

**IDS Working Paper 583
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Connecting Food Inequities Through Relational Territories

**Julian May, Imogen Bellwood-Howard, Lídia Cabral,
Dominic Glover, Claudia Job Schmitt, Márcio Matos de
Mendonça and Sérgio Sauer**

December 2022

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Summary

This paper explores how food inequities manifest at a territorial level, and how food territories are experienced, understood, and navigated by stakeholders to address those inequities. We interpret 'food territory' as a relational and transcalar concept, connected through geography, culture, history, and governance. We develop our exploration through four empirical cases: (i) the Cerrado, a disputed Brazilian territory that has been framed and reframed as a place for industrial production of global commodities, to the detriment of local communities and nature; (ii) urban agroecology networks seeking space and recognition to enable food production in the city of Rio de Janeiro, Brazil; (iii) informal food networks forming a complex web of intersecting local and global supply chains in Worcester, a secondary South African city; and (iv) periodic food markets in Ghana that synchronise trade systems across space and time to provide limited profit-making opportunities, but nonetheless accessible livelihood options, for poorer people. Examining these four cases, we identify commonalities and differences between them, in terms of the nature of their inequities and how different territories are connected on wider scales. We discuss how territories are perceived and experienced differently by different people and groups. We argue that a territorial perspective offers more than a useful lens to map how food inequities are experienced and interconnected; it also offers a tool for action.

Keywords

Food; territory; equity; Brazil; Ghana; South Africa.

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Acronyms

AFN	alternative food network
BVM	Breede Valley Municipality
GIAHS	Globally Important Agricultural Heritage Systems
IDP	Integrated Development Plan
Matopiba	Maranhão, Tocantins, Piauí, and Bahia
RECAU	Carioca Network of Urban Agriculture/ Rede Carioca de Agricultura Urbana

1. Introduction

Recent years have seen an intensification of scholarly and activist movements towards localising food and counteracting globalising food systems, responding to mounting evidence that globalised food is both environmentally unsustainable and inequitable. Alternative food networks of diverse kinds have sought to counter commodified food relations by emphasising closer proximities between producers and consumers, to build fairer and more sustainable local food systems (Watts, Ilbery and Maye 2005; Goodman 2003). In this ‘quality turn’ in food studies and practice (Goodman 2003; Winter 2003), ‘the local’ is often portrayed as a scale of ecological balance, relations of trust, and authenticity of food. Critical scholars have challenged the romanticised views of localness, and the simplification of local–global binaries that sometimes underpins these views (Brown and Purcell 2005; DuPuis and Goodman 2005). Reality, say the critics, is far more entangled. Local actors are involved in global processes, while global actors are involved in constructing local identities.

In this paper, we made a deliberate effort to move beyond a binary scalar perspective (local vs global). We engage with a notion of **territory**, which is emerging from the intersection of food studies, critical geography, and political ecology. We interpret this notion of territory as relational and transcalar. With this understanding, we highlight different manifestations of food inequity, and outline territorial approaches that seek to build more equitable food systems.

We were guided by the following questions:

- What are territorial expressions of food system inequities?
- How can territorial framings unveil and address food system inequities?

We begin by outlining our conceptual understanding of territory and the rationale for taking a relational approach. Then, we introduce four cases – from Brazil, Ghana, and South Africa – which illustrate different expressions of territorial inequities and how a territorial approach to food systems is claimed to address those inequities. We examine commonalities and differences across the four cases in terms of the nature of the territorial inequities they expose, and how different territories are connected, and how territories are understood and experienced in divergent ways by different actors and stakeholders.

We argue that a territorial perspective offers more than a useful lens for mapping how food inequities are experienced and interconnected. It also offers a tool for action. We conclude with suggestions about future directions and priorities for research on food territories.

2. From fixed scales to relational territories

2.1 Interrogating the local–global binary

The ideal scale of food systems is a disputed matter (Carlile and Garnett 2021). Over the past 50 years or so, food systems have become significantly interconnected and globalised and, while this may have brought down food prices and eliminated seasonality for consumers (which was until recently considered as a positive development as framed as choice), this has come at significant environmental and social cost. Growing awareness and understanding of these negative impacts and inequities, generated by the globalisation of food, has led many scholars and activists to advocate for the localisation of food systems, shortening food chains (Loiseau *et al.* 2020; Watts *et al.* 2005) and curtailing the power of intermediaries, retailers, and transnational corporations (Patel 2013).

For instance, studies on agroecology and food sovereignty have exposed the ills of globalisation and highlighted the virtues of alternatives based on empowering local actors and on local ways of knowing and living (Rosset and Martínez-Torres 2012; Altieri and Rosset 1996; Pimbert 2017; Méndez *et al.* 2015). Studies on short food chains have highlighted advantages of proximity between producers and consumers (Watts *et al.* 2005; Jarzębowski, Bourlakis and Bezat-Jarzębowska 2020; Hinrichs 2003).

Yet, the turn to the local has been challenged by work revealing localism's shortcomings. Localism can lead to 'an elitist, undemocratic politics of perfection marked by problematic conceptions of social justice and civil tolerance', say DuPuis and Goodman (2005: 13). Hinrichs (2000) illustrates this problem by reference to local farmers' markets and community-supported agriculture in the United States (US) where producer–consumer proximities, which seek to decommodify food, remain deeply rooted in commodity relations in which 'the balance of power and privilege ultimately rests with well-to-do consumers' rather than farmers or less-advantaged consumers (*ibid.*: 301). Winter (2003) shows how localism in consumption may be driven by ideologies and perceptions (e.g. that local produce is good, fresh, and ecological), rather than actual evidence which testifies for the quality and safety of local produce. Brown and Purcell (2005) conclude that there is nothing inherent about scale that could make 'the local' inherently emancipatory or environmentally sustainable – and that, as socially constructed, scale itself should be an object of inquiry.

In this paper we sought to develop an understanding of food territories that goes beyond the local–global binary, while not neglecting critical perspectives on localism.

2.2 Food territories as relational

Territories are often thought of as geographical areas with circumscribed borders, whether they be biophysical (biomes, regions), political (countries, federal states, municipalities), or administrative (districts, counties, boroughs). A growing literature, spanning from spatial planning to food studies, supports an alternative view: that territories are socially constructed and relational spaces. Their borders may be contested, porous, or fuzzy (Paasi and Zimmerbauer 2016). Multiple borders are conceivable, and how these borders are created, regulated, and enforced is of consequence; a border is an institution rather than a line that innocently demarcates a geographic location (Sassen 2005). This perspective is particularly relevant if one wants to understand how people, organisations, and movements are responding to pervasive inequities within and between food territories, as this paper explores.

