Local Food Plan

Review of local food definitions

Learnings for implementing and monitoring food systems transformation

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Contents

Executive summary

The authors of this report analysed local food definitions from articles and reports to create two contrasting local food system (LFS) models. The solutions and suggested monitoring indicators presented herein aim to address the needs of different LFS types.

Analysis of the definitions led to the identification of ten themes (Fig. 1), which reflect the elements from which LFS definitions can be assembled. Two LFS models, differing across these themes, were created to explore the tensions between the aims and requirements of different forms of LFS. Real LFS are usually diverse mixtures of these two models.

The market-driven model of local food imagines LFS focused on improving returns to producers through the leverage of stories about the traditions, region and sustainability of production and the characteristics of products. The community/social-driven model imagines LFS based on a desire to use local food to achieve social aims, including improved access to high quality food.

The models highlight two needs which, in the current food system, are often in opposition. Exploring these needs enabled us to consider how LFS might meet both goals – providing decent livelihoods for food producers and food system workers as well as access to high quality food for all – while also delivering on environmental sustainability.

The twelve solutions – drawn from existing practices and initiatives as well as insights from this work – focus on creating LFS which can be resilient in delivering on these needs.

- Fully implemented right to food.

- Universal Basic Income for farming and farm workers.

- Networked local and interoperable infrastructure.

- An open-access local food research, monitoring, reporting and data-sharing network.

- Values-driven food systems.

- Not-for-profit business models.

- Community owned infrastructure.

- Digital and physical infrastructure exclusively for SMEs/not-for-profits.

- Pay-as-you-feel & payment in kind.

- Societal commitment to reduce inequality and poverty.

- Change in food mindsets through engagement and learning.

- Systematic change – building on Milan Food Pact and other frameworks.

Monitoring is vital to track change, assess progress against desired outcomes, learn iteratively from experience and create ever more effective approaches to growing and governing LFS. However, monitoring is an expression of power that can shape the systems it observes, therefore, monitoring systems and indicators **should be chosen with the involvement and positive engagement of those engaged in LFS on the ground, in keeping with the local empowerment and democratic values at the heart of localism**.

The suggested metrics in this report should be considered as starting points for collaborative indicator development and governance through the **establishment of a local food monitoring, reporting and data sharing network** based on existing initiatives and resources.

Acknowledgements

1. Introduction

In February 2024, a Sustainable Food Trust article on local food – **What is local food and why does it matter?** – explored some of the benefits of local food systems (LFS) and highlighted the importance of recognising their diversity. In this report, which forms part of the Sustainable Food Trust's contribution to the **Local Food Plan**, we re-visit the issues raised in the article. Some of the elements of this report were published in an advance **online article** in December 2024.

In this report we:

i. Present two models of LFS that emerged from a thematic analysis of existing definitions. These models describe 'market-driven' and 'community/social-driven' local. The models represent two imagined extremes of LFS. They are used to highlight issues with our current food systems and the tensions arising from trying to meet the needs of diverse LFS.

ii. Put forward solutions with the potential to meet both the need for decent livelihoods for farmers, land workers and other food supply system workers and the need for all people to have access to high quality food.

iii. Discuss the importance of 'localness' in itself.

iv. Highlight issues relating to local resilience and the need for a 'networked' local food supply.

v. Present an approach to monitoring the diversity of LFS and discuss the requirements of such monitoring in terms of driving the growth of LFS without constraining its diversity.

The thinking in this report underpins the Local Food Plan's definition of local food. The solutions and the monitoring approach that are presented contribute to the Action Planning phase of the project, alongside the Sector Snapshot Review and Solutions Design activities.

2. Local food definitions and models

The first part of this report focuses on local food definitions. We looked at 81 definitions of local food from 37 authors/organisations in reports and articles, pulling out different themes from each definition to better understand what people mean by 'local food'. From these themes (described fully in Appendix 1, list of sources Appendix 2) we drew out two contrasting models of local food to highlight the tensions between the diverse forms of LFS in the UK and explore how to overcome these tensions.

The two models that emerged – market-driven and community/social-driven LFS (Figure 1) – relate to the identified themes (on the left of the figure). It should be noted that these models are imagined 'extremes' of LFS, which we used to get to the heart of issues around local food. **In reality, local food systems are a diverse mix of different elements of both these models**, and may be moving towards or away from more community- or market-driven ways of working. The aim here is to use our imagined 'extremes' to synthesise a version of local food which delivers the best of both worlds.

The market-driven model imagines a version of local food motivated by the need for farmers and growers to make a decent living from food production and lays out how local can enable this through the market. In our community-driven model, the focus is on a version of local food shaped by communities in order to achieve social goals, including access to good quality food for everyone.

We will now look at how the aims of these two models of local food might be achieved and consider some of the associated issues.

	Market driven local	**Community / social driven local**
Geography	Absolute – defined area for provenance but might sell anywhere. Idea of 'escaping' local market	Relative/graded – defined by context, source as much as possible within community. Do not 'escape' local market, enable duplication
Information flow	Via data & labelling using standards	Personal communication in the context of trust
Buying / selling location	Owned, governed by or dependent on retailer	Access, independence/self-organisation, flexibility/ephemerality
Food quality	Value-added traditional processing & tailored packaging & distribution	Shorter distance & time from producer to eater; fresh & less processed food
Supply chain involvement	Customers non-engaged consumers of supply chain outputs	Involvement of customers in supply chain, including buying clubs, community owned retail, community growing, CSA
Local benefits	As location of food supply chain businesses committed to area through value of local story	From social & human capital built up in the food system & improved access to food
Production sustainability	Environmental and social impacts of food system valued by supply chain due to consumer premium	Environmental & social impacts of food system valued intrinsically or through non-market motives like pride
Supply chain relations	Mutual dependence within supply chain centred on location, not dependent on local eaters

Valuing outcomes for producers by enabling value-added marketing

Valuing customers due to ability to pay for characteristics beyond nutritional necessity | Mutual dependence including local eaters

Valuing outcomes for producers beyond market

Valuing customers beyond transaction (ability to pay) – access, local resilience and quality of life |

Figure 1. Two models of local food created by imagining contrasting positions in relation to the themes (orange boxes) which emerged from thematic analysis of local food definitions (see Appendix 1).

2.1. Market-driven local

For producers, informing consumers of their product's provenance, quality and sustainability, and shortening the supply chain – i.e. reducing the 'middle-man' between the producer and the consumer – are ways to potentially gain better prices for their produce.

These approaches require farmers to have the resources and opportunities to either sell direct or to maintain direct traceability from their farm to the products the consumer buys. They require support for the sustaining of traditional practices and the required infrastructure for local production and innovation. But they also require those who buy the produce, complete with a rich story about its qualities, value and provenance, to be willing and able to pay more for it than they would for similar products without such value attached. Indeed, producers may sell outside their local area to reach more affluent markets. As a result, the 'food miles' associated with products sold via this version of localness may be **similar to products not sold as local**. In essence, this form of local is, in many respects, compatible with the globalised food supply system.

We can visualise the 'market-local' situation to sum up this description. Light green arrows represent tensions or potential conflicts between aims.


Review of local food definitions
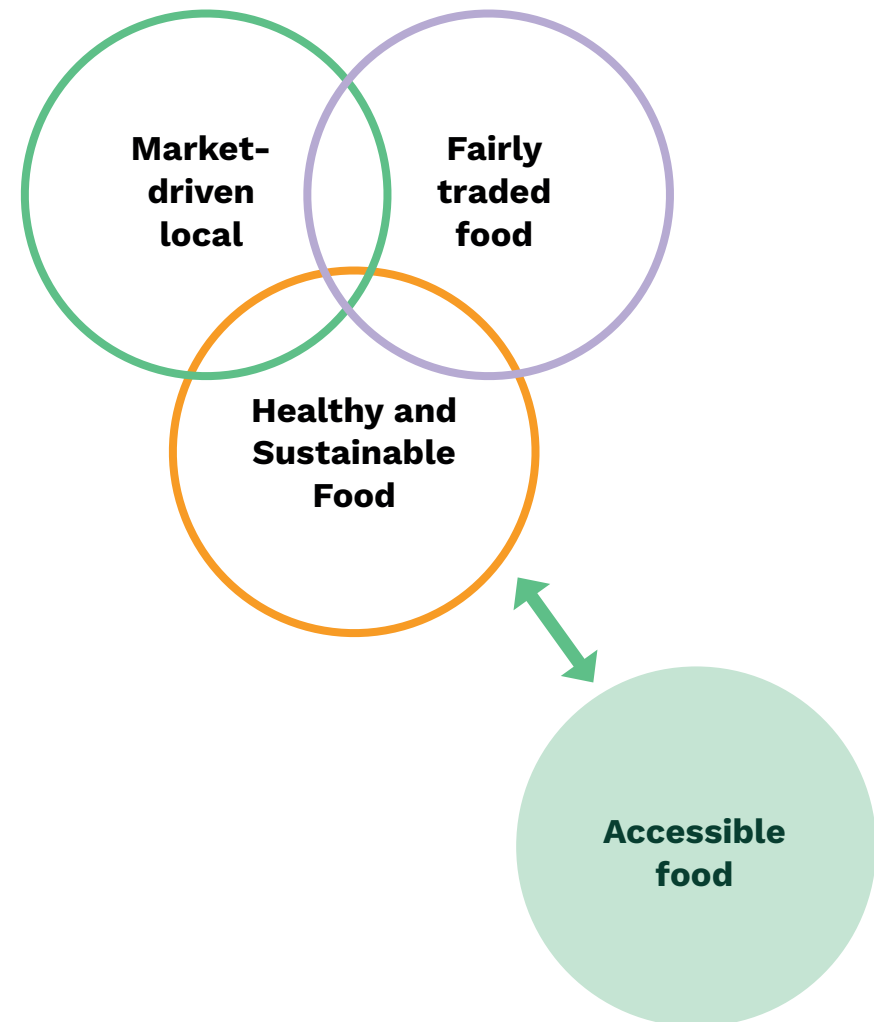
Another key influence on fair rewards for farmers and growers is power and dependency in the food system. If a few large companies dominate a supply chain, it is likely that any added value generated in the chain will flow to those companies. These large companies can, for example, demand more from their suppliers at lower prices because they are large enough to buy the product from another supplier if needed, whereas their suppliers might struggle to find other outlets.

