



TABLE Report

# What scale for the food system? Moving beyond polarised debates



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Rachel Carlile and Tara Garnett

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## Written by

- Rachel Carlile, TABLE intern, PhD candidate at the University of Edinburgh
- Dr Tara Garnett, TABLE director, University of Oxford

## Contributed to by

- Helen Breewood, TABLE research and communications officer, University of Oxford
- Dr Jeroen Candel, TABLE research director, Wageningen University and Research
- Walter Fraanje, TABLE research and communications officer, Wageningen University and Research
- Matthew Kessler, TABLE research and communications officer, Swedish University of Agricultural Sciences
- Dr Elin Rööös, TABLE research director, Swedish University of Agricultural Sciences

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## Summary

This report shares our reflections on TABLE's most recent project of work – a series of dialogues and discussions with food systems stakeholders, focused on the theme of 'scale' in the food system.

### Areas of agreement: key messages shared by our speakers

- **Assumptions need to be challenged:** Key terms such as 'smallholder' encompass multiple realities, and assumptions about food systems (e.g. that small farms have lower yields; local food systems are more democratic) may not be correct or may be locally specific.
- **The local-global binary is unhelpful:** Food systems encompass multiple, interconnected scales. Therefore, problems found in one place may be resolved elsewhere, or by processes seemingly unrelated to food systems outcomes.
- **Diversity of scales is essential:** There is no single 'ideal' scale for the food system; it is important to maintain a diversity of scales and ensure that they harmonise rather than compete. Currently, the large-scale or global (e.g. transnational agribusiness; global trade; large farms) tends to dominate, and displace or overwhelm alternative scales of action.
- **The state plays a key role:** National governments need to play a key role in food systems, in order to encourage sustainable farming practices, to improve the resilience of food systems, and to ensure that markets and the private sector contribute to food security, equity and sustainability.

### Areas of contention

- Each speaker offered nuanced reflections, and no one advanced the more extreme stances common in polarised debates. Nonetheless, certain topics proved more divisive, in particular, **the future of smallholder farming, the benefits of global trade and the governance of food systems.**

### What factors influence opinions on contentious topics?

Certain underlying factors seemed to influence opinions on these more contentious topics.

- **Perceptions of reform:** Some speakers were optimistic about the possibility of generating reform within the system, whereas others were more sceptical and promoted alternatives to dominant scales of activity.
- **Different values and priorities:** All speakers highlighted the importance of food security, sustainability, social equity and resilience; however, speakers prioritised and understood these goals differently, and disagreed on the scope and pace of change, and the specific interventions deemed necessary.
- **Disciplinary and professional background:** Speakers' disciplinary or professional background seemed to affect their interpretation of history, the scale of focus they adopted when considering food systems change, and, in turn, their opinions on contentious topics.
- **Personal experiences:** shaped speakers' aesthetic preferences and expectations for global interactions.

# What scale for the food system? Moving beyond polarised debates

## 1. Introduction

Towards the end of 2020 we at TABLE began a project of work organised around the theme of 'scale' in the food system, asking the question, 'Should the future of food be global or local?'. We undertook a process of discussions and dialogues with food systems stakeholders, aiming to better understand the arguments, values and assumptions that underpin debates around globalisation and localisation in the food system.

In this report, we round off this project by reflecting on what we have learnt from our work on this theme. We identify key points of agreement and contention, and explore the values and assumptions underlying different viewpoints.

### 1.1 Why scale?

The COVID-19 pandemic has intensified attention to the scale at which livestock and other agricultural products are produced and shipped around the world. Although the goals of reducing hunger, mitigating the impacts of climate change, and building a fair food system future for all are shared by most people, the appropriate *scale* – in all its dimensions - at which the food system should function remains deeply contested. Should nations increase food self-sufficiency or increase involvement in international trade? Are small- or large- scale agricultural systems preferable? Are food systems best governed at the local or the global level? What is the role of large corporations? Should food systems prioritise the concerns of local people, or are the interests of wider communities, future generations or other species equally important?

Debates on these topics are often focused on the most extreme and contentious viewpoints. They fail to recognise the broad and rich spectrum of more nuanced views that lie within the parameters of simplistic 'localist' versus 'globalist' positions, or to allow for more deliberative dialogue and reflection.

### 1.2 Methodology

Through this project, we aimed to invite considered reflections and discussions, exploring the theme of scale through a series of interviews and dialogues with a range of food systems stakeholders. Fourteen of these discussions took place between guest speakers and TABLE staff, and were edited into podcast episodes available on our website. One discussion, facilitated by TABLE staff, took place between two guest speakers during our launch event, and was carried out live online, featuring questions and reflections from the TABLE community and event attendees.

Speakers were drawn from a diverse array of disciplinary backgrounds and professional sectors (see Box One). We invited them to share their perspectives on current issues related to scale in the food system from the stance of their specific area of expertise, and to offer their visions for what a 'good' scale might be. During interviews, we encouraged speakers to reflect on the values, assumptions and personal experiences underlying their opinions, and on the merits or problems of opposing arguments and viewpoints.