To set the scene for the empirical material that follows, we offer three brief illustrations of how food territories are being assembled in ways that diverge from conventional thinking about borders. Our examples are: (1) *terroir*; (2) the Globally Important Agricultural Heritage Systems (GIAHS); and (3) alternative food networks (AFNs).

Terroir was first used to refer to the place-based typicity of French wine, but has since been applied widely to a diverse variety of food products (Bérard and Marchenay 2016). *Terroir* seeks to express unique attributes of a food product that connect it to its origin. The term has been taken up by policy and regulatory bodies and used to set rules and standards on production, processing and trade, which circumscribe territories through instruments of geographical identification, which certify the connection between a product and a place (Barham 2003). Yet, the notion of *terroir* is elusive, as the typicity of a product invokes qualities that are difficult to measure and regulate. Deloire, Prévost and Kelly (2008) distinguish four attributes of *terroir*: soil, space (including topography and climate), know-how, and identity of a place. Heritage, including knowledge passed between generations and built into the landscape, has also been proposed as an element of typicity (UNESCO 2005). The use of the *terroir* concept by producers, traders, marketers, and regulators reveals the elusiveness of the *terroir* concept, suggesting that food territories have complex, overlapping spatial, cultural, institutional, symbolic, and bureaucratic dimensions.

In a study on Burgundian viticulture, Demossier (2011: 685) says that *terroir* is a 'local governance tool leading to homogeneity and rootedness, while supplying a means for individuals in localities to respond to globalization'. *Terroir* can also be

a branding device, used by producers, traders, and tourism promoters, embedded in the same standardising and globalising tendencies that the concept of *terroir* appears symbolically to oppose (Riviezzo *et al.* 2017; Gyimóthy 2017; Paxson 2010). Barham (2003) observes that multiple levels of coordination are necessary to legitimate a specific *terroir*, and that these extend from local to global scales. *Terroir* has been used both to localise food as part of efforts to resist processes of globalisation and to exploit the commercial premium bestowed on 'origin food' in globalised markets. The two processes might seem contradictory, but they are not separate, as illustrated by Alonso and Parga (2018) in their analysis of what they call the 'terroirist social movement' in Spain. Here, 'terroirists' are both acting in defence of local cultures, identities, and the environment, as well as seeking to gain a market niche within lucrative globalised spaces of distribution and consumption. In a study on 'heirloom rice' in the Cordillera mountains of Luzon, the Philippines, Glover and Stone (2017) described a specific process of this kind, in which traditional rice landraces, which possess symbolic, spiritual, and agroecological significance locally, are commodified, using branding and geographical indication, for commercial sale to affluent consumers far away, in Manila and the US.

The second example concerns the Globally Important Agricultural Heritage Systems (GIAHS). This international initiative, launched by the Food and Agriculture Organization of the United Nations (FAO) in 2002 at the World Summit on Sustainable Development, seeks to identify and safeguard 'agricultural heritage sites' (FAO 2019). GIAHS comprise a range of complex and diverse agroecosystems, not all of which are strictly agricultural.¹ GIAHS recognise the diversity of agricultural and natural resource management practices, landscapes, and knowledge systems. They account for material (food, natural resources, biodiversity) and immaterial (technical knowledge, social relations, and cultural expression management) manifestations of agrobiodiversity. Although geographically located, their borders are not precisely defined. Fuller *et al.* (2015) regard GIAHS as three-dimensional systems defined by people, ecologies, and history. A historical perspective accounts for the dynamism and constant adaptation in these systems through interactions between humans and nature over time.

The concept of GIAHS places debates about scale in an interesting perspective. GIAHS are typically unique, localised systems rooted in specific places, strongly defined by features of local landscapes (e.g. the chinampas system in a lake within Mexico City). Yet, they are also part of a global designation system, which has been put in place to define rules of protection.

¹ For example, the Espinhaço Mountain Range in the State of Minas Gerais in Brazil is a system centred on the gathering of Sempre-vivas flowers and management of native flora (Monteiro and Trombini 2022).

The third example concerns so-called AFNs (alternative food networks), a concept that is not new (Goodman 2003; Goodman and DuPuis 2011) but which gained renewed impetus when the Covid-19 pandemic threatened food security across the globe (Misleh 2022; Losch and May 2022; Cabral and Schmitt 2020). The AFN concept applies to a range of practices of food provisioning driven by social movements, social enterprises, and activist organisations. It seeks to counter commodified food relations and strengthen justice and equity in food systems. AFNs often involve farmers' markets, community supermarkets, community-supported agriculture schemes, agroecology, and other examples of community-organised food provisioning.

These three framings are each useful in understanding food territories as relational spaces, linked to but not exclusively defined by connection to particular localities. All three are shaped by worldviews that reject capitalist logics, and combine ecological sustainability with social justice goals. Proximities and relations of trust between food consumers and producers are often highlighted as conducive to more equitable practices that are also ecologically sound and ethical (Jarzębowski *et al.* 2020; Watts *et al.* 2005). To best confront powerful actors that dominate globalised food systems (e.g. large farmers, transnational agrochemical corporations, large retailers), the actors operate in networks that coalesce around shared values and connections to places (Losch and May 2022). But, as highlighted by Dansero and Puttilli (2014), AFNs, in particular, can be quite diverse and heterogeneous. They can embody distinct forms of territoriality, depending on the relations created with the territory, as expressed in spatial organisation, resources used, and social relations mobilised. The development of virtual platforms for box schemes² illustrates how territoriality is diverging from a purely spatial understanding of proximity.

Terroir, GIAHS and AFNs illustrate how food relations constitute territories in ways that transcend scale, space, and borders. Food territories are defined also by identities, heritage, and social relations, which have a fluid connection with space and scale. Food territories constitute 'a crossroads of complex social, economic, cultural, and environmental relations organised in superimposed but not coincidental scales' (Dansero and Puttilli 2014: 631). While locality may be a key ingredient, which anchors identities, values, and social relations, it does not constrain actors to static definitions of space. To do so would undermine their agency and ability to engage with distinct food systems, as argued by da Luz and Maluf (2019). Agency, and disputes in the affirmation of food territories, are issues of interest in our exploration of how actors engage with territories to address food system inequities.

² Consumers can subscribe to regular deliveries of fresh fruits and vegetables via an online platform. One example is the **Florence Road Veg Box** in Brighton, UK.

3. Four case studies

In this section, we explore four case studies, which illustrate multiple manifestations of food inequities in relation to territories located in Brazil, Ghana, and South Africa. The cases express different kinds of inequity (for example, inequity in access to land and resources, and inequity in access to nutritious and affordable food), as well as distinct ways of defining territories in relation to food systems. We argue that they are illustrative of relational food territories that are assembled by policy, capital, intersecting supply chains, interpersonal relations, and sociocultural ties (we will discuss this further in section 4).