In the UK, food retail is dominated by a few very large businesses which compete for market share. They do not necessarily make a large profit because their squeeze on the rest of the supply chain goes towards offering better deals to consumers, in order to keep their custom. If one company steps out of line and raises prices to give more to their suppliers, they are likely to be undercut by the others and lose customers. In these types of systems, there is little resilience to external shocks that increase the costs of production, such as war or crop failure due to global warming – the already-squeezed supply chain is vulnerable to collapse, while consumers find prices rising beyond what they can pay. Neither of our core goals for local food are met and the

situation encourages farming practices which are increasingly intensive and extractive, damaging nature and, ultimately, human well-being.

A simplified figure showing the issues with our current global, corporate food supply chain sums up these problems. As before, light green arrows show potential tensions and trade-offs.
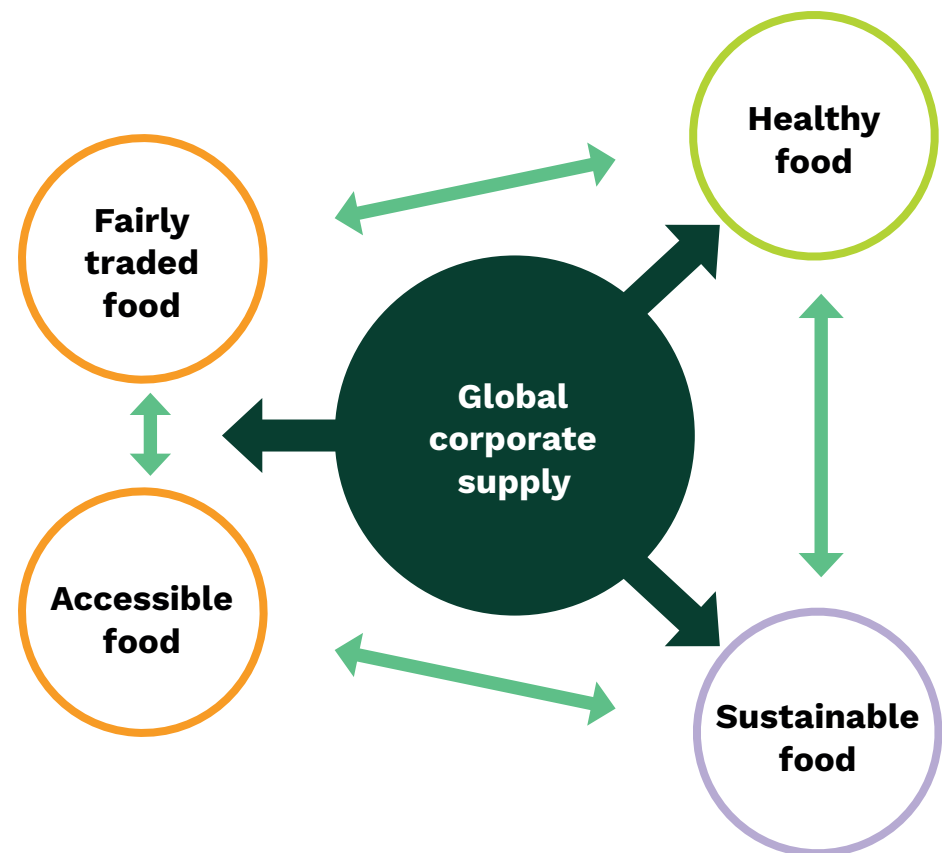
2.2. Community-driven local

For communities engaged in food systems, facilitating improved access to food for the poorest groups relies upon the ability to source produce cheaply, from buying clubs, where groups of people can gather together to buy in bulk, food banks and surplus food hubs, which take waste food from supermarkets and other suppliers.

Another solution is to enable people to grow their own food in community gardens, or to benefit from discounts on their food prices in return for payment in kind, for example by working on a Community Supported Agriculture (CSA) farm. These projects are often driven by people's desire to engage with and build their local communities, addressing isolation, sharing skills and knowledge and supporting inclusive improvements in well-being.

However, if these methods for increasing access are applied without wider system change, they may result in farmers not only being unable to gain additional income from selling the 'local' story of their food, but actually receiving less for their products because they are supporting those who cannot afford to pay market prices.

Focusing on food access, community-driven local is also not guaranteed to increase food sustainability, although those involved can be expected to wish to improve their local environment, or the healthiness of food and diet. We assume a desire to do so but (for example) the food available at food banks is not guaranteed to meet nutritional and health needs, nor to be culturally appropriate.

Community-driven local and its benefits and limitations is summed up visually below.

Accessible food

Community -driven local

Healthy and Sustainable Food

Fairly traded food

3. Solutions

Perhaps the greatest tension between the two LFS models we have described is the emphasis in one on rewards for producers and in the other on access to high quality food for the poorest people in society. In these models, the two aims pull the resources generated in the food system in opposite ways – can we imagine a system in which we pay producers better and support access to high quality food for everyone? We would like to get to the position shown here:

Equitable food

Local Food Synthesis

Healthy and Sustainable Food
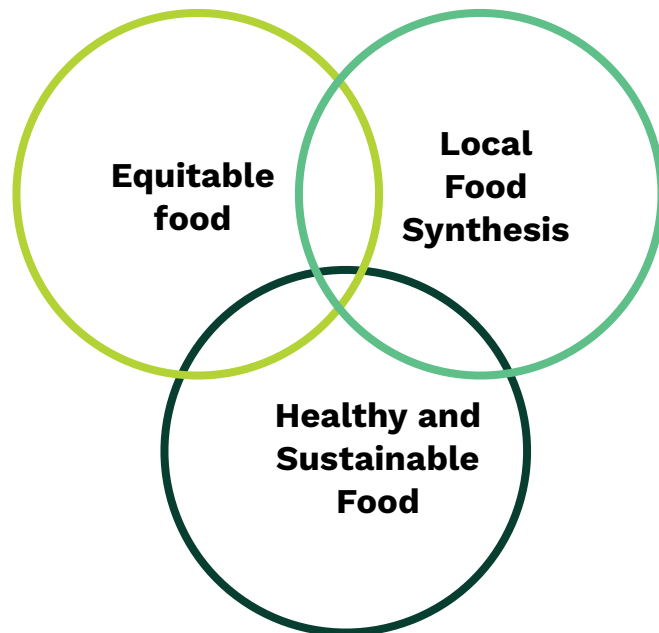
It is useful to think simply about what needs to happen to achieve this. For food to be more accessible and for its production to provide a proper livelihood for farmers, growers and food supply chain workers, one or more of the following things needs to be true:

1. less of the value created in the supply system is extracted by people other than eaters, farmers, growers and other supply chain workers

2. more value is created in the supply system

3. more value is added to the supply system (e.g. investment of money or of in-kind engagement, the provision of infrastructure and other resources)

4. eaters earn fairer rewards from their work, enabling them to pay more for food. This last point lies beyond the boundaries of the food system and focuses attention on wider issues of inequality and fairness in our economic system

Box 1 lists some suggestions for how we might follow this logic to transform our food systems to meet the aims we have identified. They are gathered and developed from practice, work and

thinking across food and farming systems and research and are described in turn in the rest of this section.

Box 1

A list of suggested options for transforming our food systems

(see main text for detail)

- Universal basic income for farmers and other land workers.

- Food as a right.

- Pay as you feel and payment in kind schemes.

- Implementing the Milan Urban Food Pact across towns and cities.

