Politics and Governance
2027 • Volume 15 • Article 12660
https://doi.org/10.17645/pag.12660

cogitatio

ARTICLE

Open Access Journal

The Public Dimension of Urban Food Infrastructures: Advancing Conceptualisation and Unpacking Public Sector Roles

Ana Moragues-Faus [1,2], Patricia Homs [1,2,3], Amaranta Herrero [2,4], María José LaRota-Aguilera [1,2], and Andrea Rizo [1,2]

[1] Department of Economic History, Institutions, and Policy and World Economy, University of Barcelona, Spain
[2] Food Action and Research Observatory (FARO), University of Barcelona, Spain
[3] Department of Anthropology, Philosophy and Social Work, University Rovira i Virgili, Spain
[4] Department of Sociology, University of Barcelona, Spain

Correspondence: Ana Moragues-Faus (ana.moragues@ub.edu)

Submitted: 27 April 2026 **Accepted:** 27 July 2026 **Published:** 4 November 2026

Issue: This article is part of the issue "Urban Food Governance Beyond 2030: Resilience, Justice, and the Politics of Sustainability Transitions" edited by Anna R. Davies (Trinity College Dublin), Dean Phelan (University College Dublin), Yuliya Voytenko Palgan (Lund University), and Ana Moragues-Faus (Universitat de Barcelona), fully open access at https://doi.org/10.17645/pag.i544

Abstract

In recent decades, cities have developed diverse urban food governance innovations, ranging from integrated food strategies to translocal alliances and targeted programmes. While these efforts have advanced systemic and multi-actor approaches, questions remain about their material grounding, inclusivity, embeddedness in urban dynamics, and impact. Emerging scholarship has begun to explore urban food infrastructures (UFIs) to better understand how the material and relational foundations of urban food systems shape sustainability and food security outcomes. At the same time, public food infrastructures are increasingly championed in policy recommendations as key to building just and resilient food systems. However, conceptual clarity and analytical frameworks for examining UFIs and their governance remain limited. Drawing on insights from governance, urban, and infrastructure studies, we develop an analytical framework to advance the definition of UFIs and unpack the diverse public roles involved in governing them. This framework is applied to three types of infrastructures in Barcelona: urban community gardens, cooperatives, and food insecurity initiatives. Findings show that UFIs are relationally constituted and politically embedded, revealing multiple public sector roles that challenge conventional understandings of public infrastructures and state-led action. By advancing the conceptualisation of UFIs, the article offers a new entry point for urban food governance that connects material, relational, and political dimensions; contributes to policy debates on accountability for public sector action and inaction; and highlights the importance of further interrogating the publicness of infrastructures in shaping just and resilient urban food futures within a post-2030 agenda.

© 2026 by the author(s), licensed under a Creative Commons Attribution 4.0 International License (CC BY).

Keywords
community gardens; food cooperatives; food insecurity initiatives; public sector roles; publicness; urban food governance; urban food infrastructures

1. Introduction

Over the last decade, hundreds of cities have developed urban food governance innovations, ranging from integrated food strategies and food policy councils to translocal alliances and targeted programmes. These developments have attracted growing scholarly attention and helped consolidate urban food studies as an interdisciplinary and increasingly transdisciplinary field (Moragues-Faus et al., 2022). This work has advanced the field by foregrounding the systemic, multi-actor, and multi-scalar character of urban food governance (High Level Panel of Experts on Food Security and Nutrition [HLPE], 2024). At the same time, recent reviews have pointed to persistent limitations, including weak attention to materiality, uneven engagement with power and governance, limited inclusivity, and continuing uncertainty around the impacts of urban food governance innovations (Battersby & Watson, 2018; Brand et al., 2019; Moragues-Faus et al., 2024). Additionally, scholars call for stronger grounding in the specific urban conditions through which food systems are organised and transformed (Battersby & Haysom, 2018; Moragues-Faus & Battersby, 2021). This challenge is particularly relevant in emerging debates on a post-2030 agenda, in which cities are increasingly recognised as strategic sites for addressing the interlinked crises of sustainability, social justice, and resilience (Bai, 2025). If food is to be more central in these debates, greater attention must be paid to the infrastructures through which it is materially organised, circulated, and accessed. Against this backdrop, research on urban food infrastructures (UFIs) is emerging as a new area of inquiry at the interface between urban studies and food studies. Inspired by the infrastructural turn in urban studies, this perspective draws attention to the material systems, socio-technical relations, and governance arrangements through which food is made available and urban life is sustained (Living Off-Grid Food and Infrastructure Collaboration [LOGIC] et al., 2024).

Despite this growing interest, the concept of UFIs remains weakly consolidated. In many academic and policy contributions, food infrastructures are largely understood as the physical systems and facilities mobilised to feed urban populations, such as storage, distribution hubs, food outlets, or food recovery facilities (Clark et al., 2021; Maye et al., 2025). While useful, such approaches tend to privilege food-chain components while overlooking both the relational constitution of infrastructures and their articulation with other urban systems, including transport, energy, housing, health, and welfare. Food has also historically remained marginal in mainstream urban infrastructure debates, which have focused predominantly on mobility, communications, energy, and water (Monstadt et al., 2022; Wiig et al., 2022). Food's relative invisibility has been reinforced by its commodification and treatment as a predominantly private, market-mediated domain (Clapp, 2020), obscuring the collective dependencies and public responsibilities involved in its provision. Planning scholarship has similarly shown how food was institutionally displaced from urban governance, despite its centrality to urban life, by being treated as a rural, market-led, or politically sensitive issue (Pothukuchi & Kaufman, 1999). Nevertheless, global calls for stronger investment in public food infrastructures are increasing as a means to advance more sustainable, just, and resilient food systems (Cesarano, 2025; HLPE, 2024). However, public food infrastructures are often implicitly understood as state-owned buildings or services, such as school canteens, wholesale markets, or food aid programmes.

Governance scholarship suggests a more complex picture: The public sector can intervene through a variety of roles that extend beyond ownership or direct provision (Bulkeley et al., 2009; Voytenko-Palgan et al., 2021). Yet, there is a lack of analysis to unpack these roles in relation to UFIs.

This article addresses these gaps by examining the governance of UFIs and, more specifically, the differentiated roles of the public sector in shaping them. It argues that UFIs are not merely physical assets or service networks but relationally constituted and politically mediated arrangements whose publicness cannot be reduced to state ownership. To develop this argument, the article first reviews the emerging literature on UFIs and brings it into dialogue with infrastructure studies, care infrastructure scholarship, and governance theory. On this basis, it develops an analytical framework that conceptualises UFIs through three dimensions—material and biophysical configuration, infrastructuring practices, and governance and political mediation—and uses it to examine three types of UFIs in Barcelona: urban community gardens, agroecological food cooperatives, and food insecurity initiatives. The article then analyses the different roles the public sector plays in shaping these infrastructures. In doing so, it contributes to the conceptualisation of UFIs as socio-material and political arrangements, advances the debate on what makes food infrastructures public, and broadens the objects of analysis through which urban food governance can be studied.

2. UFIs and the Role of the Public Sector

The concept of urban food infrastructures (UFIs) is only beginning to consolidate in the literature. A systematic Scopus search shows very limited explicit use of the term (Middha, 2022; Rut & Davies, 2024; Zazo-Moratalla & Orellana-McBride, 2025). Although related notions such as metropolitan food infrastructures or local food infrastructures appear more frequently, the term infrastructure often remains implicitly defined. Unlike food-environment approaches, UFI research focuses on the socio-material assemblages, practices, and governance arrangements sustaining food provisioning.