The cases selected for this paper are: (i) the contestation of the Brazilian Cerrado, a territory that has been branded and rebranded as a place for industrial farming of global commodities, to the detriment of local communities and nature; (ii) urban agroecology networks seeking space and recognition to enable urban food production in the city of Rio de Janeiro, Brazil; (iii) informal food networks and a complex web of intersecting local and global supply chains in Worcester, a secondary South African city; and (iv) periodic food markets in Ghana that synchronise trade systems across space and time to provide limited profit-making opportunities, but nonetheless accessible livelihood options, for poorer people.

3.1 Contesting the Brazilian Cerrado

This case study considers the constitution of a territory – the Brazilian Cerrado – based on ecological attributes, political drivers, economic interests, and social justice struggles. It illustrates how the definition of this territory is dynamic, contested, and deeply political.

The Cerrado is often presented as one of Brazil's six biomes or ecoregions, defined on the basis of vegetable cover, wildlife, climate, and geology (Figure 3.1). It is the country's largest, after the Amazon, covering about 24 per cent of Brazil. It has been described as the world's most biologically diverse savannah (WWF n.d.), including large portions of dense forests.

In agricultural science and policy circles (in Brazil and internationally), the Cerrado is best known as the birthplace of the Brazilian Green Revolution, which turned the country into the world's leading producer of soybeans and a major producer of other globally traded agricultural commodities (Hosono and Hongo 2016; Nehring 2016; Cabral, Pandey and Xu 2021). In the late 1960s, the country's military regime placed the Cerrado at the core of its modernisation agenda. The narrative was that the Cerrado was barren and empty and that, with technological corrections, subsidies, and investment in infrastructures, it would

play a central role in supporting industrialisation and feeding the country and the world. Agricultural research, public subsidies, credit schemes, and international aid enabled farming at scale in this territory and, over time, turned into a ‘sanctuary’ of large monocrops and pasture. Brazil emerged as a global powerhouse for the production and export of soybeans, chicken, and beef. More than half of the country’s soybeans and 35 per cent of its beef are produced in the Cerrado, which accounts for about 45 per cent of Brazil’s agricultural land (Bolfe, Sano and Campos 2020).

Figure 3.1 Biomes of Brazil



Source: [Brazil Travel](#), via Wikimedia Commons, [CC BY-SA 4.0](#).

The following description of large-scale farming in the Cerrado is evocative of a widely shared narrative about the Cerrado’s agricultural success, which has reverberated internationally (*The Economist* 2010; Morris, Binswanger-Mkhize and Byerlee 2009).

Twin-wagoned lorries laden with soya thunder along the highways.
Away from the main roads, human beings are a rarity, glimpsed only
in the cabins of combine harvesters or, in the late afternoon as the
air becomes still, in the cockpits of crop dusters flying crazily close to
the ground.
(Wheatley 2010, paragraph 3)

The success narrative overlooks the environmental and human costs of the dramatic, 50-year transformation of the Cerrado. Half of its native vegetation had disappeared by 2009 (MMA and IBAMA 2011). Soil degradation and depletion of water basins are widespread problems, moving the agricultural frontier further

north in a relentless search for high-yielding conditions (Borges and Almeida 2009; Franoso *et al.* 2015; Pearce 2011; Dutra and de Souza 2018). Land and income inequalities are high, and land and natural resource-related conflicts and violence are intense in frontier zones, particularly in the area known as Matopiba, which covers the Cerrado portions of four Brazilian states (Favareto *et al.* 2019; Sauer and Cabral 2022; Sauer *et al.* 2021).³

The formal demarcation of Matopiba by the Ministry of Agriculture in 2015 sought to brand this space (and rebrand the Cerrado) as a ‘modern’ agribusiness territory (Embrapa 2013). Matopiba has recorded the fastest growth in land under soybean, as well as rising land concentration (Sauer and Cabral 2022). An Intergovernmental Panel on Climate Change (IPCC) report has noted that these land-use changes ‘have contributed to increasing net GHG [greenhouse gas] emissions, loss of natural ecosystems (e.g. forests, savannahs, natural grasslands and wetlands) and declining biodiversity’ (Shukla *et al.* 2020, A.1.3). Some new investments are driven by real-estate speculation, rather than food production needs (Boechat *et al.*, forthcoming).

Inequities associated with Brazil’s Green Revolution agriculture have long been documented (Sauer and Pereira Leite 2011; Sauer 2008; Fernandes, Welch and Gonalves 2012), but a focus on the predicament of the Cerrado as a diverse human and ecological territory under threat took shape with the creation, in 2019, of the Matopiba Observatory for Socio-Environmental Conflicts.⁴ This is a network of academics, social movements, and non-governmental organisations that monitors conflict, denounces aggression, and studies how industrial agriculture is impacting communities (Sauer *et al.* 2021). Its understanding of the Cerrado emphasises both environmental and sociocultural diversity, and a perspective of the territory’s social and natural dimensions as co-constituted. By foregrounding ‘sociobiodiversity’ (Guéneau, Diniz and Passos 2019), this network asserts a different view of the territory, which challenges the normalised narrative of the Cerrado’s agricultural commodification as a success of Brazil’s export-oriented agro-industrial model.

The inequities associated with the exploitation of the Cerrado are felt, not only in this territory, but through their connections to food inequities in other parts of the country and the world. For instance, cheap Brazilian chicken has been feeding poor people in Africa while driving African chicken producers out of business (Zachary 2004). A 2020 report revealed that the United Kingdom’s largest supermarkets and fast-food outlets retailed chicken that was fed on soybeans from the Cerrado, linked to deforestation (Heal *et al.* 2020).

³ The term Matopiba combines the initials of the four Brazilian states of Maranhão, Tocantins, Piauí, and Bahia.

⁴ [Matopiba Observatory for Socio-Environmental Conflicts website](#).

Throughout the past five decades, the Cerrado has been transformed ecologically, socially, and in the way the territory is understood and portrayed. Agricultural scientists and the state first built a narrative of the Cerrado as barren, empty land, ready to be tamed by science and turned profitable by state-subsidised entrepreneurs. This was followed by a narrative of success – ‘the miracle of the Cerrado’ (*The Economist* 2010) – that accounted for the advance of science-led modern agriculture and Brazil’s emergence as a global agricultural power. The social and ecological diversity of this territory have been under unrelenting threat. But a new narrative is emerging, which attempts to reclaim the Cerrado as a complex, sociobiodiverse territory, whose erosion connects inequities in Brazil with other parts of the globe (Cabral, Sauer and Shankland, forthcoming).