- Embedding human values – going beyond profit maximisation.

- Common infrastructure reserved for SMEs.

- Societal choice to reduce inequality and pull people out of poverty.

- Changing mindsets around food.

The implementation of a **Universal Basic Income for farmers and other land workers**, providing the financial stability they need to focus on product quality, resilience, environmental sustainability, social justice and the expression and development of their own values and farming ethos.

Embedding the principle of **food as a right** in policy to ensure that access to high quality food for all is a pre-requisite for any food system.

Using **Pay-as-you-feel schemes** to enable customers to pay an amount for the produce they buy that is proportionate to what they can afford. **Payment in kind** – via direct involvement in the food system – allows those with little money to enjoy good food as part of an exchange, rather than as charity. Arrangements for people who cannot afford to pay for food now, to agree to contribute to the system in the future, are another way to ensure dignity in accessing food – a concept reinforced by considering food as a right.

Encouraging towns and cities to sign up to and implement the **Milan Urban Food Pact** and its Framework for Action, which seek to build urban food systems that are 'inclusive, resilient, safe

and diverse, that provide healthy and affordable food to all people in a human rights-based framework, that minimise waste and conserve biodiversity while adapting to and mitigating impacts of climate change.'

Embedding human values in supply chains, so that decisions **go beyond the motive of profit maximisation** and respond to social concerns and values. Supply chain values in LFS are underpinned by personal relationships between the participants in a chain, including through informal peer-to-peer networks (for example, networks of farmers or the sharing of knowledge between retailers in different locations). Being empowered to use our values to get what we need and want from our food systems is vital and underpins all the actions described here – remembering that, as **Schumacher** highlighted, 'the market' is just one of the tools we have created to enhance our well-being. It has many uses but is not something positive in and of itself. Other tools are available.

The embedding of human values in supply chains can take many forms. A value-driven model of food supply may incorporate ideas such as food as a right (highlighted above). In this way, while the actors in the food supply system make a fair living and invest in what they do, they are not seeking to maximise what they extract from the system, nor to dominate it – this creates the potential for both producers and customers to benefit. These values might be embedded via not-for-profits, community interest and similar innovative business models. They may arise through the direct involvement of local communities in food supply, for example through **community owned, cooperative and community interest independent retail**.

Human values can also be applied to develop fairer and more resilient food systems through initiatives that encourage profit-sharing and the management of risk for producers – for example in CSA schemes in which farms and eaters are connected, with the latter paying subscriptions in return for a share of the harvest.

Another way to bring human values into the food system and to reduce the extraction of profits is to move towards community, shared or public ownership of infrastructure, ranging from land to data systems, equipment, processing facilities and market halls. Such resources managed

not-for-profit as commons, could be accessed by individual companies or skilled workers either for free or at cost price. Researchers like **Elinor Ostrom** have shown that the **successful management of resources held in common** is most likely to be achieved in situations of interdependence and commitment, which we might expect in food systems with long-term engagement between small, local businesses.

In the UK, the **Food Data Collaboration** shows how collective ownership of data infrastructure can facilitate access to markets and improve fairness in distributing profits along the food supply chain, while building standards for the practices and product quality of businesses wishing to use these shared resources. The **CSA network** is another example of the value of collective ownership – a cooperative promoting, training and connecting CSA schemes. The concept of **community restaurants**, with local authorities supplying venues for free or at reduced prices demonstrates how public ownership of infrastructure can grow food systems that benefit both eaters and producers.

Again, drawing on **Ostrom's** thinking, shared ownership of this type creates a way for people to gain a democratic say over the types of food infrastructure they have access to, how they are used and managed, and by whom. This involvement could present new opportunities for (and interest in) food systems, how they are working and what happens within them – reducing the disconnect between people and the production of their food. This opens space for conversations about sustainability and product quality, develops stronger and more stable relationships and (as a result) increases trust and the expression of human values in food systems.

As Ostrom discovered through her research, successful management of 'common pool resources' shared by all is likely to work particularly well where there is a clear definition of who is part of the community drawing on the resources, and who is outside it. This again highlights the importance of localised systems as a favourable environment through which these solutions could thrive.

Only allowing small businesses to access common infrastructure would increase the ability of such companies to withstand competition from corporates operating with economies of scale and able to cross-subsidise

their individual outlets and facilities. This support for small businesses would increase food system diversity, enabling enterprises to join food markets without the entry barrier and ongoing burden of infrastructure costs, thus increasing innovation arising from healthy competition.

Local, shared facilities designed to handle small batches of diverse products would enable the products of small producers to enter the market without being lumped together, maintaining the link between the origin of the products and the final customer and allowing trust to develop. Common or shared ownership of infrastructure would also provide stability in localised systems, despite (due to small business size) the likely churn of businesses entering and leaving the market.

The basis for focusing on SMEs lies in the themes arising from our exploration of LFS definitions and from our wider work and discussions, including the identification of power relations within supply chains as an important determinant of their outcomes, and the challenges which imbalances in business size can create when producers, other supply chain actors, and local customer demand interact.

In suggesting promoting the role of SMEs to grow LFS, we are making some testable assumptions that smaller supply chain actors are expected to:

- personally connect to customers and to each other

- express non-market values when given a conducive business model and supportive context (in large companies the profit motive is often embedded at a large scale and is remote from local, human-scale motives)

- rely on each other – no single business is big enough for others to become completely dependent on them, creating a more even balance of power in the supply system

- operate at a scale which allows other small-scale supply chain actors and communities to connect with them, without having to scale up or change their business mode

- ensure market diversity, choice and innovation – if businesses in the supply system are smaller, multiple businesses and organisations can be expected at every step of the supply chain except in the smallest communities

- be helped by communities who support them and in turn be able to help their communities in difficult times (as evidenced during COVID) building a sense of interdependency and shared goals through the involvement of non-market interactions

- benefit from engagement in their community personally and professionally

- have limited negative impacts even if they are poorly run, compared to the impacts of a poorly run multinational – and they are unlikely to have the resources to 'greenwash' or cheat, especially when customers know them

- scale and localness are likely to correlate, with smaller businesses more likely to be dependent on and linked to a specific geographic location in a way that large multinational firms are not

Therefore, nurturing small producers and food supply businesses could organically facilitate the development of thriving LFS without trying to artificially determine their geographic scale or nature.

At the 'eating' end of food supply systems, lack of access to good quality food needs to be tackled at root through a **societal choice to reduce inequality and pull people out of poverty**. This connects the issue of resilient, local, sustainable food systems to a much wider political debate. This connection is essential, otherwise our food system will continue to mask high levels of inequality by providing artificially cheap food – avoiding needed change and at a huge cost to the environment, communities and producers.

Tackling inequality goes alongside **changing mindsets**. While many people cannot afford to pay more for quality food (and often cannot afford to buy food at all), we need to normalise the idea that such food, sustainably produced, is valuable and requires supporting – either directly through prices or through public spending to drive the food system transformation discussed here. In turn, the solutions we've presented and their effects on how we all engage with our food systems can support that change of mindset.

4. Do we really need *Local* Food Systems?

Do the solutions we have looked at really require 'localism'? The solutions above focus a lot on company size and supply system relationships – perhaps these, not locality, are most important for just and sustainable food systems? We could go further – the current globalised supply system can to some extent reproduce many of the potential benefits of local systems. Through the application of new technologies, such as block-chain, more information about product qualities, backstories and production, can be shared with consumers without personal interactions; big retailers can and do donate to food hubs and community schemes, and can make money through stocking location-specific produce in local food aisles. Through government-driven regulation, the power of large companies can be focused to incentivise improvements in environmental sustainability and social justice along the supply chain. In these ways, it might be argued that we can gain many of the producer-side benefits of market-driven local food without changing much at all.

But it's not that simple. Here are some reasons why the 'local' needs to stay at the forefront of our food systems thinking.

Firstly, the well-being and dignity of farmers, growers and other agricultural workers requires them to have power to act as responsible professionals. This is essential for food production to be resilient and adaptable, drawing on producers' rich, local expertise. Remote, top-down change – including incentives which farmers and growers have no control over – empowers centralised, abstract knowledge and ways of thinking. It degrades the capacity of farmers, growers and agricultural workers to develop leadership and innovation, takes both the responsibility for and satisfaction of achieving positive change away from them, and discourages new entrants to the sector at a time when the UK's farming population is ageing.

From the perspective of human well-being and dignity, this is neither a healthy nor an efficient state-of-affairs and it can build resentment

and increase the transaction costs of achieving sustainability gains.

The only solution to this issue is for food supply systems to become more co-dependent (rather than dependent on a few powerful businesses) and more embedded in local communities, connecting them to social networks of support, to a deepening understanding of local issues and to a space for the expression of their own values. A LFS model in which those involved are motivated or forced to 'escape' their local markets is hollow and will, in the end, re-create the conditions and issues of the current system.