A first strand of work understands UFIs in relation to food-system activities and supply-chain stages (HLPE, 2017). In this vein, metropolitan food infrastructure has been defined as "the web of resources, activities, and actors that drive the growing, processing, selling, buying, preparing, and consuming of food" (Clark et al., 2021, p. 1), while UFIs have also been described as "webs of interdependences that link production, consumption, and food waste systems" (Rut & Davies, 2024, p. 1). These definitions align with policy-oriented framings that identify farming, processing, storage, distribution, retail, food aid, and community food spaces as critical infrastructures for food provision (Soma et al., 2022). Some studies classify food infrastructures according to supply-chain stages (Clark et al., 2021), while others foreground multiple dimensions—material, digital, legal, and social—that shape food provision in urban contexts (Moragues-Faus et al., 2020).

Within this literature, physical and material components have received the greatest analytical attention. Research on food outlets, food deserts, and, more recently, food swamps has highlighted how the uneven distribution of food infrastructures is linked to socio-spatial inequality and food insecurity (Deener, 2017; Taylor et al., 2025). Yet the food desert framework has also been widely criticised for failing to capture the relational and lived dimensions of food access that shape adequate provisioning in everyday urban life (LOGIC et al., 2024).

A second and expanding body of work addresses this gap by emphasising informal systems, collective action, and community-led initiatives as key food infrastructures (Abrahale et al., 2019; Moustier et al., 2023). This scholarship shows that infrastructures are not reducible to physical artefacts: their social, relational, and governance dimensions are constitutive of how they function and with what effects. Community gardens, community kitchens, surplus food redistribution, and other food sharing initiatives (Baumann & Arens, 2024; DuPuis & Christian, 2023; García & Lambert, 2025; Williams et al., 2024) have thus been analysed as infrastructures of care, mobility, and accessibility (Rut & Davies, 2024; Williams & Tait, 2023).

Accordingly, recent scholarship has built on the infrastructural turn (which has largely overlooked food), conceptualising UFIs as relational, socio-material, and performative assemblages rather than merely technical or physical systems. Drawing on work on the politics and social life of infrastructure, infrastructures are understood as the material and social arrangements through which everyday urban life is sustained—or, conversely, made precarious (Amin, 2014; Berlant, 2016; Bresnihan & Hesse, 2021; Campbell et al., 2022; Larkin, 2013). From this perspective, UFIs actively mediate relations of care and neglect, producing differentiated geographies of justice and injustice (Williams & Tait, 2023). These debates also resonate with urban political ecology, where infrastructures are understood as socio-political arrangements that produce and reproduce inequalities through design, access, and governance (Gabriel, 2014). LOGIC et al. (2024) advance this relational and political understanding by building on assemblage thinking (McFarlane, 2011) and rejecting binary framings of infrastructure as formal/informal or present/absent. Instead, they emphasise uneven degrees of "griddedness" through which urban residents access food-related infrastructures in precarious and differentiated ways (Lawhon et al., 2018). This perspective foregrounds everyday negotiation, improvisation, and contestation as central to how food infrastructures work in practice, particularly for marginalised populations.

Drawing on these interdisciplinary debates, we define *urban food infrastructures* (UFIs) as the interconnected material systems, practices, and governance arrangements through which food is provided and made available to sustain life in cities. To operationalise this concept, we propose three analytical dimensions with porous boundaries.

First, the *material and biophysical configuration* refers to the biophysical processes and material arrangements through which UFIs are constituted. This includes food itself, built spaces, vehicles, digital tools, ecological processes, and their entanglement with other urban systems such as water, energy, transport, and housing (HLPE, 2024; LOGIC et al., 2024; Star, 1999). Materialities enable, constrain, and shape the relations and functions that infrastructures can sustain.

Second, *infrastructuring practices* focus on the continuous social and material practices through which infrastructures are assembled, maintained, repaired, used, and transformed to support urban life (see McFarlane & Silver, 2017; Rut & Davies, 2024). Infrastructures are not fixed entities but continuously made and remade through mundane, caring, economic, repair, and prefigurative practices (Graham & Thrift, 2007; Larkin, 2013; Power & Williams, 2020). In urban food systems, these practices mediate the flows and relations through which food provisioning is sustained, while remaining open to contestation, adaptation, and situated forms of knowledge production (Bodenstein & Pfeffer, 2026).

Third, *governance and political mediation* address how UFIs are governed, by whom, and through what forms of power. Drawing on both infrastructure studies and urban food governance scholarship, we identify four analytical categories (1–4). Taken together, these four categories provide a structured yet flexible framework to examine governance beyond broad definitional statements, while remaining attentive to the plurality, contestation, and unevenness that characterise UFIs:

1. An *actors and processual* category foregrounds governance as multi-actor, relational, and continuously enacted through practice. UFIs are shaped by shifting constellations of state actors, civil society organisations, private actors, and residents, whose interactions produce changing forms of power (Haysom, 2015; Moragues-Faus & Battersby, 2021). Governance is therefore not a stable structure but an ongoing process of negotiation, contestation, collaboration, and adaptation (Amin, 2014; Anand et al., 2018).
2. An *institutional and policy instruments* category captures the formal and informal rules, organisational architectures, and policy tools through which UFIs are steered. Governance operates through municipal departments, regulatory frameworks, and planning systems, but also through hybrid arrangements involving diverse actors (Doernberg et al., 2019). This category highlights how responsibilities are distributed and coordinated across sectors, and how infrastructures are shaped through instruments such as procurement, zoning, subsidies, or welfare programmes, underscoring the fragmented and negotiated character of institutional arrangements across governance arenas (Kidd & Reynolds, 2024; Moragues-Faus et al., 2022).
3. A *political economy and inequality* category examines how governance is embedded in relations of power, resource distribution, and structural exclusion. It highlights how infrastructural arrangements produce differentiated geographies of connection and disconnection, examining food infrastructures as sites through which inequality is both governed and generated (Anand et al., 2018; Heynen et al., 2006). Food infrastructures are shaped by market dynamics, welfare regimes, uneven state investment, and processes of commodification. This category focuses on who controls key nodes of provisioning and distribution, how infrastructures reproduce or challenge socio-spatial inequalities, and how commodification or neoliberal restructuring condition access to food (Clapp, 2020; Graham & Marvin, 2002).
4. Finally, a *normative and discursive* category attends to the values, goals, and interpretive frames through which food infrastructures are legitimised and contested. Governance is exercised not only through institutional arrangements but also through imaginaries, discourses, and normative commitments (Larkin, 2013)—such as equity, resilience, efficiency, or sustainability (Agyeman et al., 2023)—that shape what kinds of infrastructures are possible, prioritised, and for whom.