3.2 Urban agroecology in Rio de Janeiro

This case study focuses on the construction of agroecological food systems in the metropolitan region of Rio de Janeiro and, more specifically, in the city of Rio de Janeiro itself. It looks at a diversified set of initiatives for food production, consumption, and circulation that draw inspiration from agroecological principles. These initiatives are coordinated through the Carioca Network of Urban Agriculture (Rede Carioca de Agricultura Urbana, RECAU). We draw attention to the **territorialization** of these coordinated practices, through the making of connections between peripheral urban populations and food-production initiatives located in intra-urban and peri-urban spaces.

Since the second half of the twentieth century, this metropolitan region (currently comprising 22 municipalities) went through an intense process of urbanisation and ‘de-territorialisation’ of its agri-food system. The region transitioned from being a net producer to a net importer of food. Food production is still present in some areas adjacent to the metropolitan region of Rio de Janeiro, as in the Serrana region, which specialises in vegetable production. But elsewhere in this metropolitan region and its surroundings, agricultural decline is the dominant trend. Nonetheless, according to data provided by the public service of rural extension of Rio de Janeiro (EMATER-RJ), it is estimated that the city of Rio de Janeiro still hosts around 1,500 urban producers, who grow bananas, cassava, green coconut, and vegetables, among other fresh products (Lima *et al.* 2019). These producers grow food in small plots of land, either in home gardens, areas abandoned by real-estate speculation, or inside environmental conservation areas.

These urban producers are more predominant in the West Zone (*Zona Oeste*) of the city, in an area historically known as Sertão Carioca, where there is still some space for food production. These spaces are, however, constantly threatened by the expansion of the city, having also been impacted by the development of

infrastructures to host international sporting events (notably the 2018 Olympics). The preservation and regeneration of urban spaces for food production has been systematically neglected by city planners.

With regards to consumption, the municipality of Rio de Janeiro has a population of 1.3 million people (22 per cent of the total population) living in *favelas* (shanty towns), many of them in territories occupied by drug trafficking or paramilitary groups, or militias. According to a survey carried out by the Brazilian Research Network on Food and Nutrition Security and Sovereignty (PENNSAN), 23.6 per cent of the population of the state of Rio de Janeiro faced severe or moderate levels of food insecurity in 2022, a condition that is also a result of the economic crisis and the Covid-19 pandemic.

RECAU was established in 2009 with support from farmer associations, non-governmental organisations, and social assistance organisations, among others. The initiative brought together various needs and concerns. There were demands for technical support for urban food production, and concerns about inequities in access to resources for producers and to adequate food for consumers. RECAU's agenda included the right to land, inclusion within public policies, the construction of shorter food supply chains, participatory certification for organic products, and access to quality food for populations living in peri-urban areas. Over time, interfaces were established with organisations representing organic farmers, notably the Carioca Network of Organic Fairs (Circuito Carioca de Feiras Orgânicas). The municipal government has supported these initiatives discontinuously. In 2019, a Municipal Policy for Urban and Peri-Urban Agriculture was approved by the City Council, whose impacts are still very limited. Yet, some advances are noticeable at the federal state level. The advocacy work carried out by RECAU and other civil society organisations resulted in the approval, in 2019, of a State Policy on Agroecology and Organic production for the state of Rio de Janeiro. This was turned into regulation in 2021. Although the new policy remained unfunded for some time, intense civil society mobilisation resulted in the approval, in 2022, of an annual budget of R\$20m (approximately US\$3.7m) to promote agroecology and support for urban agriculture.

Since its establishment, RECAU has made successive efforts to connect agroecological food production with the supply of healthy food to peri-urban populations, strengthening urban agriculture for self-provisioning. RECAU also sought to strengthen shorter connections between food production and consumption, through the implementation of fairs, participation of local producers in municipal government procurement programmes, and other actions. During the pandemic, the network implemented several initiatives involving urban food production and distribution to vulnerable populations, through solidarity campaigns.

Inequities in urban agriculture in Rio de Janeiro are strongly intertwined with other inequities, including in housing, the recognition of *quilombola*⁵ peasant territories, the struggle for basic services such as health and education, and the institutionalised violence against populations living in marginalised areas of the city, particularly in the *favelas*.

The territorialisation of agroecological food practices (from production to consumption) has unfolded in a very challenging context. The establishment of a home garden or a food fair, the distribution of a basket of agroecological food to people in need – these were hard-won victories, celebrated by actors in these networks. The strategies used involved the combination of diverse repertoires of action, including: the defence of urban farmers' work and life spaces and the fight to expand them; the construction of political and institutional links with other institutions; constant advocacy work in the public policy domain; communication with publics; and strengthening alliances of urban consumers. Despite the challenges, agroecology initiatives across the city have gained visibility and capacity, building alliances that go beyond RECAU. These networks involve other groups that promote agroecology, not only in the urban and metropolitan space but also across the country, including the National Collective of Urban Agriculture, established in 2014, which is becoming a key space for congregation.

3.3 Long and short food networks in Worcester and Breede Valley Municipality, South Africa

This case study examines food networks in the secondary city of Worcester, which is located in a highly productive agricultural region in South Africa. In addition to having the highest recorded level of income inequality in the world, the dualistic nature of South Africa's agricultural sectors remains largely unchanged since Merle Lipton's seminal and much debated 'Two Agricultures' (Lipton 1976). The Breede Valley Municipality (BVM), within which Worcester is located (Figure 3.2), is an example of the commercial sector, and is an area where the bulk of South Africa's table grape, wine grape, and pome fruit production takes place. These value chains are well integrated into the global food economy, with export markets in the US, Europe, and Asia, as well as in other parts of Africa.

With an estimated population of 193,104 people in 2020 and containing only 1 per cent of South Africa's commercial farms, the BVM accounts for 2 per cent of commercial farm income, 29 per cent of table grape production, and 34 per cent of wine grape production (Stats SA 2017). The municipality is

⁵ *Quilombola* is the term used for communities of African heritage. Quilombo settlements were first established by people who escaped slavery in Brazil, which was only abolished in 1888.

also the location of significant broiler and pork production and one of South Africa's largest food processing companies. The agricultural sector accounts for 23.5 per cent of the employed workforce in the municipality, and 3 per cent of South Africa's farmworkers.

Despite this favourable location, the population of the BVM faces significant food insecurity. Although the prevalence of households below the national poverty line is relatively low, the prevalence of under-five stunting is higher than the national average, at 27 per cent (Mabaso *et al.* 2021). In 2019, the estimated prevalence of moderate food insecurity in Worcester was 40 per cent of the population and the estimated prevalence of severe food insecurity was 15 per cent (Davis *et al.* 2022).