Secondly, the value of local systems lies not just in how they transfer information along the supply chain and support local initiatives – but in their ability to do this through the building of human relationships and networks of learning and experience. Both **human and social capital** are created in multiple ways and lead to conditions which spur innovation around how the supply system can work directly to improve human well-being and the environment. Proximity is vital to these processes, and these processes are central to resilience. They create living engine rooms from which communities can evolve and innovate

creative solutions to the challenges of public health, food security, global warming and the biodiversity crisis.

Thirdly, the environmental benefits of LFS need to be taken into account. There are many good examples of environmental and social benefits arising from LFS, but in most cases they are not guaranteed to arise when such systems are used. However, there appear to be two environmental benefits directly associated with localness – these relate to i) food miles and associated environmental costs, which have been estimated to be responsible for almost **20% of the CO_2 emissions from food**, and ii) the issue of **imbalances in global flows of nutrients** caused by the shipment of food and agricultural inputs around the world. This has and will continue to have a range of complex and damaging environmental and societal impacts. Action can be taken to explore the conditions under which LFS perform well in terms of those benefits which they could but are not guaranteed to deliver. Monitoring should track environmental benefits and impacts as LFS grow, as part of an iterative process of learning and improvement around sustainability for those involved.

These three arguments show why we should look to localness of food not only as a convenient shorthand for other things of value, but as something valuable in itself.

The definition of localness followed in this report reflects **recent work** suggesting an emerging shared recognition among consumers of a definition of local food that focuses on specific (administrative or geographical) localities rather than a particular distance or type of outlet. For monitoring (Section 6), this form of definition has practical advantages in terms of the existence of local authority boundaries as a pragmatic focus for defining monitoring areas. This basis for definition does not preclude other elements being added to reflect specific values and requirements. Indeed, the ten themes drawn from our local food definition analysis (Fig 1) suggest the dimensions of definitions which specify more than geographic locality.

5. Resilience and networking the local

While localism creates more resilient communities closely connected to their food supply, it also brings a **risk to resilience** if problems like extreme weather events mean the local area does not produce the types and amounts of food needed. At the same time, solutions like pay-as-you-feel might create big challenges for areas with high poverty levels and few wealthy people.

These challenges highlight the need for governance structures across LFS. These would aim to develop ways to support food infrastructure in areas people cannot afford to pay as much for products, drawing on funds from places where people can, and to facilitate the trade of food between communities in which there are surpluses to those facing shortages.

We might imagine this 'networked local' model within the UK and beyond – recognising that while seasonality in diet should be maximised to reduce food system impacts, nutritional needs and multi-cultural populations require some trade in food between nations.

Clearly, such networking would need to avoid morphing back into the current global system. 'Networked local' should, therefore, be:

- centred on fairness, dignity and rights, not profit maximisation and market share

- based on interdependence and commitment, not domination and extraction

- focused on connecting people and communities not just products through the nested governance of their food supply system

Concepts such as **food zoning**, where communities try to source as much as possible from each successive zone beyond the centre of their area, can help keep a local focus, while communal governance and data sharing could connect local markets to each other.

Networking between different LFS – both for trade and for the sharing of learning and the monitoring of progress – highlights the importance of building **interoperability** into the digital and physical infrastructures of LFS.

Developing interoperability has already begun through the ongoing work of the **Food Data Collaboration** and would be further encouraged by systematic, networked mapping and monitoring of LFS.

6. Monitoring the transition to more localised food systems

In order for our food systems to provide the desired outcomes, we must monitor progress, keeping track of change and its impacts, and learning from experience to iteratively develop better LFS and governance structures.

Monitoring should track progress in implementing solutions (e.g. proportion of small businesses in UK food supply systems, proportion of businesses with not-for-profit models) as well as progress towards desired outcomes (e.g. proportion of farmers/growers making a decent living through food production, trends in diet and diet-related illness, average distance food products travel from field to fork), including changes in estimated environmental impacts of the food system (e.g. negative and positive impacts of food production and supply on biodiversity and greenhouse gas emissions) (Fig. 2).

Figure 2. An overview of how this report fits into the wider Local Food Plan project, highlighting the subjects of monitoring – the ultimate aims (light green boxes) and the implementation of change including its effect on economics (dark green boxes). Progress in achieving aims interacts with processes of change and economic trends (dark green arrows). The outcome 'well-being of nature' includes the well-being of livestock.

Review of local food definitions
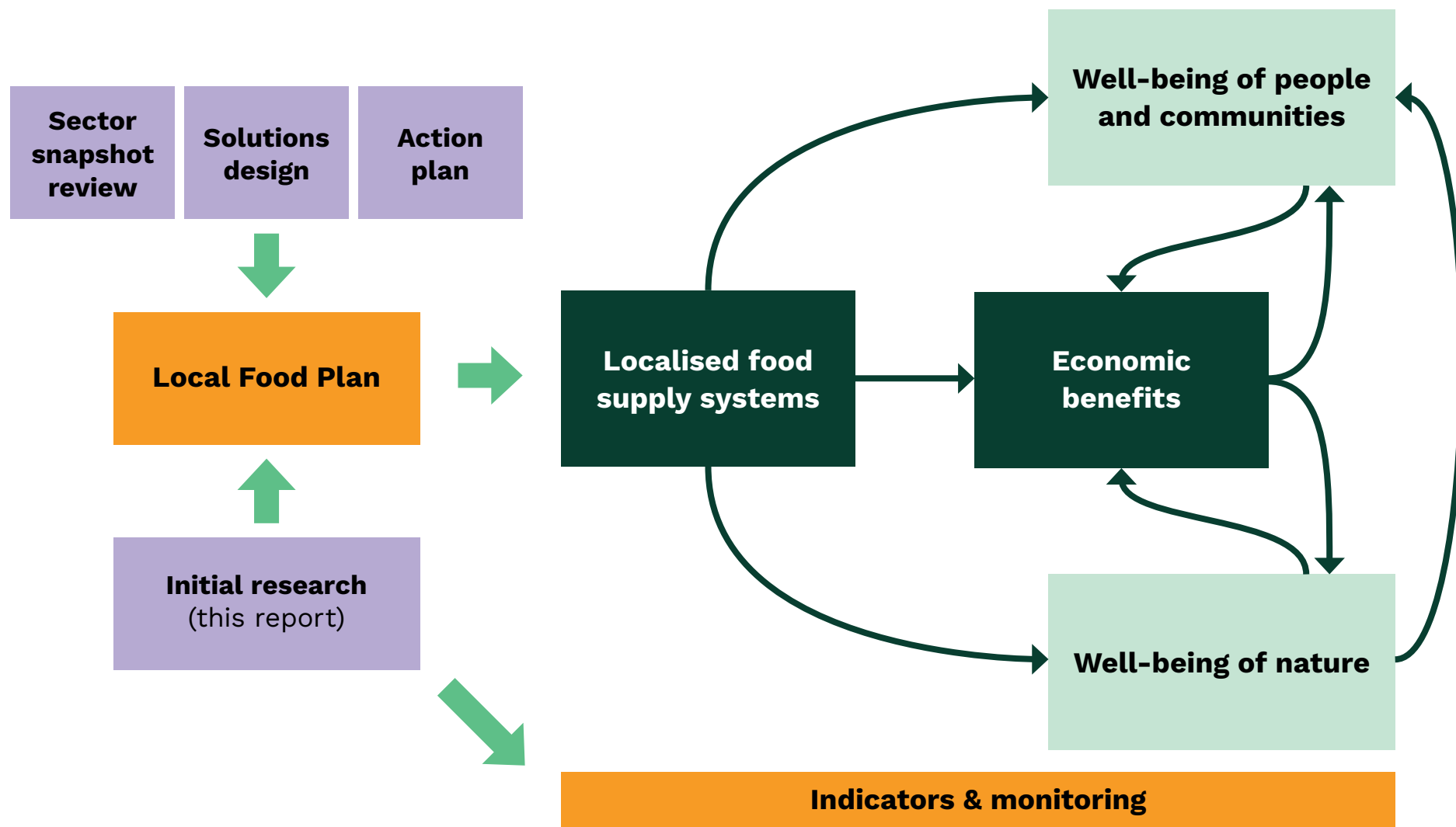
It is important to note that different types of LFS have different characteristics, may be driven by different motives, and are likely to require different types of change in order to flourish. LFS closer to the market-driven model are the most easily monitored, as their aims, such as increasing the share of rewards for producers from food supply, and their likely benefits, such as job creation, are well-understood and data is often collected around them. In contrast, community-driven models of LFS focussed on food access and non-market motives are likely to be much more diverse (with fewer commonalities that could form comparable monitoring points) and to have benefits which may be hard or practically impossible to quantify.

When we look at the variables commonly monitored in relation to local food (such as job creation or market share for local food) in the context of the definitions of local food and their diversity, it is clear that they often capture only very basic aspects of growth, which may not be relevant or may be misleading in terms of some LFS types, and they tend towards measures that are most relevant to the 'market' type of LFS. It is necessary also to capture information about how food systems improve food access, in order to achieve both a fair deal for producers and access to good quality food for all.