This conceptualisation helps capture UFIs across their material, practice-based, and governance configurations. However, a central concern of this article is to further examine the notion of public UFIs at a time when calls for their expansion are gaining traction. While urban food scholarship has recognised municipalities' growing involvement in food governance, there is still a limited understanding of the range of competences and forms of agency through which city authorities shape food systems (HLPE, 2024; Moragues-Faus & Battersby, 2021). Here, climate governance scholarship offers a valuable point of departure. Studies have identified leadership, municipal competences, resources, and urban political economy as key factors shaping local capacity to act (Betsill & Bulkeley, 2007; Bulkeley & Kern, 2006). More specifically, Bulkeley et al. (2009) identify five governance modes through which municipalities engage

with climate change—governing by authority, provision, enabling, partnership, and self-governing—later translated into governance roles for city authorities by Voytenko-Palgan et al. (2021). Together, these contributions provide a useful basis for interrogating the publicness of UFIs and the differentiated roles public authorities play in shaping them (see Table 1).

Table 1. Public sector roles in UFIs.

Governance mode	Governance roles	
Authority	Public sector as regulator Does the public sector use laws, regulations, taxes, bans, or other policy instruments to support, shape, or constrain UFIs?	
Provision	Public sector as provider Does the public sector provide, build, fund, maintain, support, or withdraw services, materials, land, or other infrastructure (resources) to UFIs?	Investor funding, building, maintaining, or materially supporting infrastructure
		Host providing access to publicly controlled space/infrastructure
Enabling	Public sector as enabler Does the public sector enable or constrain UFIs through supportive measures—such as information provision, training, networking opportunities, competitions, or voluntary certification schemes—and by fostering collaboration?	Matchmaker facilitating connections, coordination, and collaboration among actors
		Communicator producing, translating, and disseminating information, knowledge, and narratives
Self-governing	Public sector as consumer or user Does the public sector incorporate UFIs (their products or services) into its own operations, services, or procurement activities?	
Partnership	Public sector as partner Has the public sector developed partnerships with UFIs, through specific initiatives or actors?	

Source: Adapted from Voytenko-Palgan et al. (2021).

The remainder of this article is structured as follows. Section 3 describes the methodology. Section 4 examines three types of UFIs through the three analytical dimensions outlined above, while Section 5 develops a comparative analysis of the roles the public sector plays in shaping these infrastructures, drawing on the framework presented in Table 1.

3. Methodology: The Case of Barcelona

Barcelona provides a relevant case for understanding the public sector's role in shaping UFIs beyond traditional state-owned or state-managed forms. Since 2015, food has gained political centrality in the city's governance agenda: Following its engagement with the Milan Urban Food Policy Pact, Barcelona has reframed food as a strategic domain integrating sustainability, public health, and social equity (Herrero & Moragues-Faus, 2025). This institutional shift coexists with a vibrant landscape of grassroots initiatives shaping food provisioning and access across the city (Davies et al., 2025). The article examines three types of

UFIs: urban community gardens, agroecological food cooperatives, and food insecurity initiatives. These were selected because they allow examining the public dimension of UFIs beyond state ownership. All three are socially embedded, materially significant, and shaped through hybrid arrangements involving public institutions, civil society organisations, and community actors, extending the analysis beyond conventional public facilities such as municipal markets or school canteens or privately operated infrastructures, such as supermarkets. The three types also capture distinct entry points—food production, collective provisioning, and access—and are sufficiently significant and diverse in Barcelona to support comparison. The city has 189 urban community gardens (excluding school gardens), including municipal allotments, community-managed gardens, therapeutic gardens, privately hosted gardens, and squatted initiatives (Ajuntament de Barcelona, 2019). Around 60 agroecological food cooperatives are legally constituted as associations, alongside some non-formalised initiatives and a few registered as consumer cooperatives. Most serve 20–30 households through direct produce distribution, while one cooperative supermarket has more than 500 members (Espelt & Vega, 2018). More than 300 food insecurity initiatives also operate across the city, ranging from conventional food aid, such as food banks, to models promoting sustainability, dignity, and agency (LaRota-Aguilera & Moragues-Faus, 2025). Together, these cases reveal decentralised, relational, and often co-produced forms of food infrastructure frequently overlooked in institutional accounts of urban food governance.

The analysis draws on qualitative and documentary methods. The dataset includes 35 interviews with initiative members and policymakers, four workshops, and analysis of relevant reports, strategies, and policy documents. In addition, the authors' sustained engagement with the city's food governance landscape over the last five years, including attendance at more than 50 workshops, seminars, and public events, provided contextual knowledge that informed case selection, interpretation, and triangulation (see Supplementary File 2 for additional details).

4. UFIs as Material, Practice-Based, and Governance Arrangements

4.1. Urban Community Gardens

Urban community gardens in Barcelona constitute a socio-ecological food infrastructure through which food cultivation is intertwined with environmental care, social interaction, and everyday engagement with urban nature. Their *material and biophysical configuration* is grounded in land, soils, organic matter, seeds, water, sunlight, microorganisms, and pollinators, as well as in the built elements that make cultivation possible: raised beds and shared tools and facilities. These gardens are materially modest but ecologically dense spaces, where food production depends on the continuous management of soil fertility, nutrient cycling, water flows, and ecosystem balance. In Barcelona, this material configuration is shaped by the city's dense urban form and Mediterranean climate, which make access to land and water particularly contested.

These material arrangements are embedded within wider urban infrastructures. Community gardens depend on the municipal water system and, in some cases, electricity, while their development is also conditioned by land-use planning, access regimes, and the availability of vacant or underused space. They also connect with educational, environmental, health, and social infrastructures, through relationships with schools, environmental education facilities, health institutions, social programmes, and neighbourhood networks. In some cases, part of the harvest is informally channelled to networks supporting people experiencing food insecurity, bypassing restrictive frameworks around redistribution.

These socio-material conditions are reproduced through *infrastructuring practices*. Gardening involves the everyday work of preparing soils, sowing, planting, watering, mulching, composting, repairing beds, maintaining tools, and harvesting. Such practices reproduce cultivation conditions while embedding cooperation and care into the infrastructure itself. Shared tools and collective routines make gardening a social practice as much as an agronomic one, and many gardens complement cultivation with workshops, educational activities, and neighbourhood events. Infrastructuring here is therefore both material and relational: It sustains food production while generating forms of ecological learning, collective engagement, and social support.

The organisation of this work varies by garden type. In some cases, limited paid work is introduced through municipal staff or specialised organisations in urban agriculture and community facilitation. In most cases, however, everyday functioning depends heavily on voluntary activities, and continuity depends less on stable public investment than on the sustained commitment of participants and supporting organisations.

Governance and political mediation are shaped by hybrid and multi-layered arrangements. Community gardens involve a heterogeneous constellation of actors whose roles vary according to garden type and tenure condition. Municipal actors—particularly the City Council, district administrations, and agencies such as the Municipal Institute of Parks and Gardens—retain formal authority over land access, regulation, programme design, and, in some cases, implementation. Civil society actors, including neighbourhood associations, cooperatives, NGOs, schools, and grassroots collectives, often organise participation, manage the space, and sustain day-to-day activities. Gardeners themselves act simultaneously as users, caretakers, and, in some cases, co-managers. Governance is therefore not reducible to municipal control, but enacted through ongoing relations between public regulation, collective organisation, and informal negotiation.

From a political economy perspective, community gardens occupy a marginal yet socially valued position within Barcelona's urban food system. Crucial resources—especially land, water, and legal recognition—remain under municipal control, while public support is selective, temporary, and often project-based. Tenure tends to be precarious, while regulations prohibiting commercial activity and restricting redistribution constrain the role gardens can play in food provisioning. Informal and squatted gardens may be tolerated but remain vulnerable to closure or displacement. These infrastructures are therefore sustained through a hybrid political economy combining public authority, voluntary work, and limited material resources.

