollution, the depletion of freshwater and other natural resources, and an increased vulnerability to droughts and floods. Besides these pressing environmental impacts, the current food system has various negative impacts on the well-being of humans and animals. Almost a billion people are chronically undernourished, while over two billion more suffer from a lack of access to sufficiently nutritious food. At the same time, the spread of the Western diet has led to a global increase of obesity and diet-related disease, such as type II diabetes and cardiovascular disease. Finally, the distribution of wealth and power in the global food system has raised urgent questions about social injustices, as corporate concentration in the food system has arguably undermined the livelihoods of millions of farmers and workers (Clapp, 2021), as well as the exploitation of other animals in intensive livestock sectors. These impacts show that the linkage between ecological and social concerns are at the heart of food system debates.

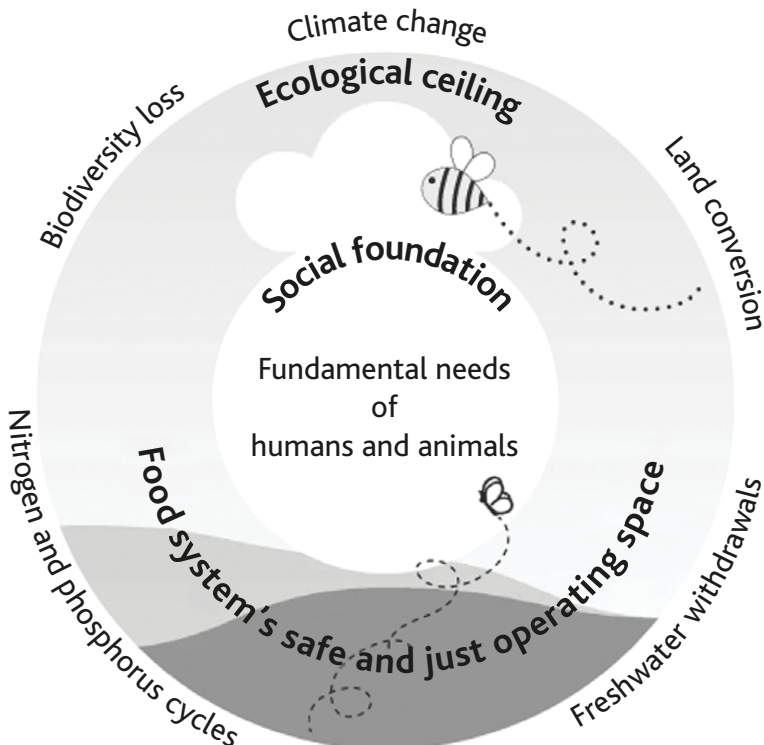
It is for these reasons that calls for a 'transformation' or 'transition' of the global food system have rapidly grown in strength in recent years. In 2021, the UN, for the purpose of debating such a transformation, organised the first-ever Food Systems Summit, although it was criticised for its lack of inclusivity (Clapp, 2021). The International Panel on Climate Change

(IPCC) highlighted a shift of diets away from animal-based products as well as the reduction of food waste and loss as two key directions to alleviate the food system's climate impacts. In the European Union (EU), the European Commission adopted the objective of realising a food system that has a neutral or positive environmental impact, while ensuring food security and public health, as part of its Green Deal agenda.

One way of envisioning these calls for a food system that contributes to both social and ecological objectives is to use Kate Raworth's (2017) metaphor of the *doughnut economy*. The central challenge of a food system transition, then, is to realise a food system that operates within planetary boundaries as well as adhering to a social foundation by respecting the fundamental rights and needs of humans and animals. This space 'inside the doughnut' may be considered a safe and just operating space for a future food system (see Figure 13.1).

Food system reform may not be possible without fundamental changes to the way in which the food system is *governed*, as current food and agricultural policy regimes have been dominated by vested interests and

Figure 13.1: Food system doughnut



Source: Adapted from Raworth (2017); De Boer et al (2019); RDA (2020)

neoliberal, productionist policy beliefs, often at the cost of broader social and ecological concerns. Following the emergence of food systems thinking and an increased sense of urgency, governments across contexts and levels have recently started to experiment with innovative governance arrangements and policy designs. Notable examples, which will be further described in the next section, include the emergence of urban food policies, the adoption of national food (security) strategies, and the EU's ambitious Farm to Fork agenda for food system change. Despite the high hopes surrounding these initiatives, however, considerable governance challenges remain. Drawing on the recent food policy literature as well as adjacent scholarships, this chapter discusses four of the most pressing among these governance challenges: the need for strengthened policy integration, diversifying policy framings, transition management and fostering food democracy. Without addressing these challenges, food system transitions may lack the pace and depth that is required to realise a safe operating space in time.