## Box One: Project Participants

	Disciplinary background	Professional sector	Focus of work
Ken Giller on the <b>Food Security Conundrum</b>	Natural sciences (ecologist)	Academic	Small-holder farming; farming systems
Rob Bailey on <b>Global Food Trade Chokepoints and Vulnerabilities</b>	Interdisciplinary (natural sciences; business; development)	Private	Climate change; business development risk management
Lauren Baker on <b>Connecting Local and Global Scale to Place</b>	Social sciences (political economy)	Civil society (local; on ground action)	Sustainable food systems
Sahil Shah on <b>Scaling Seaweed</b>	Business and economics	Private	Technology; food security
Jennifer Clapp on <b>Commodifying Food</b>	Social sciences (political economy)	Academic	Trade & finance
Jamie Lorimer on the <b>Probiotic Planet</b>	Social sciences (geography)	Academic	Environment; wildlife conservation; human health;
Elena Lazos Chavero on <b>Scale, Seeds and Sovereignty</b>	Social sciences (anthropology)	Academic	Food sovereignty
Brent Loken on "It's not so simple"	Natural sciences	Civil society (global; nature conservation)	Climate change; resource management
Jessica Duncan on "We eat, drink and breathe food policy"	Social sciences (sociology)	Academic	Global governance
Vincent Ricciardi on <b>Challenging Assumptions</b>	Data science	Academic	Farming systems
Klara Fischer on <b>Why "technology is not scale-neutral"</b>	Interdisciplinary (biology; social sciences)	Academic	Small-holder farming; technology
Sophia Murphy on "Getting the global rules right"	Social sciences (political economy)	Civil society (global; advocacy)	Trade; food security
Felipe Roa-Clavijo on "Feeding the village, nation, or world"	Social sciences (development studies)	Academic	Food security; peace & conflict; agriculture
Elin Rööös, Johan Karlsson and Robin Harder on "Values in food systems models"	Natural sciences	Academic	Food systems modelling; Agriculture, consumption, energy use
Charles Godfray on <b>TABLE launch event</b>	Natural sciences (biology; environmental sciences)	Academic	Biodiversity; food production; ecosystem services

### 1.3 What have we learnt?

Speakers all offered nuanced reflections and acknowledged the complexities of the issues being discussed, and some clear overarching areas of agreement emerged. Nonetheless, there were some topics, such as the future of smallholders, the benefits of global trade, and the governance of food systems, where differences of opinion were more apparent. In this report we present key areas of agreement and disagreement in more detail, and explore possible factors underlying contrasting perspectives.

## 2. Areas of agreement

### 2.1 Assumptions need to be challenged

There are many assumptions held about different scales of production, and commonly used terms such as 'smallholder' carry multiple connotations and expectations. It is often claimed that small farms are less productive and have lower yields than large-scale farms.<sup>1</sup> Similarly, it is often assumed that local food systems will be more inclusive and democratic than national or global supply chains, or that small-scale food producers will help preserve local food cultures and traditions.

As various speakers noted, although the terms underlying these assumptions are often left undiscussed, they can be defined in various ways. Ken Giller pointed out that the term 'smallholder' refers to a diverse group of people that is very difficult to characterise: in Brazil, 'a small-scale farm will be anything around 50 hectares or below whereas...in India, 40% of smallholders have less than 0.05 hectares.' Klara Fischer agreed that not only does the term refer to different farm sizes, but also to the different contexts in which smallholders work (e.g., soil, weather, market possibilities, politics). This highlights the importance of clearly articulating what is meant by expressions such as 'smallholders', as ideas of possible pathways for food systems change can vary greatly depending on how they are understood.

Speakers also challenged the assumptions that are attached to these different terms. Data scientist Vincent Ricciardi shared details of his study<sup>2</sup> that found that contrary to common beliefs, smallholders across the globe have higher yields per hectare than large farms using similar management practices (e.g., small- and large-scale cereal producers), *and* harbour greater agrobiodiversity and non-crop biodiversity. Social anthropologist Elena Lazos Chavero also shared findings that contradict certain ideas about smallholders and local food systems, in particular their role in preserving food traditions and generating democratic food systems. During her ethnographic research in rural Mexican communities, Elena observed that many small-scale farmers planted native maize because of its popularity among middle-class consumers and academics, rather than due to their own dietary preference or desires to maintain food cultures. She also noted that social inequalities were reflected in the distribution and governance of food at the community level, thus countering suppositions that local food systems are more equal or democratic.

Challenging assumptions in this way has significant implications for discussions about scale in the food system. For example, suggestions that small farms actually produce higher yields *and* harbour greater biodiversity potentially undermine arguments for land sparing, while acknowledging the complexities of local food systems and the preferences of small-scale producers challenges those advocating for shorter-supply chains and small-scale farming to think carefully about the realities of achieving democratic food systems and maintaining local food cultures.

1 Collier, P., & Dercon, S. (2014). African Agriculture in 50 Years: Smallholders in a Rapidly Changing World? *World Development*, 63, 92–101.; Grunewald, C. & Smith, A. (2019). *Big Farms, Bad Rap*. Available at: <https://thebreakthrough.org/issues/food/big-farms-bad-rap>

2 Ricciardi, V., Mehrabi, Z., Wittman, H. et al.(2021). Higher yields and more biodiversity on smaller farms. *Nat Sustain* 4, 651–657.