Figure 3.2 Breede Valley Municipality



Source: [Htonl](#), via Wikimedia Commons, [CC BY-SA 4.0](#).

The majority of those experiencing food insecurity are black African and coloured. The income poverty experienced by black households in low-income neighbourhoods of the BVM results in poor diets with low dietary diversity and unhealthy food options (Davis *et al.* 2022). The cereal-based diet is high in energy (calories), but low in micronutrient value, diversity, animal foods, vegetables, and fruit (Mchiza *et al.* 2015). Approximately 50 per cent of the food

basket of South African consumers is made up of shelf-stable products, mostly processed staple foods such as maize-meal, rice, flour, and margarine (Crush and Frayne 2011). Many of them have a high sugar or salt content, such as flavoured maize-meal porridges and instant noodles. Furthermore, the price of nutrient-dense foods has been rising, while food that is nutrient-deficient has become more affordable. Even in the context of the well-functioning commercial agricultural sector in the BVM, the cost of fruits and vegetables has risen more rapidly than other food sources (PMBEJD 2021).

Food networks in the BVM contain a mix of short local value chains and longer chains into the national economy, but are also strongly integrated into technologically advanced and financialised global food chains. The latter are particularly evident in frozen meat, table grapes, and pome fruit; upstream suppliers of agricultural inputs; and, increasingly, providers of fintech services. These provide digital technology innovations to support value chain management, blockchain being one example.

Most food distribution in South Africa is done by five large corporations, all of which are present in the BVM (Greenberg 2017). Supermarket food sales account for the largest share of all food that is consumed in South Africa, at 60 percent. In the BVM, markets are segmented, with differently branded and stocked outlets servicing different socioeconomic groups and locations.

No-frills outlets are to be found in the low-income neighbourhoods of Worcester, including in the township of Zwelethemba, into which the black African population were forcibly relocated during the apartheid era. These shops offer shelf-stable foods, some fresh products obtained from their vertically integrated supply chains, as well as frozen poultry and pork products sourced from elsewhere in South Africa, Europe, and the US, despite the presence of the broiler farms surrounding Worcester. In 2019, two regional butchery chains operating in the BVM, and poultry-producing firms in Brazil, Poland, and Spain were named as interested parties in an enquiry by the International Trade Administration Commission of South Africa into the dumping of frozen bone-in poultry products to South Africa.

Outlets in the high-income suburbs are located in the two shopping malls that have been built in Worcester since 2006. These offer luxury products that include fresh horticultural products as well as out-of-season fruit and vegetables imported from East Africa, Europe, and elsewhere in the world. For example, since 2018, mangoes grown in the São Francisco Valley in Brazil have been imported into South Africa and can be purchased at a national chain located in the BVM (Maxwell 2018).

The informal food sector trade is important in the low-income areas, and in some parts of the Worcester Central Business District. Shelf-stable foods, sugary

beverages and snacks are readily available in the *spaza* (house) shops and from street hawkers in the low-income areas of the BVM. Vendors often source products from the formal wholesale and retail sectors, re-selling them in smaller volumes, in more convenient locations, or at more convenient times. Many of the fresh products are sourced from the provincial food market at Epping near the City of Cape Town, some of which were produced in the BVM before being transported to Epping, purchased and transported back to the BVM. Examples are butternuts and onions. However, there is also a strong seasonal trade in fresh produce that have not been accepted for export due to size or blemishes.

In South Africa as a whole, such food vendors account for 55 per cent of all small-scale enterprises and more than 81,000 outlets outside the formal sector. An estimated 400,000 hawkers/*spaza* shops provision these areas, with about 70 per cent of households in poor urban areas in the Western Cape sourcing food from these businesses (Battersby, Marshak and Mngqibisa 2016). In the BVM as a whole, households purchased, on average, 14 per cent of their food consumed from informal sources, but those who shopped at *spaza* shops or street retailers purchased an average of 37 per cent of their food from these sources (Davis *et al.* 2022).

Most of these informal businesses have precarious livelihoods and are 'survivalists' (Temkin 2009), and according to the BVM local authorities, their major challenges are start-up costs, location, logistics, and access to trading places. Recognising this, both the provincial government and the municipality are moving towards the adoption of place-based approaches to local food system governance. For example, the municipal Integrated Development Plan 2022–27 (IDP) refers to the provision of resources, incentives and exemptions, coordination, and more favourable zoning and trading regulations, markets, and other support for street trading. Similarly, the provincial 'Nourish to Flourish' food and nutrition security strategy is being piloted in three places: Knysna, Langa in the City of Cape Town, and the BVM.

The Covid-19 pandemic reminded everyone that local authorities bear the brunt of early response to disasters, whether local or national. They are also responsible for enforcing regulations concerning the use of space, including rules relating to public facilities, the enforcement of trading hours, and the right to use public land. The BVM's new IDP explicitly mentions these obligations. It remains to be seen how these good intentions and policy statements translate into implementation.