If measures of change in LFS do not pick up (or are not relevant to) some forms of LFS, our tracking of elements such as environmental benefits relative to measured LFS growth will not fully reflect the benefits (or negative impacts) of the diversity of LFS. At the same time, limited and generic monitoring of LFS may act to marginalise (for example amongst potential funders) LFS whose growth does not register in measures of success used by people and organisations promoting change. We, therefore, need to find monitoring approaches which do not have unintended consequences.

Consideration of how monitoring might potentially promote some forms of LFS and supress others, reveals that determining how LFS are monitored is an expression of power. While this report suggests some principles for and approaches to monitoring, we propose that local food practitioners and communities themselves should have a say in what data are collected, how and by whom, and how they are used to drive change – rather than these things being imposed top-down.

This is not to say that existing monitoring strategies are not of value, rather that whatever monitoring approach is chosen **should be chosen with the involvement and positive engagement of those involved in LFS on the ground, in keeping with the local empowerment and community-led nature of localism**.

One promising angle for the development of metrics which avoid issues around the contested definition of 'localness' is to focus on monitoring the size of producers and other actors along the food chain. The logic for this is that SMEs are much more likely to be reliant on a particular geographic area than large multi-nationals, so that monitoring their presence is a good proxy for localness without having to define the scale of localness that is desired. However, given that there are benefits associated with localness per se (see Section 3) there is a strong argument for keeping it explicitly to the fore in monitoring. Here we suggest that metrics are assessed at the level of local authority areas (an administrative definition of localness) (see discussion in Section 4).

Monitoring approaches that look at how people perceive the health and vibrancy of LFS in their area offer another perspective on measuring change and its outcomes. They provide a measure of 'ends' rather than 'means', in that they consider how people feel about their food system. People feeling positive about the nature and extent of LFS in their areas is an unambiguous measure of success which does not risk artificially constraining or promoting any specific form of LFS. Comparing such data with information about the types of LFS on the ground can instead help to drive change which is iteratively better focussed on the most positively received types of food supply. The **Local Food System Vitality Index** provides a good example of this approach.

6.1. Indicators of outcomes

Bringing these thoughts and arguments together, it is possible to suggest some candidate indicators for monitoring LFS (Table 1). The below list of 16 candidate indicators focuses on progress in relation to ultimate outcomes – well-being of people and well-being of nature (Fig 2).

In relation to the broad indicators associated with the well-being of nature (including livestock) the **Global Farm Metric** and other frameworks created to guide the holistic assessment of farm sustainability, provide tools to establish the sustainability of food production on farms and in community/social growing and gardening projects.

The indicators in Table 1 can be monitored in single areas to assess whether change towards LFS is driving improved outcomes, or collated at regional or national levels for a wider overview.

Next page:

Table 1. Local food system candidate outcomes indicators. Includes indicators from Milan Pact (as marked and see next section for detail) which are outcome rather than progress indicators.

*These indicators relate to the **Milan Pact** indicator 'Proportion of agricultural land in the local authority area under sustainable agriculture', an outcome indicator in their 'Food Production' category.

Indicator	Outcome category
Proportion of food insecure households based on the Food Insecurity Experience Scale (FIES) (from **Milan Pact**)	Well-being of people and communities
Proportion of people suffering from obesity, malnutrition & diet-related disease (including from **Milan Pact** the number of adults with type 2 diabetes & minimum dietary diversity for women of reproductive age)	Well-being of people and communities
Proportion of population with access to safe drinking water and adequate sanitation (from **Milan Pact**)	Well-being of people and communities
Proportion of people who feel they have access to healthy and culturally appropriate food at affordable prices within walking distance of their home or via a reliable public transport service	Well-being of people and communities
Proportion of people with a diet in line with the Eatwell Guide	Well-being of people and communities
Proportion of people satisfied with their local food system	Well-being of people and communities
Proportion of people who feel well-connected to their local community	Well-being of people and communities
Number of small farms/growers breaking even on the basis of crop and/or livestock production alone	Well-being of people and communities (supply chain)
Wages or income for farmers, farmworkers and food supply chain workers (**Milan Pact** version: number of formal jobs related to local food system that pay at least the national minimum or living wage)	Well-being of people and communities (supply chain)

Indicator	Outcome category
Working conditions for farmers/growers, farmworkers and food supply chain workers: hours worked, leave and sickness entitlement, pension savings, health and safety in workplace etc.	Well-being of people and communities (supply chain)
Farmer health and well-being indicators	Well-being of people and communities (supply chain)
Land worker and supply chain worker health and well-being indicators	Well-being of people and communities (supply chain)
Proportion of SME, not-for-profit & independent food supply chain actors (incl. producers) who feel they have power/freedom to express their values in business choices, including who to buy from & sell to	Well-being of people and communities (supply chain)
On-site biodiversity, livestock well-being, yields & nutritional quality / contamination of produce (including stability and resilience), and off-farm environmental impacts (including climate change) of farms selling majority of products (by value) direct or via independent/not-for-profit retailers*	Well-being of nature (including domesticated species)
On-site biodiversity, livestock well-being, yields & nutritional quality / contamination of produce (including stability and resilience), and off-farm environmental impacts (including climate change) of community & social growing & gardening initiatives*	Well-being of nature (including domesticated species)
Total annual volume of food losses & waste (from **Milan Pact**)	Well-being of nature (including domesticated species)

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6.2. Indicators of progress

For indicators to effectively monitor the diverse range of LFS, a framework is important to ensure a systematic approach. The indicators associated with the 2015 **Milan Urban Food Policy Pact** and their organisation into six key categories for action (Governance; Sustainable diets and nutrition; Social and economic equity; Food production; Food supply and distribution; Food waste) provide a coherently organised set of indicators developed for food systems in cities and could be built upon to develop effective monitoring of UK LFS.

Below, we use the Milan Pact's categorisation and incorporate its indicators as the core of a suggested approach to monitoring indicators of progress in implementing change in local food systems. The pact focuses on action by municipal authorities, and therefore our list augments it by incorporating indicators not necessarily driven by local authority actions as well as including indicators associated with specific solutions highlighted in this report. The Milan Pact indicators that stipulate local authority action might also be worked towards by communities, by creating bodies and policies which the local authority might be invited to join if they are not the drivers, or by providing ready-made solutions that local authorities can use for promoting change.

As highlighted above, these **suggested indicators are starting points to be added to, explored and refined with the involvement of LFS stakeholders on-the-ground, ideally as part of the development of a local food monitoring and data network**. Further indicators may be required to track change arising from additional actions recommended in the LFP final report.

Table 2. Milan Pact progress indicators (grey) augmented by indicators suggested based on the current review. Seven Milan Pact indicators are included in Table 1 as outcomes & are not in this list.

Milan Pact categories	Indicators
Governance (Ensuring an enabling environment for effective action)	Local authority body in place for advising and making decisions on food policy inclusive of local communities and food SMEs/producers
	Presence of an active multi-stakeholder food policy and planning structure (e.g. food policy councils; food partnerships; food coalitions)
	Presence of an inventory of local food initiatives and practices to guide development and expansion of local food policy and initiatives
	Presence of local food policy or strategy and/or action plans for specific communities (local authority areas, cities etc)
	Presence of a mechanism for assembling and analysing local food system data to monitor/evaluate and inform local food policy making at local and national levels
	Existence of a food supply emergency/food resilience management plan for each community (in response to disasters; vulnerabilities in food production, transport, access; socio economic shocks, etc.) based on vulnerability assessment
	Proportion of not-for-profit organisations in the food supply chain who have the reduction of environmental impacts and delivery of environmental benefits as part of their mission in their governing documents

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Governance (Ensuring an enabling environment for effective action)	Proportion of independent organisations in the food supply chain with a written, measurable plan and record of delivery on the reduction of environmental impacts and delivery of environmental benefits from their activities & sourcing
	Proportion of small, not-for-profit and independent food chain actors (including producers) who feel that local food supply system monitoring is supportive and valuable
	Proportion of people outside food supply system involved in food supply (growing, CSA, community retail etc) who feel that local food supply system monitoring is supportive and valuable
	Proportion of small, not-for-profit and independent food chain actors (including producers) who feel they have routes to influence local food supply system monitoring development
	Proportion of people outside food supply system involved in food supply (growing, CSA, community retail etc) who feel they have routes to influence local food system monitoring development
	Availability of tailored, affordable and feasible sustainability certification for community gardens, growing schemes and other small-scale producers - potentially via **Participatory Guarantee Systems**
	Proportion of food/ingredients sold traceable back to the original producer(s) by the consumer