This marginality is also discursively produced. Municipal policies and public narratives frame community gardens as social, therapeutic, or environmental infrastructures rather than as key elements of the urban food system. Their value lies in participation, wellbeing, and inclusion, while food production remains secondary. This framing supports the city's green image but limits gardens' roles and investment. Despite this symbolic alignment with sustainability, gardens remain marginal within the city's green infrastructures—positioned as beneficial yet supplementary, rhetorically valued but materially constrained by regulation and narrow views of food's role in the city.

4.2. Agroecological Food Cooperatives

Agroecological food cooperatives (hereafter co-ops) in Barcelona are infrastructures centred on collective food provisioning through direct or short supply chains with agroecological producers. Their *material and*

biophysical configuration is organised around modest but crucial physical anchors: premises where food is received, stored, sorted, and distributed; refrigeration and storage equipment; and digital tools that coordinate ordering and communication. In small- and medium-sized co-ops, these spaces host weekly food deliveries and also serve as sites of assembly, coordination, and social interaction. The cooperative supermarket in Barcelona is structured differently, combining a larger retail space with longer opening hours, wider product diversity, and partial work professionalisation, allowing access through a more continuous shop-based model rather than weekly pre-orders.

These material arrangements are embedded in broader provisioning infrastructures. Co-ops depend on transport networks, delivery vehicles, and digital ordering platforms that connect urban consumers with agroecological producers. The central material challenge is facilitating urban access to alternative food networks through infrastructures of logistics and coordination.

These arrangements are sustained through *infrastructuring practices* that organise participation and responsibility. In this sense, access to food is mediated through becoming a member of the infrastructure. In small- and medium-sized co-ops, members rotate tasks related to sorting, cleaning, accounting, communication, and supplier coordination. They also participate in assemblies and working groups that reproduce the social and organisational conditions of provisioning. These collective practices sustain not only food circulation but also political discourses that shape the initiative's identity. At the same time, equal distribution of responsibilities does not imply equal capacity to fulfil them. Time availability, care responsibilities, and organisational skills are unevenly distributed, making participation both constitutive and potentially exclusionary.

In the cooperative supermarket, wage labour does not completely replace collective participation but redistributes infrastructural work across different tasks and responsibilities. Participation requirements, however, can lead to exclusion, as not all members can meet the expected commitments. In response, the cooperative has shifted from a compulsory fixed-hours participation model to a more flexible system. This illustrates how infrastructuring is continuously revised in response to concerns about inclusivity, accessibility, and organisational sustainability.

Co-op governance is fundamentally community-based, but also marked by tensions around scale, efficiency, and democratic proximity. In smaller initiatives, governance tends to rely on assemblies and horizontal participation, often valued as conditions for autonomy and direct democracy. These arrangements foster strong member control and social embeddedness, but they can also limit growth and constrain producers' viability. From the mid-2010s onward, membership stagnation and the decline of some co-ops sharpened debates about the need for scaling. Cooperative supermarkets emerged partly as a response to this impasse, seeking to combine larger scale and wider accessibility with participatory governance. Yet this reconfiguration introduces more differentiated decision-making arrangements, including governing boards, committees, and paid staff, thereby redistributing infrastructure governance. Direct producer–consumer ties are central to the co-ops' political and ethical identity, fostering trust, reciprocity, and transparency. At the same time, such direct relationships can generate significant administrative and logistical burdens for producers. Efforts to scale through cooperative supermarkets partly address these limits by concentrating demand and streamlining logistics, sometimes with intermediaries. Still, they do not eliminate market pressures or producer precarity.

In this context, public institutions have historically played an ambivalent role in shaping the *governance* environment of these co-ops. Smaller initiatives have often valued autonomy and informality. As co-ops grow, however, formalisation becomes increasingly necessary for legal registration, work management, rental contracts, access to funding, and regulatory compliance. This has reconfigured how some actors understand the public sector: from an external or constraining force to a potential enabler of infrastructural sustainability (Homs & Escribano, 2025).

From a political economy perspective, co-ops operate within a dominant agri-food system structured by price competition, economies of scale, and retail concentration (Clapp, 2022). They aim to build short supply chains grounded in agroecological production, proximity, and fairer producer–consumer relations, yet these infrastructures remain deeply conditioned by market constraints. Scaling is often framed as a strategy to improve affordability, accessibility, and producer viability, but larger infrastructures such as cooperative supermarkets also face higher fixed costs, greater investment needs, and intensified pressures around economic viability.

Discursively, co-ops mobilise discourses around autonomy and the creation of alternatives to the dominant agri-food system. As larger-scale initiatives seek greater stability, some actors increasingly frame public support as a legitimate demand, sometimes articulated as a "social debt" arising from their uncompensated environmental and social benefits. Co-ops thus remain politically significant, but also structurally fragile, between counter-hegemonic aspirations and the need for wider institutional recognition.

4.3. Food Insecurity Initiatives

Food insecurity initiatives in Barcelona constitute essential yet fragmented UFIs that stabilise food access for vulnerable people. They compensate for policy gaps but may also normalise food insecurity—a structural and politically under-recognised problem—through charitable, uneven, and project-based arrangements. The *material and biophysical configuration* of food insecurity initiatives includes food banks, soup kitchens, community kitchens, dining spaces, and solidarity fridges, operating across municipal premises, religious and third-sector facilities, and shared community sites. These sites are linked by infrastructures of storage, refrigeration, transport, cooking, and distribution through which food is collected, processed, and redistributed. Economic transfer mechanisms, such as food vouchers redeemable in designated retail outlets, represent a distinct material logic: Rather than assembling their own material base, they redirect provisioning through existing commercial infrastructures. Access to premises, equipment, and secure tenure directly shapes continuity and operational capacity.

These initiatives are deeply entangled with other urban infrastructures. They depend on welfare infrastructures, especially social services and referral systems; on transport and mobility networks that enable users and food flows to move across the city; on retail infrastructures through which vouchers and transfers operate; and on donation, waste-recovery, and surplus-management systems through which food is redirected from markets, supermarkets, and public procurement chains into food-support circuits. Yet a substantial part of their infrastructure depends on the waste and surplus dynamics of the food system.

These material arrangements are sustained through extensive *infrastructuring practices* that coordinate food sourcing, storage, preparation, redistribution, and outreach across a highly heterogeneous organisational field.

These activities depend on paid staff, community members, and volunteers. Since the work goes beyond the physical handling of food, many initiatives require trained staff to manage daily activities, support participants, and coordinate tasks in order to address unstable funding and high demand.

The participants' roles in these practices vary significantly. In some initiatives, such as community kitchens, users actively participate by cooking, organising activities, and shaping the initiative's social life. In food banks or voucher-based mechanisms, participation is generally more passive or transactional. Infrastructuring also depends on inter-organisational relations of mutual aid, shared surplus channelling, and coordinated redistribution, allowing these infrastructures to function at the urban scale. Their strong territorial embeddedness in neighbourhood networks and local knowledge can enhance responsiveness to local needs, but also produce uneven coverage, since areas with denser civic infrastructures tend to sustain richer and more diversified provisioning arrangements than others.