3.4 Periodic markets and rural–urban linkages around small towns, Ghana

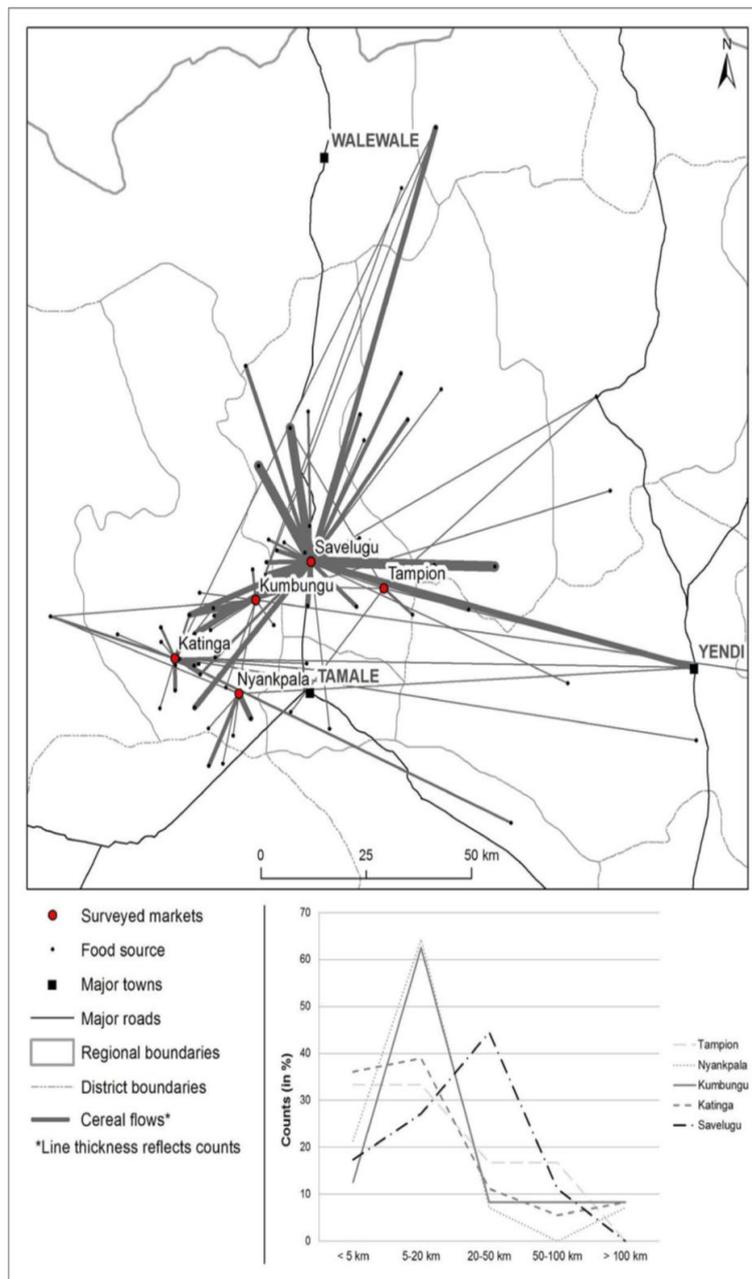
Many food systems in West and East Africa have been shaped around periodic market systems for decades, probably for centuries. Periodic markets are regional trade systems, which coordinate and synchronise market trading in time and space. They typically comprise a group of villages or small towns, each of which holds a market on a different day of a ‘market week’, which may be three to seven days long, depending on the region. Local smallholder farmers bring their goods to a nearby market to retail to peers or sell in bulk to aggregators. Rural consumers – often the same farmers – purchase local and imported retailed goods from neighbours or regional traders. Aggregators and retailers circulate from one market to the next, selling to and buying from a different rural base daily.

There was a time of academic interest in periodic markets in the 1970s and a slight revival of interest in the twenty-first century, with little literature in between. Karg *et al.* (2019) reopened interest in these territorial markets and their wider contexts, with a paper highlighting how periodic markets related to processes of small-town development in Africa. This work drew on a study of a periodic system of six markets in northern Ghana.

Periodic markets provide a local exchange function, but they also fit into a hierarchy of markets on larger scales. Larger in a group will have better connections to regional and national markets, thanks to their status as a regional capital or because of better road connections to other regions. This provides a channel for bulked rural products to be sold on. An example is the movement of yams from northern to southern Ghana, where yam production is less viable. Agricultural products may also be bulked further and move into an export value chain. An example is the movement of palm oil from Ghana into the global market.

Imports make a similar journey in the opposite direction, as consignments move across borders and are then subdivided, eventually reaching retailers at the local, rural market level. Tomatoes and onions reach Ghana in this way from Burkina Faso and Niger, respectively. The ‘spatiotemporal synchronisation’ (Smith 1979: 472) of these periodic markets, i.e. how often they run and how far apart they are, may be determined by the perishability of the goods traded and the amount of time it takes traders to travel between markets (Obudho 1976; Fagerlund and Smith 1970). The detailed study by Karg *et al.* (2019) showed that each small market had a ‘marketshed’ around it, representing the distance from which it sourced goods (see Figure 3.3). Larger markets had wider marketsheds. Rural settlements closer to these larger markets also showed greater commercial orientation.

Figure 3.3 Village and small-town marketsheds in northern Ghana



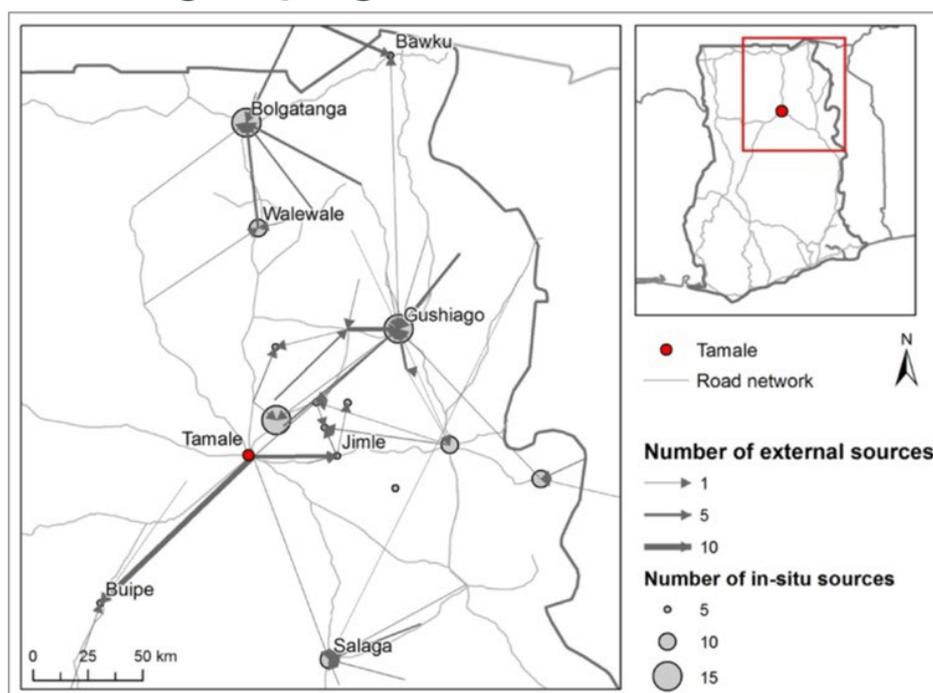
Source: Karg *et al.* (2019), with permission for reproduction from Springer Nature.

Development of such markets is intimately linked to infrastructural, economic, and social development of rural settlements where they take place (Karg *et al.* 2019; Satterthwaite and Tacoli 2003; Tacoli and Agergaard 2017), making them central to any policy or strategy that promotes infrastructural development or investment in a specific value chain. The recursive interaction between market development and wider local development can occur through, for example, development of processing facilities (Tacoli and Agergaard 2017) or road

infrastructure (Porter 1995). Value chains that bypass local towns, for example in contract farming, may not have the same positive infrastructural and development effects (Djurfeldt 2015).