Promising food policy initiatives

The emergence of urban food policy

Cities have developed into the spaces in which, to date, the most ambitious and concrete food policy efforts have been undertaken. An increasing number of local governments across the globe have committed themselves to fostering local food system transitions and have adopted ambitious food strategies (Ilieva, 2017). A possible explanation for this engagement is that the local level is where symptoms of a malfunctioning food system – food insecurity, health inequalities, environmental degradation – are most visible, putting pressure on local decision makers to take action even if some of these issues do not fall within their traditional policy remits. Moreover, local governments operate at the level that is closest to citizens and companies and are therefore the most accessible administrative level to turn to for sharing concerns or when asking for public support for new societal initiatives. In various parts of the world, such as the EU and US, subsidiarity – the notion of resolving societal issues at the most immediate level if possible – is even a general principle of law.

As there are considerable differences in food system challenges, jurisdictional powers and political preferences across localities, research has found a large diversity in the goals and instruments local governments have adopted within their food policies (Barbour et al, 2022), though generally including both social and ecological objectives. The most common policy goals for local governments to focus on are the strengthening of short value chains, promoting more sustainable (urban) agriculture, stimulating local economic development, fostering food literacy and increasing food security

(Candel, 2019), many of which combine social and ecological food system concerns. In terms of instrument mixes, although there is a large variety in policy design, regulatory instruments tend to be less common, possibly because cities in most contexts lack regulatory jurisdictions. Instead, most popular policy instruments include the use of grants and subsidies, providing information and advice, spatial planning and facilitating access to (public) land and public procurement (Candel, 2019).

A much-cited example of an urban food policy frontrunner is the city of Toronto, Canada, in which the local food policy council, a network of citizens and local food system actors, played a pivotal role in introducing programmes to promote urban agriculture, organise food assistance and foster composting. In the Global South, the Brazilian City of Belo Horizonte has been widely lauded for its integrated food security approach, encompassing subsidised markets, school lunches and the procurement of local and sustainable produce.

Various national and international networks have contributed to international policy diffusion between local governments (Moragues-Faus, 2021). Perhaps the most influential of these networks is the Milan Urban Food Policy Pact (MUFPP), which was set up during the World Expo of 2015 and has since grown in size. Cities subscribing to the MUFPP pledge to foster local food system transitions, in which they are assisted through annual conferences, awards and the development of a food policy monitoring framework (Sibbing et al, 2022).

The adoption of national food strategies

Compared to food policy development at local level, national governments have so far been less forthcoming in designing food system or food security strategies. ‘Food policy’ in that sense remains a rather fragmented domain, with agricultural, environmental, social policy and public health ministries typically having jurisdiction over only a subset of food system issues, causing major policy incoherencies. That said, following long-standing academic pleas for better integrated or more joined-up policy efforts (for example, Barling et al, 2002), a gradual turn of the tide seems visible in recent years, as an increasing number of governments have either adopted or been debating the adoption of comprehensive food strategies (Candel and Pereira, 2017).

In the Global North, recent examples of the adoption of national food strategies include those of Sweden (2016), Finland (2017), Canada (2019), the UK (2022) and Flanders (2022). Most of these strategies focus on a combination of economic, social and ecological objectives. For example, the ‘Food Policy for Canada’ prioritises six outcomes: i) vibrant communities, ii) increased governance spaces and partnerships within food systems, iii) improved food-related health outcomes, iv) strong indigenous food

systems, v) the reduction of environmental and climate impacts, and vi) inclusive economic growth. Whereas these strategies set out long-term food system visions and serve important agenda-setting functions, they have so far resulted in hardly any actual policy change, for example, redirecting financial incentives from unsustainable towards more sustainable and healthier food system practices. Quite the contrary, sustained austerity measures and economic downturns have resulted in increased concerns about food poverty in high-income countries and decreased the appetite for accelerated environmental action as citizens feel transition costs are shared unequally.