The reproduction of these practices depends on *governance arrangements* that are plural, territorially embedded, and institutionally fragmented. Organisational forms range from informal neighbour solidarity networks and mutual-aid groups to large third-sector organisations with formal boards, managerial structures, and professionalised services. Public institutions are central to this field, but governance is not reducible to state action. It is enacted through the interactions of municipalities, charities, religious organisations, intermediary networks, volunteers, participants, retailers, and donor systems. In some initiatives, governance is community-based; in others, it is more hierarchical and centralised.

These actor constellations are mediated through a layered and fragmented institutional architecture. The Municipal Institute of Social Services functions as a key channel for public intervention, yet food-related competences are dispersed across departments and levels of government, often with limited cross-departmental coordination. Formal instruments include grants, collaboration agreements, school meal subsidies, use of public facilities, and economic transfer mechanisms. Informal and semi-formal coordination spaces, such as territorial boards and the Network for the Right to Adequate Food, provide arenas for dialogue and exchange, but have limited capacity for strategic coordination and integration.

From a political economy perspective, food insecurity initiatives are embedded in the broader inequalities that produce food insecurity in the first place: housing precarity, unstable employment, inadequate social protection, and exclusionary migration regimes. These conditions shape both the need for support and the terms of access. Inequalities also exist between initiatives. Large organisations controlling key nodes of food aid, donation flows, or redistribution channels can shape provisioning conditions for many smaller actors, while competitive grant systems advantage organisations with stronger administrative capacity. Uneven territorial distribution, unequal transport accessibility, and selective eligibility criteria in social services further reproduce differentiated access across the city.

This field is also marked by competing normative and discursive framings. While the right to food has gained visibility in policy agendas, food insecurity often remains under-recognised and weakly addressed as a structural political issue. Many initiatives and public frameworks continue to operate through emergency and individualised logics. Food insecurity initiatives, therefore, make visible both the essentiality and the limits of current urban food governance: They are indispensable infrastructures of care and survival, yet also infrastructures through which structural insecurity is managed, unevenly mitigated, and, at times, depoliticised.

5. The Roles of the Public Sector in Shaping UFIs

A comparative reading of the three cases shows that the public sector shapes UFIs in Barcelona through multiple, overlapping, and uneven roles. Drawing on the public sector roles framework outlined in Section 2 (see Table 1), the analysis below illustrates this differentiated involvement across the three types of UFIs. The Supplementary File 1 provides further detail and empirical examples for each role and infrastructure type.

The most visible and stable role across the three UFIs is that of *regulator*, although the content and effects of regulation differ significantly and are exercised across multiple governance levels.

In community gardens, regulation is primarily municipal and operates through land-use planning, programme design, eligibility criteria, and rules governing use, including where gardens can be located, who can participate, and under what conditions food can be cultivated, redistributed, or commercialised. This role is decisive because it shapes access to land, water, and legal recognition. At the same time, it narrows gardens' potential by defining them mainly as spaces of self-consumption, environmental education, therapy, or community participation rather than as significant provisioning infrastructures.

In co-ops, regulation is tied to legal forms, labour conditions, taxation, sanitary rules, and commercial compliance, operating across municipal, regional, and national levels. Small co-ops may operate with varying degrees of informality, but as initiatives scale up, formalisation becomes increasingly necessary. Regulation becomes more consequential for larger infrastructures, shaping accounting, traceability, labelling, and food handling.

In food insecurity initiatives, the regulatory role is more layered, spanning regional and national anti-food-waste laws, European funding frameworks, and municipal social-service protocols. Public regulation shapes eligibility, funding streams, and donation systems—while public procurement law simultaneously constrains deeper integration through complex contracting requirements. Regulatory changes have important distributive consequences that reconfigure UFIs and their relations; for example, the transition from food aid programmes to more integrated social policy frameworks has reorganised the material and institutional conditions through which food insecurity is addressed, from food parcels to vouchers.

A second major role is *provision*, understood as the public sector's contribution of material, spatial, or financial resources. Public authorities can act as hosts when they make land, premises, utilities, or facilities available, and as investors when they subsidise operations, staffing, or infrastructural adaptation.

In community gardens, the hosting role is especially visible by providing access to land, rooftops, water, and sometimes basic facilities through specific programmes. By contrast, the investor role is more limited. Public support is often selective, temporary, and modest, despite the burden on gardeners of applying for grants. The municipality, therefore, acts more clearly as host than as investor, making gardens possible without fully institutionalising them as core infrastructures.

In co-ops, public authorities rarely act as hosts, since premises are mostly rented spaces. Provision is clearer through the investor role, especially in larger initiatives such as the cooperative supermarket. Support may take the form of subsidies for employment, refurbishing, development of technological tools, or actions to increase participation. Even so, investments remain partial and project-based.

In food insecurity initiatives, public provision is both the strongest and most structurally embedded. Public authorities act as investors through subsidies, collaboration agreements, and economic transfer mechanisms such as food vouchers; in some cases, public funding also covers staffing costs. They also act as hosts, making municipal facilities available for some initiatives including kitchens, dining spaces, or redistribution points. Here, public provision is often a condition of operational viability. Yet even in this case, provision remains fragmented, fragile, and mediated through organisations rather than organised through direct and universal public delivery.

A third role is *enabling*, through which public authorities support infrastructures indirectly by facilitating coordination, knowledge exchange, visibility, or legitimacy. This can be divided into two modalities: the public sector as matchmaker, connecting actors and resources, and as communicator or legitimiser, making initiatives visible and publicly recognisable.

In community gardens, enabling is relatively strong. The municipality acts as a matchmaker, providing technical support and programme coordination, while also creating spaces for exchange among gardens and other agroecological actors. It also acts as a communicator by incorporating community gardens into broader narratives of sustainability, biodiversity, and participation. These actions do not remove dependence on public resources but help sustain the social and organisational conditions underpinning UFIs.

In co-ops, enabling is weaker and more uneven. In its roles as matchmaker, the public sector shows little evidence of systematic public work to connect co-ops with other actors, such as social services, or with broader procurement and redistribution systems. The communication role is somewhat more visible, particularly where local and regional agendas recognise agroecological provisioning. Even so, cooperative actors continue to perceive visibility and institutional legitimation as insufficient, highlighting gaps between institutional sustainable food narratives and practice.

In food insecurity initiatives, enabling is broader but still fragmented. Public institutions may act as matchmakers by coordinating food-waste prevention programmes, linking social entities with companies or donation flows, and facilitating access to available initiatives through municipal channels. They also play a communication role by amplifying third-sector food poverty campaigns and supporting training initiatives such as cooking or food-reuse workshops. These functions matter, but they rarely amount to a strategic effort to articulate the system as a whole.

A fourth role is *self-governing*, understood here as the public sector acting as a consumer or user of UFIs by incorporating their products or services into its own operations or procurement practices. Across the three cases, this role is notable for its absence. Public institutions do not meaningfully integrate garden produce or co-ops' supplies into municipal provisioning systems, such as public procurement. The lack of institutional purchases or public food vouchers redeemable in co-ops is widely perceived as a missed opportunity. In food insecurity initiatives, self-governing appears only indirectly: Public institutions refer users to these initiatives and thereby rely on them to fulfil part of their own social protection mandate. This indirect reliance reveals that public authorities depend on these initiatives without formally integrating them into a universalised public system.