Sustainable diets & nutrition	Number of local authority/community-led or supported activities to promote sustainable diets
	Presence of programmes/policies that promote the availability of nutritious and diversified foods in public facilities
	Existence of policies/programmes that address sugar, salt and fat consumption in relation to specific target groups (e.g. general public, in hospitals & schools)
	Proportion of people with food preparation skills and good nutritional knowledge
Social and economic equity	Proportion of people supported by food and/or social assistance programmes
	Proportion of children and youth (under 18 years) benefitting from school feeding programmes
	Number of community-based local food assets in the local authority area
	Presence of food-related policies and targets with a specific focus on socially vulnerably groups
	Number of opportunities for food system-related learning and skill development in i) food and nutrition literacy, ii) employment training and iii) leadership
	Proportion of people who feel able to afford food originating from farms under organic or nature friendly farming certification

Social and economic equity	Proportion of community volunteers involved in the food supply chain (including all forms – growing, food banks, CSA, staffing community store etc) who have received training on the environmental sustainability of food and ways to improve it in their own context
	Number and proportion of food system firms making business choice to set limits to their growth
	Amount of money extracted from food supply system in shareholder dividends
	Amount/type of food system infrastructure in community, public or cooperative ownership
	Proportion of value in food system going to SMEs/firms with not-for-profit business models
	Number and proportion of food supply system firms engaging in peer-to-peer knowledge exchange
	Proportion of people with understanding of food sustainability issues
	Market value* of food sold or exchanged under 'pay as you feel' or payment in kind schemes (*calculated from the value of these transaction had they occurred at current market price)
	Proportion of food system firms which are SMEs (including small farms/growers)

Social and economic equity	Proportion of food system firms with not-for-profit models (including small farms / growers)
	Proportion of people outside supply chain professionals involved in food system (growing, CSA, community retail etc)
	Proportion of people who feel able to afford food originating from farms under organic or nature friendly farming certification
	Proportion of people with good knowledge about where their food comes from
	Proportion of people in supply chain who feel personal connection and positive commitment (rather than one-way dependence) with those immediately up and down the chain from them
	Proportion of famers/growers and farm workers who have received training on the environmental sustainability of food and ways to improve it in their sector
Food production	Number of residents within local authority boundary with access to an (urban) agriculture garden
	Presence of local policies and regulations that allow and promote agriculture production and processing in the local authority area
	Number of local food processing and distribution infrastructures available to food producers in the local authority area
	Proportion of local/regional food producers that sell their products to public markets in the local authority area

Food production	Surface area of (potential) agricultural spaces within the local authority boundary
	Proportion of total agricultural population – within the local authority boundaries-with ownership or secure rights (including rights to access common land) over agricultural land for food production, by gender
	Number of urban, peri-urban and small-scale food producers that benefited from technical training and assistance in the past 12 months
	Annual proportion of organic waste collected in area re-used in agricultural production taking place within local authority boundaries
	Number, and amount of land occupied by, community and social growing and gardening initiatives
	Average age of farmers and growers
	Numbers of individual or small firm new entrants into farming
	Number of farms with agreed and secure succession plans
	Market value* of food given, sold, exchanged via direct farm sales or independent/not-for-profit retailer, caterer or hospitality business originating from farms under organic or nature friendly farming certification *based on estimated value if transaction had taken place at current market price
	Average distance from people's homes to accessible land for growing

Food production	Community, public or cooperative owned infrastructure reserved for SMEs only (including producers)
	Proportion of SME/not for profit producers (farmers, growers) able to access small-scale processing and packaging facilities which they can afford to use
	Proportion of famers/growers and farm workers who have received training on the environmental sustainability of food and ways to improve it in their sector
Food supply and distribution	Existence of policies/programmes that address the reduction of GHG emissions in different parts of the food supply chain
	Presence of a development plan to strengthen resilience and efficiency of local food supply chains logistics
	Presence of food safety legislation and implementation and enforcement procedures
	Proportion of food procurement expenditure by public institutions on food from sustainable, ethical sources and shorter (local/regional) supply chains
	Number of fresh fruit and vegetable outlets per 1000 inhabitants (markets and shops) supported by the local authority or local community.
	Annual local authority investment in food markets or retail outlets providing fresh food to residents, as a proportion of total (investment) budget
	Existence of support services for the informal food sector providing business planning, finance and development advice

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Food supply and distribution	Proportion of not-for-profit and independent business owners and employees throughout the supply chain who have received training on the environmental sustainability of food and ways to improve it in their sector
	Proportion of SME/not for profit producers (farmers, growers) able to access transport and retail opportunities to supply small local markets affordably
Food waste	Annual number of events and campaigns aimed at decreasing food loss and waste
	Presence of policies or regulations that address food waste prevention, recovery and redistribution
	Total annual volume of surplus food recovered and redistributed for direct human consumption

6.3. Next steps for monitoring

An important step towards systematic mapping and monitoring of LFS is the development of an open-source local food research, monitoring, reporting and data sharing network, including a coordinating hub. This should i) grow from and where possible complement / share information with current food data collection and monitoring to avoid duplication and complexity in reporting ii) enable practitioners (those involved professionally in local food production and supply and communities involved in local food and growing) to shape the agreed metrics of progress and outcomes iteratively to meet requirements effectively, iii) avoid assessment processes or indicators constraining LFS within the current market model of food supply, iv) facilitate continuous learning towards more resilient, sustainable and thriving food system models, v) enable outcomes to be analysed to highlight impacts on specific groups according to age, gender, sexuality, belief, ethnicity, social group and those with disabilities, to avoid hiding issues of discrimination and inequality, vi) be tailored to the constraints and requirements of small, not-for-profit and community actors.

Initiatives such as the **Food Data Collaboration** are already working to facilitate the connection of local producers to customers and may provide a good basis for developing the proposed LFS monitoring and learning network, with the potential for support from **research institutions involved in food research** as well as government and local communities.

7. Final thoughts

Aside from inherent benefits in terms of lower food miles and avoiding global nutrient imbalances – which are far from trivial benefits – LFSs are not guaranteed to be better than any other system in relation to environmental or social outcomes. However, we believe they offer the best chance to deliver such benefits, through the development of solutions tailored and adaptable to changing local contexts. They enable processes of change which create value and well-being through the very act of attempting to tackle issues together.

We believe that there is a route through the ideas shared here – but developed over many years by the broad and diverse local food movement and those working in it – to create food systems that provide good livings for farmers, growers and agricultural and supply chain workers, while delivering access to good quality food for all and engaging sustainably with nature. A systematic, collaborative monitoring network for LFS including reporting, data sharing and continuous learning are key aspects of driving change which must embrace rather than constrain the wide diversity of LFS. Solutions must look beyond the limited ethics of the market to develop values-based food supply systems that are rooted in access to high quality food for all and decent livelihoods in food production and supply, strive for ever-greater social and environmental sustainability, and nurture the innovation and benefits of SMEs and not-for-profit businesses. Networking LFS through interoperable infrastructure and collaborative connections between communities should aim to build food system resilience through trade grounded in mutual dependence and respect rather than power and extraction.

Appendix 1

Themes derived from text analysis of local food system definitions

Themes were derived from definitions in reports and articles (see Appendix 2) and are presented along with associated notes (basis of ideas developed further in the main text).

Buying / selling location

- This theme is made up of aspects of local food definitions which relate to settings for direct sales by farmers. Farmers sell to many customers and many different types of organisation in longer supply chains, but such sales are usually defined by the type of customer (restaurant, school, wholesaler, processor) rather than by the location.

- The fact that, for direct selling, sales location forms part of some definitions of LFS, suggests that location is an important aspect of LFS. Access was one element of definitions that included reference to buying/selling locations – these locations enabled underserved groups to buy produce. Locations or mobility of sales location seem to be associated with common or public areas, or with locations owned by the producer (pick-your-own / roadside stands which might be on farmland).

- Farmers markets add a communal element to location (vs individual farm vending machines, vans or stands) which is associated with a settled arrangement ('a common area where several farmers gather on a recurring basis to sell…').

- The communal element of farmer's markets is also associated with rule-setting around what can be sold – from where, produced by whom (i.e. definitions of local being applied to regulate sales from the location) – fees, and services like hired staff to monitor compliance, collect fees, and provide and maintain needed resources etc.

From the above-listed elements of the of buying/selling location theme, important topics seem to be access, independence/self-organisation, flexibility/ephemerality in relation to location (mobile selling) and who is being sold to and when (farmers can start/stop attending

markets, can have seasons where the roadside stand is taken away, can open or close pick-your-own fields as they wish). This can be contrasted with supermarkets and other outlets whose permanence comes from the business who is selling and their longevity rather than the location – if they go, the location goes and may not be re-opened as a food outlet, or not without a required transformation. Supermarkets are places where people meet, but it is up to the retailer (rather than the producers) who can be there, when they can be there and the rules around what is sold and when etc. Access and openness to all people may be given – but they are given (or withheld) rather than existing as a right (in a public space). This last applies to stands and pick-your-own on farm-land too. Supermarkets now provide mobile services (delivery) which – like vending machines and mobile selling by farmers – enable them to come to meet the customer beyond the doors of the business.