## 2.2 The local-global binary is unhelpful

The local / global binary that often dominates discussions about food systems was largely rejected by speakers as unhelpful and indeed meaningless. They drew attention instead to the broad spectrum and multiple dimensions of different scales that coexist and interconnect within the food system. Lauren Baker and Elena Lazos Chavero pointed out, for example, that food producers often produce at once for their own consumption, for local markets and for national or global markets. Similarly, they might use native seed varieties, obtained by saving seeds from previous harvests, while also purchasing seeds and other inputs from global corporations. This coexistence of different scales is also apparent in consumption habits, as many people source their food both through local markets and producers, and from the other side of the world, through large, global suppliers.<sup>3</sup>

Building on a large body of existing literature,<sup>4</sup> speakers questioned the very idea of 'global' and 'local', highlighting the complexities involved in distinguishing between different scales within the food system. From one perspective, the food system can be understood as global, as it brings together ecologies, people, and technologies from around the world. As Sahil Shah explained, 'you often have your agricultural inputs from one place, your production taking place in somewhere else, the labour for that production coming from a third place, exporting to a fourth place, and then actually processing that in the fifth place, which may well then be consumed in the sixth place'. However, at the same time, these different stages of food production and provisioning are inevitably rooted in specific localities, meaning, as Lauren Baker pointed out, that 'actually, all food work happens locally'.

The ways in which different scales are entangled throughout food production and provisioning means that boundaries between them are extremely permeable.<sup>5</sup> Various speakers illustrated this by explaining how changes occurring in one place, or at one scale, can have major impacts elsewhere. Jamie Lorimer described how adjustments at the smallest scale, for example in the bacterial composition of soils and in the human microbiome, can have much wider impacts for environmental and human health. Awareness of this connectivity of different scales is evident in the increasing interest in rewilding and the role of keystone species in influencing natural processes and interactions throughout entire ecosystems. Rob Bailey also highlighted how seemingly 'local' events, such as political unrest or climate disruption occurring in a particular food exporting region, or even a particular port, could impact consumers around the world.

Other speakers illustrated how changes that are often understood to be 'global' or 'large-scale'- for example global free trade agreements and public policies - manifest at much smaller scales.<sup>6</sup> Elena Lazos Chavero spoke of the ways in which patterns of migration and drug-related violence might be evident on an individual farmer's plot of land in Mexico, as a lack of security and available labour affects land management choices, and consequently impacts agrobiodiversity on different plots of land. Many speakers contextualised this current reality, highlighting the historical processes and associated power relations and inequalities that have led to this interplay of different scales.<sup>7</sup>

Various speakers suggested that attempts to tackle food systems challenges will need to recognise the interdependencies and multidimensionality of different scales within the food system. Problems found in a particular place, for example a yield gap or lack of biodiversity on a particular farm, may well be connected to processes happening elsewhere and perhaps to factors that are seemingly unrelated to food systems outcomes, such as institutional research priorities, prices in global markets, state welfare provision or

3 Sophia Murphy; Jennifer Clapp

4 DuPuis, E. M., & Goodman, D. (2005). Should we go 'home' to eat? Toward a reflexive politics of localism. *Journal of Rural Studies*, 21(3), 359–371; Harvey, D. (1996). *Justice, nature and the geography of difference*. Blackwell; Massey, D. (2005). *For space*. Sage; Edwards-Jones, G., et al. (2008). Testing the assertion that 'local food is best': the challenges of an evidence-based approach. *Trends in Food Science & Technology*, 19(5), 265–274.

5 As Lauren Baker highlighted, 'it is really hard to think about scale as kind of closed...these are all very permeable boundaries'

6 Elena Lazos Chavero; Klara Fischer; Brent Loken

7 Jamie Lorimer; Elena Lazos Chavero; Jennifer Clapp; Klara Fischer



gender and race politics.<sup>8</sup> As Klara Fischer summarises, 'just because the problem is located in one place, it doesn't need mean that the solution is located in the same place, or in the same discipline... if we look at environmental degradation, for example, because environmental degradation happens in one place, it doesn't mean that it's the people who live there that have caused it.'

## 2.3 Diversity of scales is essential

Many speakers rejected the notion of an 'ideal' scale for future food systems, highlighting the importance of context and the specific challenges being tackled. For example, small farms play an important role in maintaining livelihoods and biodiversity within the farming landscape, but sustainably managed large farms might be more appropriate in certain contexts,<sup>9</sup> such as in areas with smaller rural populations. Similarly, 'local' or territorial food systems might be beneficial in contexts where diverse foods can be grown locally, but some countries will inevitably need to rely heavily on food imports to ensure their food security.<sup>10</sup>

Speakers therefore emphasised the importance of encouraging a diversity of scales to coexist so that multiple and interconnected food systems goals can be achieved. Some highlighted the importance of diverse marketplaces for encouraging efficiency and innovation,<sup>11</sup> others focused on including diverse actors in governance processes in order to ensure equity and social justice,<sup>12</sup> and others still identified a link between diversity and human and planetary health.<sup>13</sup> Above all, many speakers highlighted the importance of diversity for generating a resilient food system.<sup>14</sup> They pointed out that relying too heavily on global trade, on a few large production or provisioning firms, on a few key food producing regions, or on a small number of staple crops makes food supplies extremely vulnerable to disruption.

Various speakers suggested that the food system as it is today is therefore particularly vulnerable and events recent to the time of interviews (2020-2021), such as the obstruction of the Suez Canal or the severe drought in North American wheat-producing regions, offer timely illustrations of these speakers' concerns. The importance of diversity is often not recognised and the global or large-scale often dominates at the expense of other scales of activity. This is illustrated by many countries' reliance on imports and global trade, by corporate consolidation in agri-food economies, or by the dominance of trade rules implemented by global governance bodies. As Jennifer Clapp summarised, 'a globalised and concentrated food system does tend to take up space that could be occupied by local and alternative and diverse food systems'. Sophia Murphy agreed, explaining that although 'we can't assume that local is... Necessarily the best place to start. It just has to be there, and it has to be granted integrity. And most of our food systems do not give local integrity', as global rules often limit actions that might be taken to increase food security at the national or local level.