An earlier generation of studies framed these markets through the lens of 'central place' theory (Christaller 1968, cited in Fagerlund and Smith 1970: 334, see also Skinner 1964; McKim 1972). Karg *et al.*'s analysis was part of a move towards acknowledging the role of networks of interpersonal trading relationships and flows of goods (e.g. Bellwood-Howard *et al.* 2021). Interpersonal relationships are important because of the social logic of credit in these markets (Bah *et al.* 2003; Lyon and Porter 2009), which may even extend to cross-generational ties. Walther (2012) and Walther *et al.* (2015) have also suggested that interpersonal relationships between traders, and their spatial strategies of network-like circulation, may contribute to the spatial arrangement of market systems and the development of specific places as markets. Social and cultural aspects may also play a role in characterising different market basins. Certain ethnic groups may be associated with trading or producing specific products, and there are gendered norms within each of these groups (Porter, Lyon and Potts 2007). Distinct basins are also formed within distinct cultural and language groups. Karg *et al.* identified three market groupings in northern Ghana, around Bolgatanga, Salaga, and Gushiago-Tamale (Figure 3.4). Each lies within a discrete ethnic territory.

Figure 3.4 Arrangement of discrete large-scale market groupings in Northern Ghana



Source: Karg *et al.* (2019), with permission for reproduction from Springer Nature.

Academic analysis of periodic market systems has focused on the geographical phenomenon of their spatiotemporal synchronicity. To examine the equity dimensions of these markets, it is also relevant to consider how they relate to various idealised typologies of food regimes, and to put them into a dynamic, historical perspective.

In the previous section, the South African case study differentiated between formal and informal food systems and noted the interaction between the two systems, as informal retailers may source food products from the formal system. Studies on periodic markets in West and East Africa indicate that a similar distinction between formal and informal systems could be applied, for example when marketing boards exist and there are both formal and informal routes for farm produce sales; or when, in larger markets in the hierarchy, retailing requires payment of market fees, and informal retailing is characterised by non-payment. However, in many of the smaller-scale markets, there is no such distinction, but only one route for buying and selling. Also, as described above, locally produced goods and imports may be sold indiscriminately, side-by-side.

One specific imaginary of a formalised food system is represented by the African Green Revolution (AGR) model, which encourages farmer involvement in larger-scale production, sometimes directed to internal markets and, in many national policy prescriptions, directed to export markets. The AGR model theoretically provides opportunities for small-scale farmers to participate in high-value markets, when infrastructural, institutional, and regulatory conditions are met (Blanke 2017). The AGR vision also imagines a role for some professional marketers and agro-dealers (Odame and Muange 2011), including women. This model is presented as an alternative to extant markets, which are seen as comparatively inefficient and not providing large profit-making opportunities. However, the institutional and infrastructural conditions of the AGR vision are not often present. The costs of entry to regulated markets are too high for some small-scale actors.

The extant informal or 'traditional' way of trading in the lowest-level markets shares many of the characteristics of AFNs. For example, these markets are deeply socially embedded and often very local. The majority of traders of some goods at local level are women. Entry to the markets at the lowest level of the hierarchy demands only a minimal level of capital (Bellwood-Howard *et al.* 2021) and is often achieved through social relations rather than capital endowments or business size. Credit is obtained through social rather than financial logics. These markets provide a route for women and poor, small-scale rural farmers to get linked into imperfect markets in imperfect conditions. This is especially the case for people who are not professional marketers or farmers, and who may be engaging in these activities on a seasonal basis only, as part of a multifunctional livelihood array. These observations suggest that these markets provide

opportunities for engagement and commercialisation in a fairly equitable way, which contrasts with the formalised AGR approach. Yet, these characteristics are not intentionally created in the way they may be in AFNs, so it is doubtful that every aspect of these systems could be defined as equitable.

There are also differences between existing traditional systems and 'alternative' food systems that valorise ideas of regional or territorial identity, in that food products, although commonly associated with different places of origin, are not necessarily marketed on the basis of the geographical origin or cultural symbolic aspects which are valorised in alternative food systems, or in schemes such as Geographical Indication.

The only way in which such non-tangible aspects become relevant in traditional West African periodic markets is when the products move up a market hierarchy and are sold to emigrants of specific ethnicities in regions where they reside. In this trade, quality differentiation is minimal, largely based on degree of spoilage rather than any non-tangible or even visual or organoleptic quality. Value addition is based on physical processing, e.g. drying and grinding, rather than on perceived cultural, identity-, or status-related factors. As such, periodic markets constitute spatiotemporal organisations of generic, rather than specialist, food markets.

Periodic markets are also a setting in which to examine changing interactions between formal and informal food systems within specific food territories, and provide a means of understanding how equity dimensions of markets may change within food territories as food systems evolve.

4. Discussion

Drawing on the cases above, this section discusses (i) how food system inequities manifest in specific territories; (ii) how food territories and food inequities are linked; and (iii) how food territories are understood, experienced, and navigated.

4.1 How do food system inequities manifest in territories?

Food system inequities take multiple forms. The case on the Cerrado highlights land-based inequality and conflicts between communities and investors (often backed by the state) – in which the former are often powerless, and subjected to violent incursions on their land. Inequities in the Cerrado also relate to nature, as seen in the erosion of biodiversity and depletion of soils and water basins. Poverty and dispossession in the Cerrado co-exist with wealth and privileged access to resources by farmers (land, credit, subsidies), who are well integrated in global value chains. The BVM case tells a similar story about socioeconomic imbalances, including the contrast between prosperous farmers producing commodities for international markets while much of the population – particularly black and coloured people – face high levels of food and nutrition insecurity. The case of Rio de Janeiro also emphasises land inequities, this time concerning the lack of space for urban food production in poor neighbourhoods of the city.

The BVM and Rio de Janeiro cases move the focus of attention to inequities in food trade and consumption in urban territories. While BVM produces much fruit and other fresh food products, these are underrepresented in the diets of poorer consumers, who rely on nutrient-deficient but affordable foods. Inequities in BVM are also visible in the composition and spatial distribution of food retailing. Affluent neighbourhoods are dotted with shopping malls and shops selling luxury food products that include fruits and vegetables, including imported out-of-season products. By contrast, low-income neighbourhoods feature no-frills shops and informal street vendors selling mostly shelf-stable foods. Paradoxically, cheap frozen poultry and pork products sourced from elsewhere in South Africa, Europe and the Americas, including Brazil, are sold in these shops despite the presence nearby of livestock farms. Food system outcomes reflect these inequities, with a high prevalence of malnutrition in the low-income areas manifested as under-five stunting, and as adult and child overweight and obesity.

The Ghana case highlights periodic markets as spatiotemporally synchronised trading systems, combining elements of formality and informality, which offer a contrast with idealised market visions linked to modernising narratives such as

the AGR. Their accessibility for local smallholder farmers and their embeddedness in sociocultural systems make these periodic markets a potentially more equitable alternative to other markets where, in spite of the promise of profitability and efficiency, entry barriers are significant.