Food characteristics

- Definitions referenced fresh products and perishable products, as well as food quality and degree of processing, with a focus on

less processing: 'raw food or lightly processed food (such as cheese, sausages, pies and baked goods)'. There was not enough evidence in the data to determine what lies behind these things as elements of 'local'. Options include:

- the freshness aspect (and to some extent quality) could be directly linked to localness through necessity (costs of transporting perishable and fresh foods without loss of quality makes local sales preferable). Likewise, less processing could be related to a lack of local processing facilities – so either of these might have practical roots

- people buying local might also focus on these because this is where they expect to get a higher additional value from local (while with highly processed foods locality is less likely to affect quality)

- people who buy local may have general preferences for less processed, higher quality and fresh food – which could be linked to their ability to afford such foods as much as differences in desire for such foods between them and people not buying locally

○ inclusion of these characteristics of local food might reflect the preferences/ values/ wishes of those writing the definitions, rather than reflecting the wants/needs/ values actually represented in local food systems

More work is needed to unpick why some types of food are more linked to local than others – this is important in order to understand what actions should be prioritised to increase local food systems (e.g. focus on reducing prices / inequality; focus on educating more people to want fresh/high quality/less processed food; focus on emphasising local food quality across a wider range of food types etc).

Geographic – absolute

- Definitions based on the idea of local as a fixed geographical area, in some cases defined specifically 'within a 20-100km radius', in some cases defined in administrative terms 'food grown in your region' and in some cases undefined 'food items that have been grown and defined within (a defined geographic area).'

- Another aspect often included in relation to absolute geographic definitions is a definition of which parts of the chain are in that region: producer and consumer (omitting processing etc.) 'eating food that was grown or produced within...', more holistic, including whole chain 'a food system in which foods are produced, processed and retailed' the whole chain plus ownership 'where the physical and economic activity is largely contained and controlled within the locality or region where it was produced', and including where the consumer lives 'local resident who tries to eat only food grown or produced within a 100 mile radius.'

- So, these definitions include another category of difference – parts of the chain within the given area or definition which are required to make it local (producers; processors, retailers; consumer – eaten locally; consumer – eaten locally by residents). These aspects can be used to create a continuum of local supply.

- The central foci of locational definitions in this theme are i) location of producer (local food) ii) location of consumer (locavore) iii) definition of an area and subsequent definition of localness of food supply within that area (foodsheds).

Geographic – continuum

- Definitions of graded localness defined:

  - by the size of the area from which a population gains its food (its foodshed) 'the geographical area from which a population derives its food supply'

  - by the proportion of the food needed by an area being delivered from zones at successive distances from the centre – delimited by possibilities 'the underlying characteristics of the land, and the willingness and ability to pay amongst the people living in the same geographic region'. This relates to the idea of food subsidiarity – aiming to maximise supply from as near as possible taking into account biophysical factors (growing conditions, technology, perishability, infrastructure)

  - by the level of self-sufficiency of an area of fixed size or identity (e.g. a country) 'the extent to which a country can satisfy its food needs from its own domestic production' (see *Geographic – absolute* for how fixed geographic areas can be defined)

  - by the reach of a particular producer (see consumer vs producer centred definitions under *Geographic – absolute*) 'moving from those that are highly localised, such as a community food project, to ones which are regional and increasingly global in reach'

- Localness of producers as 'league table' hierarchy – views 'success' as becoming less local.

- In some definitions, there is a limit to the distance 'zones' involved, beyond which the system is not classed as local at all – continuums with absolute limits, or grading within absolute geographic limits.

Geographic - relative

- Definitions in which localness is relative to something else in order to introduce context –

  - biophysical context – infrastructure/access, population density, urban-ness 'products must have travelled less than a day (<7 hours) by car or truck'

  - relative to other food systems – smallest unit of description of origin or local relative to mainstream

In continuums these relative aspects can be graded in terms of localness, or localness can be graded in terms of what is possible, defined by biophysical, social context etc (see *Geographic – continuum* theme).

Involvement in supply chain

- Vertical integration of supply chain from the 'bottom' (customer) upwards, rather than integration within the pre-sale chain. This could be seen as a form of localisation or local 'capture' of a supply chain, while integration within the supply chain is an agglomeration of power versus the customer and/or other parts of the chain. Direct customer involvement in these ways also requires physical presence and therefore implies local production exists even if local sales do not / were under threat. Buying clubs increase customer-customer links and therefore local power but do not localise the supply chain itself. Involvement in the supply chain has several implications:

  o taking responsibility for local supply – links to power relations but in a positive way, taking power from a system which could take this supply from them

  o taking on (aspects of) the role of producer as an experience through hunting, fishing, foraging (side product or additional benefits of localness are the experiences of engagement in the chain – here the experience is more likely to be central and the food itself a side-product, whereas with pick your own / CSA the experience may be the side-product)

  o taking power in terms of pricing – buying groups not directly involved in the system as it is but creating a new link in the chain (group or coordinated buying) to give them some market power and reduce prices

- Another type of involvement was 'invited' vertical integration of the supply chain, where customers are asked to involve themselves via 'pick your own' etc. This is similar to foraging etc., and could involve the same practices, but the producer is proactive in initiating the activity in order to provide additional/ diversified income or to form stronger links with customers. A side-product of this (even if the main goal is saving money for the producer) is greater accessibility of products due to cheaper price (based on undertaking labour in place of some of the monetary cost).

This can be compared with the process in supermarkets where customers are invited to choose for themselves, scan and bag for themselves to save the retailer money without receiving a discount for their labour. Customers are not gaining an experience but gain control (as in pick your own) within what is available. They value this and the supermarket gains – but the supermarket has the power not to 'pay' for its part of the benefits. But key to localness (versus power) issues is that customer integration at the retail stage does not require local production or processing.

This theme demonstrates the interaction of power and localness and how the two can become confused as things to value or to react against. But unequal power relations in leading to exploitation should be something guarded against in any chain – and might, therefore, be highlighted as 'bad practice' for local (and non-local) supply (e.g. cases of local butchers cheating people because they are a monopsony).

Local benefits

- Benefits are part of the definition of local here, and therefore a system which is local will have these benefits (health, economic, environmental, social) but the benefits are for the local area.

- An idea linked to this theme is that the food produced is also for the local area, excluding in this framing food with local branding sold further afield.

- Benefits in terms of food equity and justice for local communities may be mentioned, but it can be unclear if equity relates to supply chain power and justice, or inequalities and injustice in terms of food access for different members of the local community.

- The focus on the localness of these benefits does not address the issue of whether local benefits represent true 'added value' from local systems, or whether they represent a focusing of benefits on some areas at the expense of others – redistributing benefits rather than creating added benefits overall.

Narrative/thoughts on this: Local food (if it is beneficial) should be provided to all, not become another factor linking regional economic inequality to a poor quality of life. There is an interesting question about whether selling to tourists who travel with produce back to another

area of the country would still be part of a local food system in this definition. If the local population can't afford locally provided food, this limits the potential for local food systems – but in that case localisation would lock in food inequality by linking the rich to these systems by accepting that the poor just can't afford them – this shows the importance of linking the local food agenda to the broader agenda of tackling inequality.

Production sustainability

- To be local, a local supply chain must be sustainable – environmental sustainability is usually highlighted but can embrace social aspects too.

- This aspect of LFS definitions can include opinions/assumptions about the inherent sustainability of (e.g.) particular farming approaches such as organic. 'Use of sustainable production and distribution practices reduce use of synthetic chemicals and energy-based fertilizers, are environmentally friendly and limit chemical and pesticide residue on food. Some consumers also extend sustainable production

to include fair farm labour practices and animal welfare'.

- Grey areas of localness can then be navigated using sustainability as a yardstick in place of locality as the primary factor – e.g. local production and consumption with non-local processing is not counted as local as this is (assumed to be) unsustainable 'The importance of environmentally sustainable practices may exclude some products that are produced and consumed within 'close' proximity from fitting a local definition [example given of an organic producer/grower whose food was shipped 235 miles to a distribution centre to then be sent back and sold locally.'

- Link to product quality as defining qualities of the production process. Like in that category, local does not necessarily mean sustainable and vice versa but the definition forces them to equate – 'not sustainable is not local'.

- Definitions of this type can include where benefits fall, not just their existence – e.g. benefits for local communities, not necessarily overall. However, it is not clear whether in these cases this is an objective position –

local benefits are a prerequisite for localness, as in 'keeping benefits local' – or a value judgement – local systems should provide local benefits even if they do not always. This ambiguity is not present in relation to sustainability per se, as this is clearly not an integral element of localness and vice versa – meaning that in this case including 'production sustainability' in the localness definition is a matter of values rather than something based on observation.