Although speakers emphasised that they would not reject the global or large-scale entirely, many called for addressing this imbalance. In particular, they highlighted the importance of ensuring that activities taking place at different scales are encouraged to complement, rather than contradict, each other, and contribute to the same goals.<sup>15</sup> As Lauren Baker observed, 'the scales are often completely misaligned, and they're actually detrimental to one another. I think we often pit different scales against each other, but another way of looking at this issue is from a systems perspective and really thinking about how the scales

8 Ken Giller; Klara Fischer; Jessica Duncan

9 Charles Godfray; Ken Giller

10 Brent Loken; Charles Godfray; Pat Mooney; Rob Bailey

11 Jennifer Clapp; Sophia Murphy

12 Jessica Duncan

13 Rob Bailey

14 Rob Bailey; Brent Loken; Lauren Baker; Sophia Murphy; Sahil Shah

15 Lauren Baker; Jessica Duncan; Brent Loken

can better align.' Sophia Murphy conceptualised this idea of working across scales through the notion of 'consonance', explaining 'you don't all need to have the same piece of music in front of you to make a symphony, you can play different things, and it can harmonise'.

## 2.4 The state plays a key role

Speakers all acknowledged the importance of a multiplicity of governance arrangements. However, speakers emphasised in particular the role that the state can, and should, play in generating sustainable, resilient and equitable food systems.

Some focused on the ways in which the state might support and improve smallholder production and encourage sustainable and ecological on-farm practices, for example by subsidising appropriate research and education,<sup>16</sup> creating financial incentives for farmers to adopt nature-friendly practices,<sup>17</sup> providing social security such as pensions and health care so that resource-poor farmers can invest time and money into developing their productive practices,<sup>18</sup> or ensuring that trade policies allow small-scale producers access to markets.<sup>19</sup> Speakers argued that such measures would also play an important role in tackling food insecurity and rural-urban inequalities, given that, in many parts of the world, hunger and poverty is particularly prominent among small-scale food producers.<sup>20</sup>

Many speakers emphasised the importance of markets and the private sector and called for nuance in often polarised conversations about agribusiness, suggesting that it is important not to 'villainise' or 'demonise' all corporations.<sup>21</sup> However, alongside this, they highlighted the vital role of the state. Sahil Shah suggested that national governments need to provide incentives so that the private sector helps to tackle different food systems challenges; Jennifer Clapp argued that, by implementing antitrust laws and restrictions on corporate consolidation, policy makers could help generate diverse marketplaces; and Charles Godfray emphasised that the state has an important role to play in monitoring agribusiness and carrying out 'stress testing' to ensure corporations' ability to withstand economic shocks and continue their provision of services over the long-term.

Various speakers also highlighted the role of the state in ensuring food security. Many focused in particular on actions that could be taken by national governments to address the vulnerabilities associated with reliance on food imports and global trade, for example, strengthening national food systems and bolstering production for domestic consumption;<sup>22</sup> safeguarding against disruptions to international trade by establishing grain reserves;<sup>23</sup> or investing in infrastructure in major crop-producing regions to help strengthen the global food system.<sup>24</sup> Some speakers also promoted the idea of the 'right to food', highlighting the responsibility that this places on national governments to generate equitable and sustainable food systems.<sup>25</sup> Multiple speakers highlighted the role of the state by framing food security as a political, rather than technical or scientific, challenge, suggesting that questions about the governance of new technologies would need to be resolved,<sup>26</sup> and that rural-urban, North-South, and racial and gender

<sup>16</sup> Jennifer Clapp; Klara Fischer;

<sup>17</sup> Rob Bailey

<sup>18</sup> Klara Fischer; Ken Giller; Jessica Duncan

<sup>19</sup> Jennifer Clapp

<sup>20</sup> Felipe Roa-Clavijo; Ken Giller; Klara Fischer; Elena Lazos Chavero

<sup>21</sup> Sahil Shah; Jennifer Clapp

<sup>22</sup> Jennifer Clapp

<sup>23</sup> Sophia Murphy

<sup>24</sup> Rob Bailey

<sup>25</sup> Jennifer Clapp; Sophia Murphy; Felipe Roa-Clavijo

<sup>26</sup> Charles Godfray; Pat Mooney

inequalities would need to be addressed for food security to be achieved.<sup>27</sup>

### 3. Areas of contention

Discussions about the future of smallholder farming, the benefits of global trade and the governance of food systems are often highly polarised. Although our speakers had nuanced views on these issues, and no-one advanced the more extreme stances often reflected in these debates, these topics did prove more divisive and many speakers fell into one of two contrasting categories, reflecting, to a certain degree, the more polarised opinions commonly expressed.

#### 3.1 What future for smallholders?

Broadly speaking, within food systems discourse it is possible to discern two strands of thought on the topic of smallholder farming. Some people promote, or see as inevitable, an increase in large-scale production, suggesting that larger farms and economies of scale promote efficiency and innovation, provide better livelihoods, and will be better able to ensure food security and tackle environmental and climate crises. Other people contest such views and suggest that food systems centred on small-scale farming are essential for achieving food security, sustainability, resilience and social equity and resolving rural poverty in low-income countries.