4.2 How are food territories and inequities linked?

Despite the existence of strong local food networks that directly link producers and consumers through short value chains, all four cases are also embedded in highly developed global value chains. These chains comprise flows of perishable food through sophisticated cold-chain management systems, as well as flows of self-stable ultra-processed foods, and the ingredients used to produce these. They also include flows of upstream inputs used in the production and processing of food, and the intellectual property from which these inputs were produced. Finally, the food chains are also linked to financial flows, including both direct investments and food futures contracts and other forms of speculative investments. As Sassen (2013) comments, a financial chain of this nature includes international banks, stock markets, and electronic networks, making the 'geographic borderline' of a place just one point in the chain.

In some instances, these links may reduce food inequities, at least initially. Although the dumping of frozen meat products may undermine local producers, the lower prices that may be offered can benefit low-income consumers. Equally, widening markets to include consumers in other developing countries can contribute towards farmworker livelihoods. However, in most cases the costs in one place may exceed the benefits that are realised in another. As an example, the production of Cerrado soybean and chicken may contribute towards feeding the poor in the Breede Valley but resulted in both hardship in the Cerrado as well as the loss of livelihoods in other towns in which the production of South African poultry was curtailed. Such dumping would also undermine opportunities for localised smaller-scale poultry production.

4.3 How are food territories understood, experienced, and navigated?

Idealised notions of food territories may be imposed from above. Narratives based in the imaginary of the Green Revolution have proposed that Africa is undergoing a Green Revolution, and that the Brazilian Cerrado is a success story of modernised, productive agriculture. And Matopiba is defined by some as an industrial food production zone. Yet, people and communities operating at ground level in these food systems may have divergent experiences that do not mesh with these top-down narratives. Various actors may have diverse experiences of governance and regulation systems, or of engaging with different

social groups in the process of producing, trading, and consuming food. This means that each group will have a different experience of each mode of food circulation. The narrative of the Cerrado as a sociobiodiverse territory reflects the experiences of marginalised groups that contest the modernisation framework imposed from above. The experience of trading as a partially social activity in Ghana, in which trust is based on social relations rather than formal contracts, goes some way to explaining why territorial markets are perceived by their protagonists as sociocultural rather than purely economic forms. This also partly explains why formalised interest-attracting kinds of credit, which are central to green revolution models of agriculture, are unattractive and unnecessary to small-scale traders.

Analysts may perceive that different types of food regime exist and simultaneously cut across different geographic territories. Yet, those operating within those spaces and systems may interact with multiple systems. Food systems that are understood as formal, traditional, informal, or alternative may overlap more than outside analysts perceive, to the extent that such distinctions lack meaning to food system actors. People functioning within territorial food systems do not necessarily perceive different modes of food circulation but manipulate the resources at their disposal to manage in food systems. Those resources include discourses, public goods which may be available, but also interpersonal relations, social obligations, and cultural ties. For these actors, food territories may be perceived as a functional landscape, where social relations, regulations, and markets need to be navigated.

Activists creating alternative food systems, or incumbent powerful actors upholding formal structures in food systems, may be more invested in differentiating between different modes of food circulation. These groups may perceive food territories more as a landscape to be moulded, and they may be more attuned to conflicts between different modes of food governance and circulation, and between the interests of various actor-networks and stakeholders. For these groups, food territories may appear to be an array of spatially connected opportunities, contestations, and potentials.

5. Conclusion

This paper adopted a territorial perspective to understand food inequities, and ways in which justice is claimed and equity pursued in food systems. It drew on case studies from Brazil, Ghana, and South Africa to document the different manifestations of inequity at the territorial level. Our perspective on the territory was relational and transcalar. Although the cases analysed are located in particular locations (the biome; the city; the *favela*; the market), they illustrate how food flows, how relations link and transcend scales, and how bottom-up pressures resist top-down processes of territorial configuration. The cases also illustrate how inequities are connected across territories – as in the example of imported frozen chicken purchased by poor consumers in South Africa that were fed on soybeans that deplete the Brazilian Cerrado.

The paper suggested that the territory not only offers a useful lens for mapping how food inequities are experienced and interconnected, but can also provide a tool for action. The Ghana case suggested that food territories are a functional landscape that people navigate, often by combining formal and informal arrangements and strategies. Yet, the South Africa and especially the Brazil cases, indicated how actor-networks (comprising social movements, producers, consumers and others) coalesce around the constructed notion of territory. This territorialisation emphasises connections between food to people-in-places, and shared sociocultural values and traits (e.g. healthy, ecologically sound, affordable and decent food), which the Ghana case also references, as well as shared experiences of marginalisation. Yet, not all processes of food territorialisation are driven by equity concerns, as the concept of *terroir* illustrates, and as is shown by the way the idea of regional food is manifested in West African territorial food systems.

Thus, phenomena such as short food chains, culturally specific foods, and close relations between producers and consumers can appear in spaces which are described as ‘territories’ in a functional and descriptive sense; for example, around periodic markets. In these spaces, they may be the default mode of operation. But they can also appear with a different, normative meaning in intentionally constructed ‘alternative’ food territories such as in the development of agroecological food networks in Rio de Janeiro. There can be an overlap between components that appear both in ‘functional’ landscapes, and notions of more equitable and ‘alternative’ food systems. Examples include economic and trading systems based on interpersonal relations and social trust, and the prominence given to culturally significant food items. A critical engagement with these territorialisation processes and characterisations is therefore needed, as has been suggested by others (Goodman and DuPuis 2011; Dansero and Puttilli 2014).

This paper was a step towards a theorisation of food territories in connection to food equity. Moving forward, we see the need to explore three relational aspects of food territories further:

- Their spatiotemporal dimension, particularly as new territorial identities are constructed on the basis of peoples' historical roots to places (e.g. GIAHS territories, Quilombo food territories in Brazil, and the Cerrado as sociobiodiverse rather than a cradle of modern agriculture).
- The interaction between material and discursive dimensions of food territories, which co-constitute each other from an equity perspective (e.g. how a lack of access to food and land shapes people's understandings of a food territory; or how territorial identities constrain/enable access to resources and opportunities).
- The relationships that emerge and tensions that erupt between actors at territorial level as a consequence of framing: contestations over food relations as alternative vs conventional, food networks as formal vs informal, food supply chains as localised vs non-localised.
- The connections between territorial experiences of inequity across long distances, linking countries and continents – and the pathways through which inequities may be transferred.

On a practical level, there is scope to use comparative research on food territories in different places to galvanise support for food equity across different spheres of policy advocacy and practice. This would build on the attribute of territories as spaces of coordination, in which local resources can be 'activated' through collective action, and become an answer to a shared challenge.

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