A fifth role is *partnership*, which refers to forms of public engagement that go beyond one-directional support and involve some degree of shared design, implementation, or governance. In community gardens, partnership occurs mainly through concessions, contracts, and programme-based collaborations with associations, schools, NGOs, and neighbourhood groups. These arrangements are meaningful, but they remain asymmetrical because control over land, duration, and the basic regulatory framework stays largely in municipal hands. In co-ops, partnership is, alongside self-governing, the weakest roles. There are project-based collaborations with public institutions, but there is little evidence of stable, long-term co-governance. In food insecurity initiatives, by contrast, partnership is more developed and more institutionalised. Collaboration agreements, co-managed services, and hybrid arrangements illustrate more sustained forms of collective action between public institutions and social entities. However, arrangements vary across the different types of initiatives.

The comparative analysis shows that the public sector does not shape UFIs through a single mode of action; it plays different roles and assumes different responsibilities. The role of the public sector in community gardens is particularly salient through regulation, selective hosting, and enabling, while remaining materially marginal and discursively framed as secondary social-environmental spaces rather than food infrastructures. Co-ops are shaped mainly by regulation and selective investment, with comparatively weak enabling and partnership roles, reflecting their historically autonomous position and precarious insertion into institutional agendas. Food insecurity initiatives, by contrast, are the most deeply intertwined with public action, particularly investment, hosting, and partnership, yet this does not necessarily result in universal or rights-based public food infrastructure.

The comparison also shows that stronger public involvement does not necessarily imply better addressing of collective needs, and therefore, the publicness of the UFI. In food insecurity initiatives, extensive public engagement coexists with fragmentation and enduring assistentialist logics. In community gardens, selective support coexists with strong public control and narrow policy imaginaries that limit their recognition as infrastructures. In co-ops, modest public support coexists with growing demands for political support driven by their positive sustainability impacts. The relevant question, then, is not simply whether the public sector is present, but how it is present, through which roles, and with what consequences for material stability, participation, and social justice.

The plurality of public sector roles complicates the conventional equation of public food infrastructure with direct state ownership or management, an equation long challenged in the academic literature addressing publicness (Amin, 2014; Berlant, 2016; Graham & Marvin, 2002). Here, publicness refers to the degree to which infrastructures are oriented toward collective needs through inclusive access, accountable governance, and practices that sustain everyday life beyond exclusive private interests. In Barcelona, publicness is often produced through hybrid assemblages in which municipalities and other public bodies shape infrastructures without fully controlling, fully funding, or fully integrating them into broader systems of provision. Examining UFIs through these differentiated roles therefore clarifies both the possibilities and the limits of current urban food governance, and points to the need for more coherent and justice-oriented forms of public engagement in urban food systems.

6. Conclusion

This article has argued that UFIs offer a valuable entry point for advancing research on urban food governance. While urban food studies have paid significant attention to integrated strategies, governance spaces, and specific policy interventions, less attention has been devoted to the material and socio-technical arrangements through which food is made available and urban life is sustained. This article addresses this gap and provides a more grounded analytical lens for studying the governance of urban food systems through infrastructures. Drawing on infrastructure studies, urban food governance, and care infrastructure scholarship, the article develops a framework to analyse UFIs as material, practice-based, and politically mediated arrangements. Applied to three cases in Barcelona—community gardens, agroecological food cooperatives, and food insecurity initiatives—the framework shows that UFIs are not simply physical assets or service networks. Rather, they are relationally constituted assemblages sustained through everyday work, embedded in wider urban systems, and shaped by uneven relations of power, institutional arrangements, and competing normative framings.

The study has also shown that the public dimension of UFIs cannot be reduced to state ownership alone but is expressed through multiple and differentiated roles played by public authorities, including regulation, provision, enabling, self-governing, and partnership, which combine differently across cases. These results underscore the need for further research on the roles the public sector plays across different infrastructures, from supermarkets to urban gardens, as well as to unpack the diverse ways in which UFIs serve collective needs and, therefore, their publicness beyond state involvement.

Taken together, these findings contribute to ongoing debates in two ways. First, they help consolidate the concept of urban food infrastructures (UFIs) by showing the importance of moving beyond narrowly physical understandings toward more relational and political ones. Second, they advance discussions on public food infrastructures by evidencing the hybrid ways in which the public sector shapes them beyond direct ownership or management. This suggests that strengthening the public dimension of UFIs is not only a matter of investing in facilities or services, but also of transforming the governance arrangements, institutional commitments, and political imaginaries that shape urban food systems. By mapping these diverse public roles more systematically and comparatively, new opportunities emerge to hold public interventions (or their absence) accountable across diverse UFIs that make life in cities possible and contribute very differently to sustainability, social justice, and resilience goals, from markets to food insecurity initiatives. Ultimately, this means situating food as a right rather than solely a private domain and commodity. In this sense, UFIs provide not only a new object of analysis but also a critical lens for imagining and enacting more just, resilient, and grounded urban food futures.

Acknowledgments

We are grateful to those who shared their knowledge with us and made this research possible.

Funding

This work was supported by the European Union's Horizon Europe Research and Innovation Programme under the project CULTIVATE, Grant Agreement No 101083377. Additionally, the publication is part of the project FOOD4GOOD: Addressing food insecurity and sustainability challenges to deliver good health, prosperity, social justice and regenerate the environment (PID2021-125013NA-I00), funded by the Spanish Ministry of

Science and Innovation MCIN/AEI/10.13039/501100011033/FEDER, UE; the Grant CITIES4FOOD: Transformando ciudades diversas para alcanzar la seguridad alimentaria sostenible CNS2023-144381 funded by the Spanish Ministry of Science and Innovation MICIU/AEI/10.13039/501100011033, and by European Union NextGenerationEU/PRTR; and the project FoSSNet, Grant Agreement No 101134861, funded by the European Union's Horizon Europe Research and Innovation Programme. Additional funding includes the Serra Húnter Programme of the Generalitat de Catalunya supporting Amaranta Herrero's current contract. Views and opinions expressed are, however, those of the authors only and do not necessarily reflect those of the European Union, REA, UKRI, or any other funder. Neither the European Union nor the granting authorities can be held responsible for them.

Conflict of Interests

In this article, editorial decisions were undertaken by Anna R. Davies (Trinity College Dublin), Dean Phelan (University College Dublin), and Yuliya Voytenko Palgan (Lund University).

Data Availability

The data that support the findings of this study are available from the corresponding author upon request.

LLMs Disclosure

Grammar and language editing were performed with the assistance of Grammarly, Claude Sonnet 4.6 (Anthropic), and ChatGPT (GPT-5.3, OpenAI). All changes were reviewed by the authors and edited accordingly.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

References

Abrahale, K., Sousa, S., Albuquerque, G., Padrão, P., & Lunet, N. (2019). Street food research worldwide: A scoping review. *Journal of Human Nutrition and Dietetics*, *32*(2), 152–174. https://doi.org/10.1111/jhn.12604

Agyeman, J., Alkon, A., & Duprey, A. (2023). Justice, race, and urban food governance. In A. Moragues-Faus, J. K. Clark, J. Battersby, & A. Davies (Eds.), *Routledge handbook of urban food governance* (pp. 120–135). Taylor & Francis.

Ajuntament de Barcelona. (2019). *Estratègia d'agricultura urbana a la ciutat de Barcelona 2019–2030*. https://bcnroc.ajuntament.barcelona.cat/items/f5c072eb-7e18-4c0a-9749-11fe7ffad81e

Amin, A. (2014). Lively infrastructure. *Theory, Culture & Society*, *31*(7/8), 137–161. https://doi.org/10.1177/0263276414548490

Anand, N., Gupta, A., & Appel, H. (2018). *The promise of infrastructure*. Duke University Press.