Regarding our interviewees, some were more sympathetic to this latter perspective. They envisioned a prominent role for smallholders in future food systems, arguing that there are many environmental, and health benefits of small-scale farming, and emphasising the importance of maintaining people's livelihoods and recognising their emotional connection to their land.<sup>28</sup> These speakers promoted various measures that would help smallholders improve their production and protect their livelihoods, for example secure land access,<sup>29</sup> research and education aimed at smallholders,<sup>30</sup> and governance structures inclusive of smallholders.<sup>31</sup>

Many of them also highlighted the potentially problematic relationship between technological developments and smallholder farming, emphasising how, historically, the introduction of new agricultural technologies has often favoured large-scale and capital-intensive production, leading to increases in rural poverty and inequality.<sup>32</sup> They emphasised the importance of ensuring that farm inputs and technologies were useful and accessible for smallholders,<sup>33</sup> and warned that digitalisation and automation, and the associated reduction of human labour could increase poverty and inequality among populations dependent on farming livelihoods.

Other speakers however offered an alternative view on the future of smallholding. They highlighted how the scaling up of production had allowed food to be produced more cheaply than ever before, and suggested that, given the impacts of population growth, urbanisation and climate change on food security, it would be crucial to further mechanise production and apply new technologies on a large-scale in coming years.<sup>34</sup> These speakers acknowledged the current importance of smallholder farming and many

27 Jessica Duncan; Felipe Roa-Clavijo; Ken Giller; Klara Fischer; Elena Lazos Chavero; Jennifer Clapp; Sophia Murphy

28 Klara Fischer; Jennifer Clapp; Pat Mooney; Ken Giller; Elena Lazos Chavero

29 Pat Mooney; Elena Lazos Chavero

30 Klara Fischer; Jennifer Clapp; Ken Giller; Pat Mooney

31 Jessica Duncan

32 Klara Fischer; Jennifer Clapp

33 Klara Fischer; Elena Lazos Chavero; Pat Mooney

34 Rob Bailey; Sahil Shah; Charles Godfray

smallholders' emotional attachment to land, as well as the injustices that have historically accompanied transitions to large-scale land use; however they interpreted such concerns as an argument for *just transitions*, rather than for avoiding the scaling up of agriculture as a whole.

## 3.2 Is global trade good or bad?

When discussing the globalisation of food systems, many food systems stakeholders adopt a 'pro-global' stance, suggesting that global free trade improves efficiency and innovation, widens the choice of products available to consumers, and contributes to food security in regions unable to grow their own food. On the other hand, some people lament the increasingly global movement and exchange of agri-food products. They blame globalisation for ongoing food insecurity, and for inequalities and environmental issues in the food system, and promote minimising the distance between production and consumption by generating local supply chains.

Rather than adopting these more extreme stances, all of our speakers accepted the importance and inevitability of global agri-food trade, while also acknowledging current associated drawbacks. However, some speakers focused in particular on the more positive aspects of global trade, highlighting its role in improving efficiency, lowering food prices relative to incomes, and avoiding environmental degradation by exploiting ecological comparative advantage. These speakers suggested that the global food system had generally responded well to COVID-19, focusing on the fact that staple crops continued to be exchanged around the world without major spikes in food prices during the pandemic.<sup>35</sup> Although such speakers acknowledged the problems associated with global food trade, such as a potential lack of resilience resulting from the concentration of production and an overreliance on imports, they advocated reforming current policies and practices, rather than making more profound changes to agri-food economies.

Other speakers offered a much more critical assessment of the global food system arguing for more radical, structural change. They highlighted how globalised markets had increased the presence of financial actors in food systems and facilitated corporate consolidation, causing negative impacts on the environment, social equity and food price stability, and unjust labour conditions for many food systems workers.<sup>36</sup> Analysing the global food system's response to COVID-19, Jennifer Clapp observed that in many countries, reliance on food imports had disrupted the availability of certain products, particularly dairy and other perishables, with uneven impacts on people's ability to access food. Although these speakers didn't reject global trade entirely, they promoted building and strengthening more localised or territorial supply chains.<sup>37</sup>

## 3.3 At what scale should food systems be governed?

Wider discussions about food systems governance are often highly polarised, with people disagreeing on the scale at which decisions about food systems should be made and the ideal size of different food systems actors. Some stakeholders suggest that food systems are best managed at the global scale. They promote the value of global governance organisations such the World Bank, International Monetary Fund and United Nations, global civil society organisations and NGOs, and global actors in the private sector, such as large-scale commodities companies. Others see these actors and organisations as undemocratic and unjust. They call instead for food systems governance at the city, national or regional scale, and promote the involvement of smaller scale firms, and community organisations in the processing and

35 Rob Bailey

36 Jennifer Clapp; Jessica Duncan; Lauren Baker

37 Jennifer Clapp; Jessica Duncan

distribution of food.

All of our speakers highlighted the importance of a diversity of governance arrangements connected across different scales, and recognised the challenges associated with generating change at both the global and local levels. However, some focused primarily on the role of global organisations for generating food systems change, suggesting for example that 'working at the global scale is probably a bit more efficient, in some ways' as a global organisation is able to establish the 'right global mechanisms and right global frameworks' and 'amplify and really accelerate [solutions to] these massive global problems'.<sup>38</sup> These speakers acknowledged problems associated with global organisations such as the World Trade Organisation and United Nations, but suggested that they could be resolved through the development of effective participatory processes, and adaptive and flexible forms of governance.<sup>39</sup>

Other speakers focused far more on the importance of more localised food systems governance.