Provenance[1]

- Marketing food beyond its region based on a range of aspects from tradition and culture, philosophy of producers, particular qualities of the food associated with production location and practices, and in general the product's story.

- The idea of provenance therefore focuses on 'stories' behind products which call on environmental and social values in the context of a particular place and production tradition.

- Provenance is in effect a definition of 'local' which highlights examples where this range of positive aspects are embedded in a location through the production of specific food products. In other words, it is a form of 'local' which cannot be separated from the achievement of a range of benefits that are not necessarily limited to, or found in, more localised supply systems. Because the focus is on the story of the product, the link to the local area is integral to the messaging – without the link between these other things and the local element, marketing would not be focused on provenance. This contrasts with the focus being on the local, and these other aspects being added as part of the definition – there is no a priori reason for this integration which, as a result, seeks to redefine the word 'local' to include a range of other concepts, rather than a strategy of keeping its narrow meaning, aiming for its already integral implications (about personal interactions etc.) and then adding other aspects to represent best practice where a localised system is developed. In provenance location interacts

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[1] In the main report 'Information flow' elements of this theme are highlighted in Fig. 1 – provenance itself is discussed as the focus of the market-driven supply chain model, rather than as a separate theme.

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with all the other values in a grounding way, providing imagery, differentiation etc. to the term. This then adds value to the other aspects being promoted – making them more than the sum of their parts.

- However, communication to the (non-local) customer may be through labelling, not direct, and the point of sale may be a large supermarket.

Provenance utilises a range of things of value and demonstrates their application to a given product, with place acting as a brand and as the location for these positive things to occur. However, this approach misses some aspects of a 'fully' local system: face to face interaction of producers or processors with customers (or personal connections all along the food chain); local food resilience (as products sold elsewhere it might go against localisation in some cases); power balance (because the producers have developed non-local markets); access to and engagement with marginalised groups and neighbourhoods. On the other hand, the supply chains following this route have tied and committed themselves to a given place with this marketing approach – so economic benefits of employment, social pride, sense of place

etc. can all arise, but without the elements of 'local' above. At the point of sale they link the ideas associated with local products in a non-personal way to non-local customers willing to pay a premium for the story of their food and its biophysical qualities.

Therefore, provenance is distinct from local and can be separated from it on the grounds that in some respects it can run counter to aspects of local which are integral and valued – for example, growth-centred business models that seek to 'escape from' or use the local, the absence of local residents' direct link to people in the supply chain etc. However, a 'best practice' approach to provenance could be developed to encourage its use in ways which align with the valued aspects of sustainability such as local access and food resilience etc.

Supply chain relations

- This theme includes the shortness of supply chains as well as product and producer diversity and transparency along the chain.

- Transfer of information on localness to customers; clear signals of origin. Viewed as an important aspect of short supply systems

but also includes the perspective that labelling is an unproblematic substitute for personal relations – and therefore 'short' rather than 'local' is the element that enables transparency and connection: 'The most important feature of an SFSC is that the product reaches the consumer embedded with information, such as through package labelling or personal communication. This enables consumers to connect with the place of production and, perhaps, the people involved and methods used to produce the product'. Direct, though not necessarily local producer/customer interaction is focused on.

- Relationships mediated by online sales and delivery to local areas – connecting population to local producers for direct sales which may or may not include a personal interaction, but do involve information transfer – we are here, and here is some online info about us and our product. In this case the relationship work is being done by 'short' rather than 'local' although delivery restrictions for fresh produce might bring in some limits to this disconnect (see product quality).

- A food web/network of links within the supply chain and with customers; geographical closeness as an important aspect of relationships. Mutual benefits and co-dependence in these webs 'in a strong local food web these different components are interconnected, dependent upon each other and mutually beneficial to each other.'

- Values associated with connections 'social connections, mutual exchange, and trust is viewed by some as an important feature of direct agricultural marketing'.

- Commitment to cooperation in supply chain.

In some cases, relationships in the supply chain were viewed as creating stability in their connection between production tied to land and its local character, and local ability and willingness to pay. Interestingly, this definition excludes locals who cannot pay for local produce, versus definitions in which access is an aim. This perspective fits more with the idea of provenance, with the only difference being that if locals can/want to pay for it, the produce might stay in the region. There is a tension between the 'marketing' aspect of localness and the social justice aspect. Tying in things

of value like the story of food, environment etc. produces definitions which focus on producer interests (stability, higher prices through highlighting good things). In this case, social interactions appear to serve the purpose of higher value sales and market stability – without any logical differentiation or opposition to supplying non-locally (e.g. to places with money) and therefore transitioning from 'local' to 'provenance'.

- Connection between producers and schools - provision of produce plus sponsorship or farm visits/garden projects etc. Building up of relations beyond information or personal contact via the food itself.

- Wider connections between local service providers and producers – sourcing of food with a range of goals in mind other than minimising costs.

- Idea in some definitions linking to 'food-shed / food subsidiarity' idea in defining things which are necessary for local food supply and which might limit it. It also relates to the logic of the local-short argument which focuses attention on the role of business aims and philosophy in enabling local food to

survive without the evolution of producers through a hierarchy from local to non-local as a measure of success. Many supply chain relations are important, rather than just a few or one company at a particular level of the chain.

Appendix 2

List of sources of definitions analysed

This list is of articles and reports read – some of these listed, reviewed or collated definitions of local food from a range of different cited primary sources (brief citations listed beneath relevant reference) and/or included multiple sections of text relating to LFS definitions, taking the total number of definitions analysed to 81.

Andrews, R. All about local food – and why local food is so important. Precision Nutrition. Accessed online 2023. **https://www.precisionnutrition.com/all-about-local-food**

Bashford, J., Carey, J., Righton, K., Meziani, G. and Luetchford, M. (2001) Local food routes: a summary report of food futures. Soil Association, Bristol. **https://www.soilassociation.org/media/4948/policy_2001_local_food_routes.pdf**

CPRE (2012) Mapping local food webs toolkit. **https://www.cpre.org.uk/resources/mapping-local-food-webs-toolkit-2/**

Enthoven, L. and Van den Broeck, G. (2021) Local food systems: Reviewing two decades of research. Agricultural Systems 193. 103226. **http://dx.doi.org/10.1016/j.agsy.2021.103226**

Additional cited authors whose definitions were extracted from this reference:

- EU Joint Research Centre
- Government of Canada (2013)
- US Food Conservation and Energy Act (2008)

Eriksen, S.N. (2013) Defining local food: constructing a new taxonomy – three domains of proximity. Acta Agriculturae Scandinavica, Section B – Soil & Plant Science. 63. **https://doi.org/10.1080/09064710.2013.789123**

Additional cited authors whose definitions were extracted from this reference:

- Blake et al (2010)
- Bosona and Gebresenbet (2011)
- Brown and Geldard (2008)

- Dunne et al (2010)
- Edwards-Jones (2010)
- Hinrichs (2003)
- Futamura (2007)
- Kremer and De Liberty (2011)
- Morris and Buller (2003)
- Ostrom (2006)
- Pearson et al (2011)
- Rose et al (2008)
- Schönhart et al. (2008)
- Selfa and Qazi (2005)

Martinez, S., Hand, M., Da Pra, M., Pollack, S., Ralston, K., Smith, T., Vogel, S., Clark, S., Lohr, L., Low, S. and Newman, C. (2010) Local food systems: Concepts, impacts and issues. Economic Research Report 97. Economic Research Service/USDA.

https://www.google.co.uk/books/edition/Local_Food_Systems_Concepts_Impacts_and/wVTjlY-75WW8C?hl=en&gbpv=1&dq=definition+of+local+food&pg=PT9&printsec=frontcover

Additional cited authors whose definitions were extracted from this reference:

- Hinrichs (2000)
- Hughes et al (2007)
- Jesperson (2009)
- Marsden et al (2000)
- Public Health Law and Policy (2009)
- Ragland and Tropp (2009)
- Sage (2003)
- Thompson et al (2008)

Stein, A.J. and Santini, F. (2022) The sustainability of "local" food: a review for policy-makers. Review of Agricultural, Food and Environmental Studies. 103. 77-89. **https://doi.org/10.1007/s41130-021-00148-w**

Additional cited authors whose definitions were extracted from this reference:

- EU (2013, 2014)
- Kneafsey et al (2013)
- Markuszewska et al (2012)

Sustain and RSPB (2021) The case for local food: building better local food systems to benefit society and nature. Sustain and RSPB, London. **https://www.sustainweb.org/reports/the-case-for-local-food/**

Willis, G. (2012) From field to fork: The value of England's local food webs. CPRE, London. **https://www.cpre.org.uk/resources/from-field-to-fork-2/**

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Review of local food definitions

Learnings for implementing and monitoring food systems transformation

Local Food Plan

Food, Farming & Countryside Commission

PASTURE FOR LIFE

Landworkers' Alliance

Sustainable Food Trust

sustain
the alliance for better food and farming