In the Global South, Brazil's Fome Zero (Zero Hunger) programme (2003) under the first Lula presidency has been the most lauded integrated food security strategy. Copied from Belo Horizonte's urban food security policy, Fome Zero was highly successful in reducing the prevalence of food insecurity in Brazil through a combination of direct aid, food education, subsidised restaurants, distributing micronutrients and supporting small family farms, among other measures. The Brazilian government subsequently invested in transferring its policy design to other contexts, notably sub-Saharan Africa (Marcondes and De Bruyn, 2015). Most sub-Saharan African governments have over time adopted integrated food or nutrition security strategies (Candel, 2018), often codesigned by international organisations and donors. However, many of these strategies have barely proceeded beyond paper realities due to a lack of institutional capacity, resources and political will (for example, Namugumya, 2021). In other places, such as South Africa, seemingly integrated strategies became heavily skewed towards an agricultural, productionist focus in their implementation phases (Pereira and Ruysenaar, 2012).

The EU's Farm to Fork Strategy

As food system drivers and outcomes transcend national jurisdictions, international collaboration is essential to mitigating current social and ecological pressures originating from the global food system. The European Union may well be the most ambitious international organisation in terms of designing international food systems legislation, while also sharing a large part of the responsibility for the historical development of the current malfunctioning global food system. As part of its overarching Green Deal agenda – aiming for climate neutrality by 2050 and decoupling economic growth from nature resource use while leaving behind no regions or population groups ('just transition') – the European Commission adopted the Farm to Fork (F2F) Strategy, which sets out its food system objectives and legal and non-legal actions to realise these. The strategy explicitly aims for reconciling ecological and social objectives, for example, by ensuring a decent living for farmers, fishermen and their families (Sabato and Fronteddu, 2020).

Despite covering the whole value chain from primary production to consumption, the F2F Strategy is somewhat skewed towards the production side, as the EU has much stronger competences in the agricultural domain compared to food consumption, with the exception of labelling. Consequently, agricultural objectives are more clearly defined and complemented with more compelling legislative action compared to food environment, retailing and food consumption ambitions. The most conspicuous targets of the F2F Strategy include: i) a 50 per cent reduction of the use and risk of pesticides, ii) a 50 per cent reduction of nutrient losses and 20 per cent reduction of fertiliser use, iii) a 50 per cent reduction of sales of antimicrobials for agriculture and aquaculture, and iv) 25 per cent of total farmland under organic farming, all of which are to be achieved by 2030.

While setting out an ambitious policy agenda, at the time of writing, it remains an open question to what extent the Commission will be successful in getting its proposals adopted into legislation which is of similarly ambitious levels (Schebesta and Candel, 2020). The outbreak of the war in Ukraine has, for example, resulted in a major backlash against the Commission's legislative proposals on nature restoration and pesticide use, as a coalition of conservative politicians and agricultural interest groups have seized the momentum provided by the war to ask for a delay and watering down of environmental policies, invoking 'food security' concerns. At the same time, civil society movements and academics have argued that drought-induced harvest losses, a rapid deterioration of insect numbers and the exploitation of seasonal and illegal migrants in the EU's agricultural sector show that an accelerated transition of the EU's food system is key to safeguarding long-term food security.

There is also a considerable debate about the international dimension of the F2F Strategy. The European Commission aims to protect its farmers and industries from competition from countries with lower standards and has, in the absence of a well-functioning World Trade Organization (WTO), been considering increasing standards in free trade agreements or through due diligence legislation and so-called mirror clauses. Producers from low-income countries, however, fear that these unilateral efforts will restrict their access to the EU market, especially as they may lack the resources to change to more sustainable production methods.

Governance challenges

While the previous discussion shows that the food systems paradigm and food policy development have gained significant momentum in recent years, considerable governance challenges remain. This section elaborates four of these governance challenges, drawing on recent scholarship that has sought

to connect the food policy literature with adjacent theoretical debates in the political sciences and transition studies.