Pat Mooney promoted a global food system with 'decentralised governance', and Lauren Baker advocated place-based approaches, such as mutual aid networks, that enable communities to take greater ownership over their food provisioning and 'are rooted in particular cultures and ecologies'. Felipe Roa-Clavijo illustrated the importance of these types of place-based approaches, explaining how different smallholders often have different needs, with some prioritising protection in domestic markets, and others prioritising access to forests or coastal areas for hunting or fishing, or spiritual understandings of seeds and ecologies. For Elena Lazos Chavero, this diversity highlights the importance of granting farmers control over different elements of their productive systems, for example seeds and land, and centring questions of agency. Indeed, many of these speakers preferred to focus on power and democracy rather than scale per se, suggesting that, when discussing food systems governance, it is less important to think about the scale at which decisions are made, and more about *who* is making them, and the influence that different actors have over different aspects of food systems change.

Discussions about the ideal scale of private sector food systems actors, especially the role of global corporations, were particularly contentious. Some speakers offered a positive view of global agri-food commodities companies. They suggested for example that they 'do their job pretty well',<sup>40</sup> or emphasised the 'substantive consumer benefits' associated with their work.<sup>41</sup> Although they accepted that the state would need to regulate the work of private companies in some areas, they rejected suggestions that their size should be controlled, highlighting the importance of economies of scale for improving efficiency and innovation. Others were much more critical of large, global agri-food corporations, particularly for failing to address or take seriously environmental issues in the food system.<sup>42</sup> Various speakers warned against allowing these companies to direct future change, suggesting that they could not be trusted to implement new technologies responsibly,<sup>43</sup> and that their increasing size and market share could lead to higher prices and negative environmental impacts as they become less accountable to external actors and interests.<sup>44</sup>

38 Brent Loken

39 Sophia Murphy

40 Charles Godfray

41 Sahil Shah

42 Pat Mooney; Elena Lazos Chavero

43 Pat Mooney

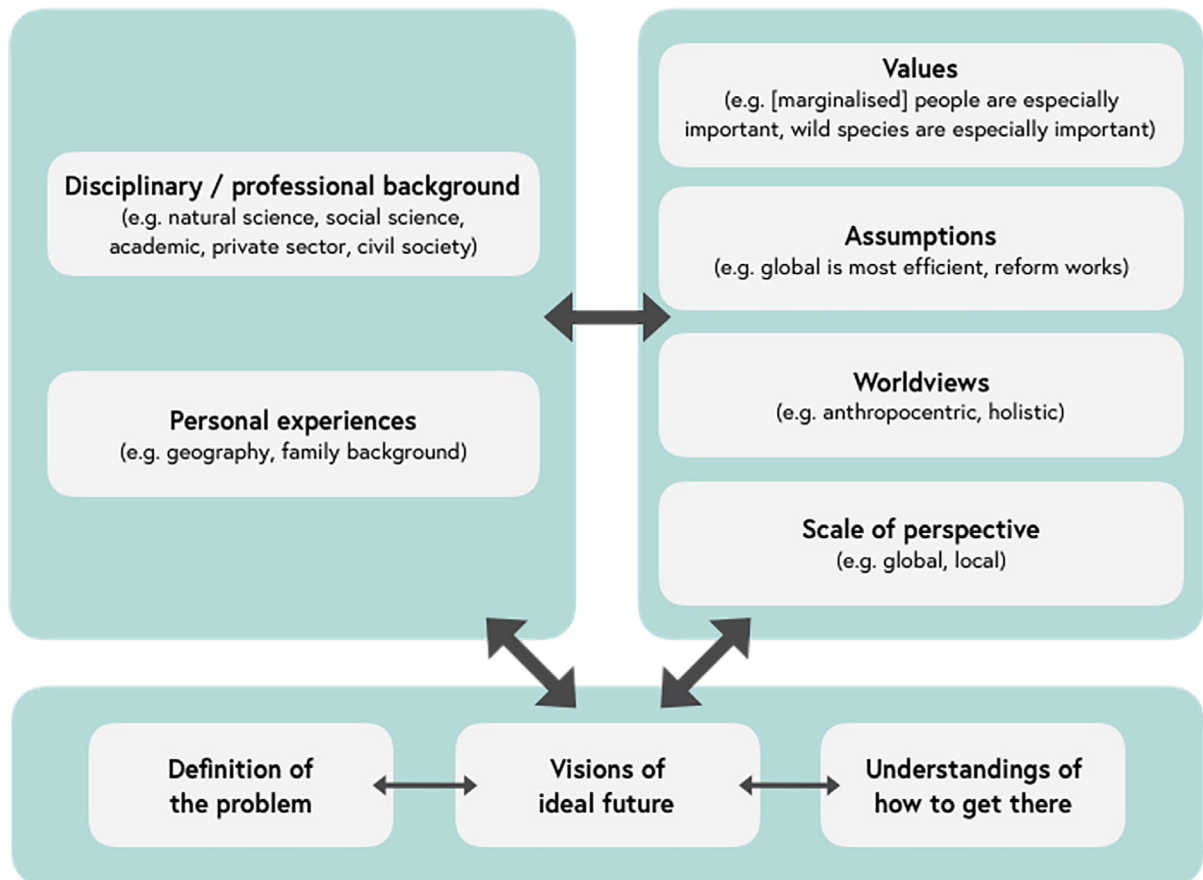
44 Jennifer Clapp

## 4. What underlies disagreements?

Within the wider food systems discourse, it is broadly agreed that changes will be needed to bring about a sustainable, resilient and equitable food system; however, people offer very different interpretations of the current issues and promote radically different ways of achieving these goals. As Jessica Duncan explained, people 'just really don't understand the problems the same way... We all want the same end goal, I think. Healthy sustainable food systems. But we really see different pathways'. Why is it that people understand problems so differently, or offer such different visions of the future? When there is so much competing and conflicting evidence, how do people make decisions about food systems change? What makes people prioritise one approach over another, or place more value on one body of evidence than on another?