Bai, X. (2025). Cities as transformative agents for global sustainability. *Science*, *389*(6756), Article eadz3642. https://doi.org/10.1126/science.adz3642

Battersby, J., & Haysom, G. (2018). Linking urban food security, urban food systems, poverty, and urbanisation. In J. Battersby & V. Watson (Eds.), *Urban food systems governance and poverty in African cities* (pp. 56–67). Routledge. https://doi.org/10.4324/9781315191195

Battersby, J., & Watson, V. (Eds.). (2018). *Urban food systems governance and poverty in African cities*. Routledge.

Baumann, H., & Arens, J. (2024). Another provision: Co-designing communal food infrastructures in East London. *Geohumanities*, *10*(2), 484–497. https://doi.org/10.1080/2373566X.2024.2417000

Berlant, L. (2016). The commons: Infrastructures for troubling times. *Environment and Planning D: Society and Space*, *34*(3), 393–419. https://doi.org/10.1177/0263775816645989

Betsill, M., & Bulkeley, H. (2007). Looking back and thinking ahead: A decade of cities and climate change research. *Local Environment*, *12*(5), 447–456. https://doi.org/10.1080/13549830701659683

Bodenstein, C.-P., & Pfeffer, K. (2026). Mapping the field of urban infrastructuring—A scoping review. *Cities*, *169*, Article 106529. https://doi.org/10.1016/j.cities.2025.106529

Brand, C., Bricas, N., Conaré, D., Daviron, B., Debru, J., Michel, L., & Soulard, C. T. (Eds.). (2019). *Designing urban food policies: Concepts and approaches*. Springer.

Bresnihan, P., & Hesse, A. (2021). Political ecologies of infrastructural and intestinal decay. *Environment and Planning E: Nature and Space*, *4*(3), 778–798. https://doi.org/10.1177/2514848620902382

Bulkeley, H., & Kern, K. (2006). Local government and the governing of climate change in Germany and the UK. *Urban Studies*, *43*(12), 2237–2259. https://doi.org/10.1080/00420980600936491

Bulkeley, H., Schroeder, H., Janda, K., Zhao, J., Armstrong, A., Chu, S. Y., & Ghosh, S. (2009). *Cities and climate change: The role of institutions, governance and urban planning* [Report prepared for the World Bank Urban Symposium on Climate Change]. World Bank.

Campbell, L. K., Svendsen, E., Johnson, M., & Landau, L. (2022). Activating urban environments as social infrastructure through civic stewardship. *Urban Geography*, *43*(5), 713–734. https://doi.org/10.1080/02723638.2021.1920129

Cesarano, S. (2025, December 17). Transforming urban food systems through food markets. *Milan Urban Food Policy Pact*. https://www.milanurbanfoodpolicypact.org/transforming-urban-food-systems-through-food-markets

Clapp, J. (2020). *Food*. Polity Press.

Clapp, J. (2022). The rise of big food and agriculture: Corporate influence in the food system. In C. Sage (Ed.), *A research agenda for food systems* (pp. 45–66). Edward Elgar Publishing.

Clark, J. K., Conley, B., & Raja, S. (2021). Essential, fragile, and invisible community food infrastructure: The role of urban governments in the United States. *Food Policy*, *103*, Article 102014. https://doi.org/10.1016/j.foodpol.2020.102014

Davies, A., Cho, H., Vedoa, M., Varderi, R. M., & Gatejel, A. M. (2025). Evolving foodscapes: Tracing trajectories of urban and peri-urban food sharing initiatives for just food transitions. *Geoforum*, *163*, Article 104318. https://doi.org/10.1016/j.geoforum.2025.104318

Deener, A. (2017). The origins of the food desert: Urban inequality as infrastructural exclusion. *Social Forces*, *95*(3), 1285–1309. https://doi.org/10.1093/sf/sox001

Doernberg, A., Horn, P., Zasada, I., & Piorr, A. (2019). Urban food policies in German city regions: An overview of key players and policy instruments. *Food Policy*, *89*, Article 101782. https://doi.org/10.1016/j.foodpol.2019.101782

DuPuis, E. M., & Christian, A. (2023). Growing food, growing food systems: The role of non-profit farms. *Frontiers in Sustainable Food Systems*, *7*, Article 1090682. https://doi.org/10.3389/fsufs.2023.1090682

Espelt, R., & Vega, N. (Eds.). (2018). *Cooperativisme i agroecologia a la ciutat de Barcelona*. Comanegra.

Gabriel, N. (2014). Urban political ecology: Environmental imaginary, governance, and the non-human. *Geography Compass*, *8*(1), 38–48. https://doi.org/10.1111/gec3.12110

García, F., & Lambert, R. (2025). Building community food resilience: Tracing socio-technical infrastructures of ollas comunes in Chile's food deserts. *Urban Planning*, *10*, Article 10583. https://doi.org/10.17645/up.10583

Graham, S., & Marvin, S. (2002). *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition*. Routledge.

Graham, S., & Thrift, N. (2007). Out of order: Understanding repair and maintenance. *Theory, Culture & Society*, *24*(3), 1–25. https://doi.org/10.1177/0263276407075954

Haysom, G. (2015). Food and the city: Urban scale food system governance. *Urban Forum*, *26*, 263–281. https://doi.org/10.1007/s12132-015-9255-7

Herrero, A., & Moragues-Faus, A. (2025). City profile: A history of changing urban powers to feed the city of Barcelona. *Cities*, *163*, Article 106025. https://doi.org/10.1016/j.cities.2025.106025

Heynen, N. C., Kaika, M., & Swyngedouw, E. (Eds.). (2006). *In the nature of cities: Urban political ecology and the politics of urban metabolism.* Routledge.

High Level Panel of Experts on Food Security and Nutrition. (2017). *Nutrition and food systems*. https://openknowledge.fao.org/handle/20.500.14283/i7846e

High Level Panel of Experts on Food Security and Nutrition. (2024). *Strengthening urban and peri-urban food systems to achieve food security and nutrition, in the context of urbanization and rural transformation*. https://openknowledge.fao.org/handle/20.500.14283/cd1459en

Homs, P., & Escribano, P. (2025). Navigating opposition and recognition: Changing relations and imaginaries among agroecology and the state. In S. Narotzky, T. Vetta, & N. Bruier (Eds.), *Agricultural extractivism in the Mediterranean region: A socioecological view* (pp. 237–257). Palgrave.