Policy integration

The adoption of overarching food strategies, be it on local, national or international levels, is only effective in steering food systems towards more sustainable outcomes if it is followed up by the integration of food system concerns across relevant policy domains. For example, shifting towards more sustainable food production practices generally requires agricultural, fisheries and environmental policy reform; increasing vulnerable people's access to food touches upon social policy schemes; while increasing people's 'food literacy' may require educational policy instruments. Apart from this horizontal policy integration challenge, there is a similar need for vertical coordination: as the previous section showed, food system competencies are spread across levels of government.

Following this quest for food policy integration, studies on the issue have given rise to broader theorisation about policy integration, connecting with adjacent debates on environmental policy integration, climate policy integration and gender mainstreaming. Food policy scholars have, for example, contributed to debates on joined-up governance (Barling et al, 2002), conceptualising and operationalising policy integration (Candel and Biesbroek, 2018), and social mechanisms driving shifts of policy (dis)integration over time (Biesbroek and Candel, 2019). Building on this work, Candel and Pereira (2017) distinguish five key steps in fostering policy integration: i) constructing resonating policy frames that foster collective action; ii) formulating policy goals, involving the setting of priorities and questions of coherence between goals; iii) involving relevant sectors and levels so as to enable both horizontal and vertical coordination; iv) fostering connectivity between different jurisdictions in a polycentric governance landscape; and v) designing consistent policy instrument mixes that will eventually result in behavioural change across the food system.

Most studies on food policy development have found that, to date, an increasing number of governments have adopted broader and generally more coherent sets of policy goals on food systems, as exemplified by the adoption of food strategies, but that instrument mixes lag behind (for example, Candel, 2019; Sibbing et al, 2019). Regarding the latter, most governments have opted for relatively uncontroversial interventions, such as information campaigns or subsidy programmes, while more coercive, and possibly more effective, measures such as pricing mechanisms, regulation and abolition of subsidies for status quo practices have generally been avoided. Moreover, food policy development and implementation is frequently dominated by a single sector, such as agriculture in the case of South Africa, resulting in poor

coordination and skewed policy approaches. Similarly, as further explained in the next sub-section, policy framings have remained rather sectoral, favouring dominant policy beliefs over alternative food system framings.

It has proven particularly challenging to strike a new balance between social and ecological objectives in food policy making. Across contexts, agrifood policies have long been dominated by the protection of socio-economic interests of farmers and rural communities, often at the expense of vulnerable and Indigenous groups, animals and ecosystems. Despite a burgeoning scholarly literature on eco-social policy design (Mandelli, 2022), which emphasises the need for developing synergies between ecological and social considerations as, for example, promoted in the doughnut model, such ideas have not yet been translated into better integrated policy mixes. Even the EU's F2F Strategy, with its emphasis on a 'just transition', only pays lip service to such integrated policy design, as supportive policy instruments largely remain lagging.

Policy framings

Recent decades have witnessed the emergence of an extensive literature reflecting the discourses, paradigms and belief systems – here referred to as *policy framings* – underpinning the current food system. Studying the ways in which societal issues are framed is crucial for understanding how problem perceptions change over time, what issues make it to the agenda of decision makers, and how problem definitions shape solution spaces.

Food policy scholars have been rather critical of dominant framings within food policy debates, as they argue these ideational configurations legitimise the continuance of unsustainable and unjust food system practices. The political use of the concept of 'food security', for example, even though in theory also encompassing social and sustainability dimensions (Clapp et al, 2021), has been criticised for underpinning productionist and neoliberal approaches to tackling malnutrition, at the cost of more complex and multi-dimensional approaches that would include social and ecological dimensions (for example, Lang and Barling, 2012; Tomlinson, 2013). Similarly, critics of the EU's F2F Strategy have cited food security concerns in the aftermath of the Ukraine war to oppose green legislation that would foster a sustainable transition of the EU's food system (Candel, 2022a).