In their discussion about food systems models, Elin Rööös and colleagues explore these questions, reflecting on the ways in which the modelling process articulates more clearly the values and assumptions underlying different visions of future food systems and trade offs that must be made. In the following section, we build on these observations, using speakers' personal analyses and our own speculations to reflect on the different factors that influence speakers' viewpoints and provoke differences in opinion on particularly contentious topics.

Box Two: Factors influencing people's visions of the future.



## 4.1 Reform *within* the system, or transformation of the system?

Speakers were not explicitly asked whether they favoured reform or more radical, alternative forms of transformation; however, assumptions about the desirability or possibility of different types of change seemed to shape opinions on various topics of debate, with speakers making different judgements about the extent to which sustainability, equity and resilience could be achieved within the current food system.

Speakers who promoted the scaling up of new technologies and production, and continued reliance on large corporations and global trade seemed to share a sense of optimism about the possibilities of reform. They suggested that 'just transitions' could be achieved to avoid the inequalities often associated with technological change; that large corporations, with input from national governments, could be encouraged to incorporate concerns such as environment, equity and human health into their work; and that the needs of different types of producers and consumers could be met through existing governance arrangements.<sup>45</sup> These speakers promoted change *within* the current food system, focusing in particular on the ability of existing food systems actors, such as policy makers and consumers in global markets, to generate change.<sup>46</sup>

On the other hand, many of the speakers who offered a more negative view of large-scale production, global trade and large agri-food corporations seemed more dubious about what could be achieved by reforming the status quo. Many highlighted historical patterns of inequality and environmental harm to express scepticism about, or reject outright, the possibility that further scaling up or continued reliance on global trade or large corporations would generate positive food systems outcomes. Instead, these speakers focused on generating change outside of dominant scales of activity, highlighting the importance of strengthening alternative food systems actors and processes, for example by developing more localised food systems, alternative markets, or social movements and community organisations.<sup>47</sup>

However, although there was some distinction between speakers' approaches to food systems change, most of them promoted a combination of different approaches. Some suggested that reform and radical change needed to occur simultaneously so that existing processes do not undermine the emergence of alternative food systems, while others, taking a pragmatic approach, felt that the merits of different approaches depended very much on context.

## 4.2 Different values and priorities

As our speakers acknowledged, food systems goals are not always complementary, and difficult decisions about trade-offs are sometimes necessary. Moreover, aims can be interpreted in different ways. Jennifer Clapp explained that 'most of the dominant food policy understandings of efficiencies have been around *economic* efficiency, and *production* efficiencies, as opposed to thinking about *energy* efficiency, and [about] *diversity* and *resilience* as counterparts to efficiency...so one could define it in different ways' (emphasis added). Speakers were not explicitly asked whether they would prioritise one goal over another; however, there often seemed to be a connection between the goals that they particularly focused on, and their opinions on the contentious topics discussed previously.

Speakers who supported small-scale farming and were sceptical about the role of large corporations tended to focus on the importance of equity, social justice, and inclusivity in food systems, and frequently mentioned topics such as incomes, social protection and livelihoods. When discussing food security, they argued for supporting smallholder farmers, highlighting the disproportionately high levels of hunger in rural

45 Sahil Shah; Charles Godfray

46 Brent Loken; Rob Bailey

47 Pat Mooney; Jennifer Clapp; Lauren Baker; Elena Lazos Chavero; Jessica Duncan

areas, and emphasising the systemic factors that, in all contexts, increase vulnerability and impede access to food. Speakers who were more optimistic about large corporations, large-scale production and global trade tended to focus more on global scale priorities such as the challenges involved in producing sufficient quantities of food for the global population in a resilient and sustainable manner, and the importance of efficiency and innovation for ensuring widespread food security.

Although some goals, such as sustainability and environmental impacts, were prioritised by all speakers, people approached these topics in different ways and offered different interpretations of these goals. Speakers who were more optimistic about the global and large-scale primarily focused on either the importance of 'land sparing' and making space for biodiversity preservation in wild landscapes, or on the importance of climate change adaptation and mitigation within the food system. Speakers who emphasised the importance of local trade and small-scale production, on the other hand, generally approached these topics slightly differently, emphasising the value of biodiversity within the farming landscape, the quality of on-farm natural resources, or the importance of ensuring sustainability within ecological systems.