Kidd, R., & Reynolds, C. (2024). Food policy coherence in local government: Who does what and why? *Food Policy*, *129*, Article 102740. https://doi.org/10.1016/j.foodpol.2024.102740

Larkin, B. (2013). The politics and poetics of infrastructure. *Annual Review of Anthropology*, *42*, 327–343. https://doi.org/10.1146/annurev-anthro-092412-155522

LaRota-Aguilera, M. J., & Moragues-Faus, A. (2025). Reclaiming food insecurity in European urban policies: Lessons from public and community-based initiatives. *Urban Planning*, *10*, Article 9557. https://doi.org/10.17645/up.9557

Lawhon, M., Nilsson, D., Silver, J., Ernstson, H., & Lwasa, S. (2018). Thinking through heterogeneous infrastructure configurations. *Urban Studies*, *55*(4), 720–732. https://doi.org/10.1177/0042098017720149

Living Off-Grid Food and Infrastructure Collaboration, Battersby, J., Brown-Luthango, M., Fuseini, I., Gulabani, H., Haysom, G., Jackson, B., Khandelwal, V., MacGregor, H., Mitra, S., Nisbett, N., Perera, I., te Lintelo, D., Thorpe, J., & Toriro, P. (2024). Bringing together urban systems and food systems theory and research is overdue: Understanding the relationships between food and nutrition infrastructures along a continuum of contested and hybrid access. *Agriculture and Human Values*, *41*(2), 437–448. https://doi.org/10.1007/s10460-023-10507-6

Maye, D., Gorton, M., Morse, A., Tocco, B., & Steytler, M. (2025). Infrastructure support for short food supply chains: The current state of play in England and towards a research agenda. *Agricultural and Food Economics*, *13*(1), Article 88. https://doi.org/10.1186/s40100-025-00418-x

McFarlane, C. (2011). Assemblage and critical urbanism. *City*, *15*(2), 204–224. https://doi.org/10.1080/13604813.2011.568715

McFarlane, C., & Silver, J. (2017). Navigating the city: Dialectics of everyday urbanism. *Transactions of the Institute of British Geographers*, *42*(3), 458–471. https://doi.org/10.1111/tran.12175

Middha, B. (2022). Urban food infrastructures: The role of inner-city universities. *Urban Policy and Research*, *40*(3), 236–249. https://doi.org/10.1080/08111146.2022.2093181

Monstadt, J., Torrens, J. C. L., Jain, M., Macrorie, R. M., & Smith, S. R. (2022). Rethinking the governance of urban infrastructural transformations: A synthesis of emerging approaches. *Current Opinion in Environmental Sustainability*, *55*, Article 101157. https://doi.org/10.1016/j.cosust.2022.101157

Moragues-Faus, A., & Battersby, J. (2021). Urban food policies for a sustainable and just future: Concepts and tools for a renewed agenda. *Food Policy*, *103*, Article 102124. https://doi.org/10.1016/j.foodpol.2021.102124

Moragues-Faus, A., Clark, J. K., Battersby, J., & Davies, A. (Eds.). (2022). *Routledge handbook of urban food governance*. Taylor & Francis.

Moragues-Faus, A., Clark, J. K., Battersby, J., & Davies, A. (2024). The potential of urban food governance to transform lives, cities, and the planet. *Global Food Security*, *40*, Article 100751. https://doi.org/10.1016/j.gfs.2024.100751

Moragues-Faus, A., Marsden, T., Adlerová, B., & Hausmanová, T. (2020). Building diverse, distributive, and territorialized agrifood economies to deliver sustainability and food security. *Economic Geography*, *96*(3), 219–243. https://doi.org/10.1080/00130095.2020.1749047

Moustier, P., Holdsworth, M., Anh, D. T., Seck, P. A., Renting, H., Caron, P., & Bricas, N. (2023). The diverse and complementary components of urban food systems in the Global South: Characterization and policy implications. *Global Food Security*, *36*, Article 100663. https://doi.org/10.1016/j.gfs.2022.100663

Pothukuchi, K., & Kaufman, J. L. (1999). Placing the food system on the urban agenda: The role of municipal institutions in food systems planning. *Agriculture and Human Values*, *16*(2), 213–224. https://doi.org/10.1023/a:1007558805953

Power, E. R., & Williams, M. J. (2020). Cities of care: A platform for urban geographical care research. *Geography Compass*, *14*(1), Article e12474. https://doi.org/10.1111/gec3.12474

Rut, M., & Davies, A. (2024). Food sharing in a pandemic: Urban infrastructures, prefigurative practices and lessons for the future. *Cities*, *145*, Article 104609. https://doi.org/10.1016/j.cities.2023.104609

Soma, T., Shulman, T., Li, B., Bulkan, J., & Curtis, M. (2022). Food assets for whom? Community perspectives on food asset mapping in Canada. *Journal of Urbanism*, *15*(3), 322–339. https://doi.org/10.1080/17549175.2021.1918750

Star, S. L. (1999). The ethnography of infrastructure. *American Behavioral Scientist*, *43*(3), 377–391. https://doi.org/10.1177/00027649921955326

Taylor, D. E., Bell, A., Rybarczyk, G., Saherwala, A., Wetzel, R., & Lewis, S. (2025). Assessing the existence of food deserts, food swamps, and supermarket redlining in Saginaw: A small, racially segregated mid-Michigan city. *Journal of Agriculture, Food Systems, and Community Development*, *14*(2), 383–429. https://doi.org/10.5304/jafscd.2025.142.014

Voytenko-Palgan, Y., Mont, O., & Sulkakoski, S. (2021). Governing the sharing economy: Towards a comprehensive analytical framework of municipal governance. *Cities*, *108*, Article 102994. https://doi.org/10.1016/j.cities.2020.102994

Wiig, A., Karvonen, A., McFarlane, C., & Rutherford, J. (2022). *Splintering Urbanism* at 20: Mapping trajectories of research on urban infrastructures. *Journal of Urban Technology*, *29*(1), 1–11. https://doi.org/10.1080/10630732.2021.2005930

Williams, M. J., Pilkington, A., & Parker, C. (2024). Food relief providers as care infrastructures: Sydney during the pandemic. *Geographical Research*, *62*(2), 263–278. https://doi.org/10.1111/1745-5871.12633

Williams, M. J., & Tait, L. (2023). Diverse infrastructures of care: Community food provisioning in Sydney. *Social & Cultural Geography*, *24*(8), 1362–1382. https://doi.org/10.1080/14649365.2022.2056630

Zazo-Moratalla, A., & Orellana-McBride, A. (2025). How to assess urban food resilience? Moving towards food security in Chilean cities. *Sustainability*, *17*(17), Article 7924. https://doi.org/10.3390/su17177924

About the Authors



Ana Moragues-Faus is director of the Food Action and Research Observatory (FARO) and associate professor at the University of Barcelona. Her work focuses on food justice, sustainability, urban food governance, and the transformation of food systems, using participatory and transdisciplinary approaches to advance more equitable and sustainable food systems globally.



Patricia Homs is an assistant professor in the Department of Anthropology, Philosophy and Social Work at Universitat Rovira i Virgili. She is a member of the Food Action and Research Observatory (FARO). Her participatory and transdisciplinary research focuses on food systems transformation, particularly on agroecological transition.



Amaranta Herrero is a Serra Húnter fellow in sociology and a member of the Food Action and Research Observatory (FARO) at the University of Barcelona. As an environmental sociologist, her research explores socio-ecological conflicts, food governance, and social transformation, focusing on how narratives and practices shape pathways towards more sustainable and just societies.



María José LaRota-Aguilera is a postdoctoral researcher at the University of Barcelona and a member of the Food Action and Research Observatory (FARO). She works on food systems transformation from a socio-ecological perspective. Her recent research focuses on the right to food in urban contexts and the role of public-community initiatives addressing food insecurity, generating evidence for more just and effective food policies.



Andrea Rizo is a PhD candidate in sociology at the University of Barcelona and a member of the Food Action and Research Observatory (FARO). Her work focuses on food insecurity and gender inequalities within urban food environments, using participatory and experience-centred approaches to advance more equitable food access in cities.