To counter hegemonic food policy framings, scholars and civil society movements have proposed alternative framings that more explicitly bring in eco-social dimensions such as 'food sovereignty', 'food justice' and 'food democracy', which draw attention to questions of democratic participation, social inequality and agro-ecological practices (for example, Hassanein, 2008; Patel, 2009; Smaal et al, 2021). Similarly, Raworth's doughnut economy model has become an increasingly popular frame to counter the dominant

economic logic underpinning modern food systems. At the same time, while these concepts have enriched debates on food systems – which one could argue is an ideational innovation in itself – and food sovereignty has been officially adopted as a policy objective in various places in the Global South, in most political systems they have not yet resulted in major policy and institutional change. [Jackson et al \(2021\)](#), for example, show how debates about the F2F Strategy remain dominated by understandings of food as a ‘commodity’ rather than alternative framings such as food as a ‘human right’ or ‘commons’. Similarly, [de Krom and Muilwijk \(2019\)](#) found that out of five societal framings of sustainable food, ‘business-as-usual’ and ‘technological optimism’ perspectives proved dominant in Dutch food policy debates. Diversifying such policy frames in political arenas may be a prerequisite to governing food systems towards a safe and just operating space.

Transition management

A third governance challenge involves the governing or managing of food system transition processes, a subject that is central to the discipline of social-ecological transition studies (for example, [Kemp et al, 2007](#); [Loorbach, 2010](#)). While transitions and transformational change have been conceptualised in different and sometimes competing ways, a key tenet of these fundamental and rapid societal and economic change processes is that they are disruptive, unpredictable and therefore accompanied by high degrees of uncertainty. This makes the political steering of transitions no easy task, also because the social gains and costs of a transition may not be distributed evenly, raising questions about ‘justness’. Steering is further complicated by the unequal distribution of power between vested interests and innovative initiatives, or even future generations or non-human agents, in contemporary political systems. The fact that tomorrow’s solutions and associated societal benefits are not yet known today means that short-term economic and political considerations tend to prevail in current food governance arrangements.

It goes beyond the scope of this chapter to review the entire body of scholarship on how best to manage transition processes. One could, however, synthesise the majority of recommendations under the slogan ‘changing governance, governing change’: a change of governance, including policies, institutions and leadership, is prerequisite to fostering more sustainable practices and outcomes. In terms of policies, this requires an enabling innovation system which fosters and incentivises emerging societal and economic initiatives through long-term and consistent legal standards, well-targeted public support, experimentation space and investments in the dissemination of knowledge, skills and science (confer [Reichardt et al, 2016](#)). Moreover, governments may steer markets towards more ecologically and socially sustainable outcomes by putting a price on undesired ‘externalities’,

for example, introducing the ‘polluter pays’ principle through emission pricing schemes. By abolishing public support to polluting or unhealthy practices, such as meat promotion campaigns in the EU, governments can shape a playing field in which more sustainable and healthier alternatives can scale up at an accelerated pace. The adoption of more generous social welfare schemes could dampen some of the income effects of these ecological policy efforts, particularly for groups with a lower socio-economic status, as such distributing the costs more evenly while increasing the perceived legitimacy of interventions (confer [Mandelli, 2022](#)).

Despite the burgeoning literature on transition management and the recent emergence of food policies across levels of government, these have not yet resulted in a shift of public support away from the status quo towards supporting the food system’s transformative potential. For example, [Buitenhuis et al \(2020\)](#) found that the EU Common Agricultural Policy system of hectare-based income support puts a brake on moving towards a system in which farmers would be rewarded for providing public goods. Moreover, most governments have so far been reluctant to take demand-side measures, such as through reshaping food environments, public procurement or fiscal interventions. Complementing agricultural policy with policy efforts further down the food system would be essential to get all relevant actors to adjust their social practices in a more or less concerted manner, and as such realise more societally beneficial outcomes.

Fostering food democracy

A fourth governance challenge in fostering a food system transition involves the lack of democratic participation of citizens and food system actors in decision making about food policy. Even many farmers, whose interest groups are generally considered to have strong relationships with decision makers, experience a considerable gap between political decision making and their farming practices (for example, [Huttunen, 2015](#)). This lack of involvement is problematic, as it negatively impacts the quality and legitimacy of policy outputs, for example, because (the linkages between) social and ecological concerns remain underrepresented. As a result, policy outputs are unlikely to bring about the scale of behavioural change that is necessary to realise more sustainable food system outcomes. This is obviously even more applicable to countries governed by non-democratic regimes. These democratic shortcomings have been particularly central in the food sovereignty scholarship, which has argued in favour of bringing food systems back under people’s control, although what such control would entail concretely has remained somewhat obscure ([Edelman, 2014](#)).