These differing interpretations of sustainability in turn seemed to generate somewhat conflicting approaches to the topic of resilience. Some speakers concentrating on climate change suggested building resilience by reducing the exposure of agri-food production to climate disruption, for example through cellular agriculture, or improving food system infrastructure to reduce the impacts of extreme climate events. Others contested such understandings of resilience, suggesting that increasing reliance on technologies risked making food systems *more* vulnerable by potentially concentrating power and limiting the variety of strategies available. These speakers focused on generating resilience through wider socio-economic and political processes, for example by preventing power concentration in agri-food economies, strengthening farming livelihoods and promoting diversified productive systems. These different understandings of resilience also bring to light more profound disagreements about the relationship between food systems and nature. Some speakers displayed a more anthropocentric understanding of agriculture, expressing excitement about the possibility of producing food for human consumption using only 'sunlight and bacteria'<sup>48</sup>, whereas others expressed discomfort at the idea of separating agriculture from natural ecosystems and of eating food originating 'from a Petri dish'.<sup>49</sup>

### 4.3 Disciplinary and professional background

There was a fairly clear relationship between the disciplinary or professional backgrounds of different speakers, and their views about or emphasis they placed on different topics. Speakers who spoke more favourably of small-scale farming and local trade tended to be academics engaged in on the ground, qualitative research, or were working in civil society organisations. Speakers who were more optimistic about the global and large-scale tended to be natural scientists, and may have worked with or within the private sector.

In particular, these disciplinary backgrounds seemed to impact the scale of perspective that different speakers adopted, which in turn, influenced their understanding of different food systems goals. Speakers who undertake on the ground, qualitative research prioritised social equity in their discussions, communicating in particular the challenges faced by small-scale farmers, and offering understandings of resilience and sustainability that coincided with the focus of their work. Those drawn from a natural science background tended to consider issues at a larger scale, focusing on climate, global biodiversity concerns and global land use patterns.



Disciplinary background also seemed to impact different speakers' readings of history, and consequently, their opinions about future trajectories of food systems change. All speakers recognised the injustices that have historically accompanied transitions in land use and agri-food production. However, social scientists offered particularly detailed and critical interpretations of these topics, whereas natural scientists and those working in the private sector acknowledged these issues but expressed optimism that historical patterns need not be repeated.

Although it is interesting to explore the impact of disciplinary background, we cannot attribute too much importance to this connection, as we interviewed a relatively small number of people, and it would be disingenuous to suggest that speakers can be easily categorised according to discipline. Moreover, many speakers pointed out that they deliberately work across disciplines in order to avoid siloed thinking. Indeed, when asked 'what evidence and knowledge base do you draw from in your own research and work', almost all speakers emphasised the importance of diversity, and described how they engage with different actors, forms of knowledge, and theoretical fields in their work.

## 4.4 Personal experiences

Various speakers identified ways in which their own personal experiences had shaped their values and assumptions about food systems. Some suggested that growing up in areas dominated by small farms had shaped their aesthetic expectations and ideals for rural landscapes, whereas others highlighted the pleasure they derived from observing wildlife or spending time in wild landscapes, and emphasised the importance of preserving these environments. Some speakers identified their 'nomadic' background moving between different locations as the reason they focused on global organisations or looked at food systems at the global scale, whereas others described their early experiences involved in community organisations and often continued this level of focus in their work. Speakers also acknowledged that their positive experiences of global interactions and inter-cultural exchange, through travel and work, likely shaped their opinions, suggesting that people who had suffered the more negative impacts of globalisation, for example marginalised rural communities whose livelihoods and landscapes had changed due to global trade, would likely have very different opinions of global trade and governance.

## 5. Limitations

The methods we used in this project, and consequently our findings, undoubtedly have various limitations. Not all dimensions of scale were fully explored, reflecting the limited number of people we interviewed and the interview design. In particular, questions related to scales of concern or temporal scale – for example to which people (or species) do we have particular duties and obligations, and over what timeframe – were not covered in any detail. Participants in this project were primarily academics from the global North, meaning that the viewpoints of a wide range of people and sectors working in or on food systems were not fully represented. This lack of diversity might explain the far-reaching areas of consensus among participants, and the relative absence of more polarised opinions. Similarly, the choice of individual interviews rather than interactive debate might have encouraged more nuanced reflection, and therefore generated more agreement than is commonly evident in wider food systems discourse. The interview style used also limits the extent to which we can assess the impact of speakers' disciplinary background on their opinions, as interviews tended to concentrate on the specific focus of their work, rather than following a structured interview plan that posed broader questions and remained constant across all speakers.

## 6. Conclusions

This project offered a valuable opportunity to explore questions about scale in the food system, with consensus reached on the importance of diversity in food systems and on the need for nuanced and careful reflection when discussing issues of scale. Areas of disagreement allowed us to reflect on the different factors that might contribute to more polarised food systems debates, highlighting the ways in which values, assumptions and worldviews underpin people's visions for the future and understandings of change.

Perhaps inevitably, this project did not produce a clear answer to the question 'should the future of food be global or local?'. For a start, our speakers all rejected this binary framing, and instead promoted a combination of global and local, and large and small. Although these kinds of nuanced reflections are widely shared and arguably open up opportunities for more collaborative decision making, they leave certain difficult strategic questions unanswered. For example, what proportion of its food supply should each country choose to import? Which crops? And from where? What governance arrangements will be needed to generate sustainability and social equity at all scales? What size should farms be in different contexts, and how might this be achieved? If anything, speakers highlighted the difficulties of making these kinds of choices. They emphasised that, given the complex connections and dependencies between food systems of different scales, decisions taken in one place or in response to one issue, will inevitably have multi-sited and multi-dimensional impacts. Many however, suggested that it is less important to work out specific answers to these strategic questions, and more urgent to consider *who* will be making the relevant decisions. The issue of power arose frequently in discussions with speakers and was woven into all topics of conversation, with various speakers suggesting that food systems outcomes often depend much less on size and scale, and much more on the power structures, ownership models and participation processes that accompany them. These comments bring to light questions and themes that deserve further exploration, as we continue to consider how differences will be reconciled and difficult decisions about food systems futures will be made.