To address food systems’ democratic deficit, civil society and mostly local governments in various parts of the world have started experimenting

with new ways of involving citizens and food system actors into decision-making processes. What many of these experiments share is that they seek to reconcile ecological and social objectives in their attempts to future-proof food systems. Examples include the emergence of local and regional food policy councils, deliberative citizen summits and citizens' tribunals, such as the International Monsanto Tribunal. These initiatives have given rise to a nascent literature on 'food democracy'. The central assumption of this body of scholarship is that food democracy initiatives, by complementing more traditional representative modes of democracy, may result in larger citizen buy-in and better policy design, as such increasing the potential for collective action towards desired directions. Adjacent bodies of scholarship have reflected on how to also include the voices of non-human agents, such as animals or ecosystems, in such novel arrangements (for example, [Darpö, 2021](#); [Donaldson et al, 2021](#)).

In spite of the high hopes surrounding food democracy initiatives and a rapidly growing body of scholarship, evidence on whether these initiatives indeed contribute to democratic goods and, ultimately, more effective and legitimate food policy remains sparse and fragmented. In a recent review of the state-of-the-art on food democracy initiatives' contributions to the democratic goods of inclusiveness, popular control, considered judgement and transparency, [Candel \(2022b\)](#) found that participation seems to be highest among food system professionals, governmental actors and NGOs, whereas citizens from marginalised groups tend to be underrepresented. In terms of popular control, food democracy initiatives proved to have the strongest influence on agenda setting, policy formulation and implementation, while decision making and evaluation proved largely out of their hands. The degree of considered judgement (that is, the quality of deliberations) and transparency appeared to be largely overlooked in existing studies. These insights show that there is still much need for a more systematic and comparative research agenda on the emergence of food democracy, perhaps most importantly to inform more equitable designs of democratic innovations.

Conclusion

Fostering a transition towards a global food system that contributes to eco-social objectives is one of the greatest political challenges of our time. Not only is the food system itself rife with injustices, with billions of people suffering from food insecurity, changing the ways in which we produce and consume food is also central to solving adjacent problems such as climate change, pollution and biodiversity loss. This chapter conceptualised this challenge as the quest for getting the food system 'inside the doughnut'.

On a positive note, the chapter has shown that there are promising initiatives towards food policies that pay more attention to the eco-social

interconnections in the food system and the detrimental impacts on planetary health. These initiatives range from local food policies to international strategies, such as the EU's Farm to Fork Strategy. Perhaps even more importantly, these political efforts complement and are complemented by bottom-up societal initiatives, such as community kitchens, community-supported agriculture and a plethora of events raising awareness about the food system. Moreover, global market forces seem to be getting increasingly interested in developing plant-based and other types of alternatives to animal products, suggesting that markets may rapidly respond if governments finally dare to change the incentives. An important political and research question that has remained largely unaddressed is to what extent and how these developments could be managed in a way that they would come to contribute to a 'just transition', in which eco-social costs and benefits would be fairly distributed.

Despite promising developments, the overall impact of the food system has remained largely unaltered, meaning that more effective public governance is required to bring about an accelerated transition. The third section of the chapter synthesised four governance challenges that need to be overcome in order to do so: fostering policy integration, diversifying policy frames, organising transition management and promoting food democracy. Moreover, while addressing these governance challenges, it would be important to also consider the interactions between the food system and adjacent systems, such as the functioning of social welfare states as well as biophysical earth systems. While further increasing complexity, the malfunctioning of various of these adjacent systems may be due to similar root causes – the dominance of neoliberal paradigms, regulatory capture, malfunctioning democratic institutions – which require a certain degree of *meta*-governance for resolution (confer [Gjaltema et al, 2020](#)). As such, food system reform could become a (more) prominent domain of investigation in a future eco-social research agenda.

Studies of the food system and food policy have evolved into a flourishing scientific field which is characterised by a high degree of inter- and trans-disciplinary learning. To date, this has resulted in a much better understanding of the feedback loops within and affecting the food system, as well as suggestions for governance arrangements and interventions that may allow more effective and equitable food governance. While this important work should continue, we have now arrived at a point where it is up to political decision makers to reap the harvest of this work and use their political craftsmanship to realise a better future.

Note

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