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Navigating agroecological urbanism: examining linkages and interdependencies within alternative food networks

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In pursuing agroecological urbanism – a strategic endeavor to dismantle disempowering structures within urban food systems through cultivating mutual interdependencies – alternative food networks (AFNs) emerge as pivotal catalysts for transformative change. Indeed, there are increasing arguments for AFNs working on diverse issues to pool resources and address food system challenges from multiple perspectives under a common frame. However, a pressing need exists for greater clarity on tensions and challenges in establishing a network of AFNs within a shared framework, such as that fostered by agroecological urbanism. This study explores impediments to organizing AFNs into transformative networks, drawing insights from two diverse urban contexts – Preston, England, and Vitoria-Gasteiz, Basque Country – using a case study methodology comprising online semi-structured interviews and participant observation. Our findings underscore three primary barriers to this process: divergent conceptualizations of food questions, education and awareness-raising as a limited convergence point, and constrained resources. Such barriers generate a practical divorce between social and environmental goals in the experiences analyzed. Central to this division is also the pivotal question of the subject of justice – whether AFNs advocate primarily for urban citizens' interests or prioritize peri-urban and rural farmers' concerns. The analysis highlights the need to develop inclusive socio-ecological narratives within the overarching framework of agroecological urbanism as a critical step in fostering collaborative coalitions among AFNs that move beyond individualized change. Building these coalitions would depend on funding availability for long-term strategic collaborative efforts, emphasizing the crucial role of public authorities in such processes.

KEYWORDS

agroecology, sustainable food networks, alternative food networks, food sovereignty, agroecological urbanism

1 Introduction

Multiple terms are used to refer to alternative food efforts, albeit referring to a set of heterogeneous initiatives: local food initiatives (LFIs), local food systems (LFSs), sustainable food networks (SFNs), alternative agri-food networks (AAFN), alternative food initiatives (AFIs), community food initiatives, sustainable food networks (SFNs) and other permutations

(Feagan, 2007). However, usually, the term alternative food networks (AFNs) is preferred in the literature. The term AFNs was introduced in the late 1990s by scholars to broadly embrace newly emerging practices that included a variety of actors, such as producers and consumers, and embodied alternative supply chains to the dominant industrial model of food supply (Murdoch et al., 2000). Since then, the label AFNs has been widely used in the literature to refer to a vast array of initiatives that differ from the conventional food system in one way or another.

AFNs seek to reconfigure the power relations between food system actors, bring nature into food-related concerns, and provide new avenues to address social and economic challenges under a more embedded notion of locality (Forssell and Lankoski, 2015). In particular, the alternative character of AFNs revolves around promoting values beyond profit maximization and industrial logic through market and non-market strategies incorporating some degree of ecological and ethical values within their motivations, local and sustainable food, and cooperation between food system actors (idem). Examples include farmers' markets, box schemes, labels of origin, Fairtrade, and other short food supply chain mechanisms (Misleh, 2022). More recently, a new dimension of AFNs has been identified that integrates a more substantial citizen and participation component under collective relocation initiatives, such as consumer groups, solidarity purchasing groups, community growing schemes, and various other not-for-profit organizations that support farmers, promote food literacy, or increase healthy food access in marginalized communities (Alkon and Mares, 2012; Vitiello et al., 2015; Brinkley, 2017). As such, AFNs are argued to relocate different dimensions of food, including spatial, informational, governance, and ownership (Mount, 2012).

The proliferation of studies about AFNs has generated many debates as scholars have started to unpack the dynamics of these practices beyond their attributed potentials and new permutations of the phenomenon materialized as a reaction to new societal challenges. As a result, critical scholars have fostered the notion that AFNs are influenced by different power and decision-making processes and interdependencies at multiple scales that constrain what they can do to transform food systems (DuPuis and Goodman, 2005; Goodman et al., 2012). As AFNs do not exist in an isolated vacuum, their potential for transformative change has been argued to be highly mediated by broader market-based and conventional food system power relations embedded within a broader neoliberal context (McClintock, 2014).¹ These dynamics render a heterogeneous landscape of AFNs with diverse, and at times contrasting, motivations, which do not always conform to values of reciprocity, trust, community, and environmental and social sustainability usually related to them (Carlisle, 2015). According to previous literature, some AFNs can potentially depoliticize food and social justice because they focus on consumer choice, market-based solutions, and personal responsibility (Levkoe, 2011; Mares and Alkon, 2011).

To account for the complexity and hybridity of AFNs, a strand of the literature has introduced a more relational understanding of AFNs (Misleh, 2022), also advanced in this paper. In this view, AFNs are conceptualized as an “array of relationships, rationales, and social values” (Sarmiento, 2017, p. 488). This perspective focuses on the processes through which alternative values are developed and translated (Goodman et al., 2012). It admits that AFNs might never be perfect but can be improved by working with others. Indeed, AFNs do not act in isolation, nor are they absent from interactions with diverse dynamics in their territories, including interconnections with other organizations and AFNs. As a result, there is an increasing argument for alliances between AFNs working on diverse issues to pool resources and address food system challenges from multiple perspectives (Holt-Giménez and Altieri, 2013; Blay-Palmer et al., 2016). It is argued that this can lead to mainstreaming alternative values across AFNs, contributing to more inclusive place-making processes and counteracting the current limitations of some AFNs to move past values usually attached to the conventional food system (Holt-Giménez and Shattuck, 2011; Levkoe, 2014). This has led to various studies highlighting the challenges of building coherence among AFNs (Bauermeister, 2016). Previous literature highlights that diverse visions of social change and derived different discourses and strategies attached to transforming food systems hinder the development of alliances between AFNs (Di Masso and Zografos, 2015). Other studies demonstrate that AFNs need to navigate differences in power and influence via resource exchange, which influences the priorities advanced by the collection of AFNs within a place (Sbicca et al., 2019; Zerbian et al., 2022).

However, there remains a pressing need for enhanced clarity regarding the precise requisites for establishing a network of AFNs within a shared framework that transcends ideological and value-based disparities. This endeavor must also effectively address the multifaceted challenges that AFNs encounter and whether, in this context, inter-organizational alignment is even an objective of AFNs. While ideological cohesion stands as a crucial factor for driving comprehensive, transformative change, its presence alone does not guarantee the seamless alignment of AFNs' efforts toward it. Numerous intricate dynamics come into play, including resource imbalances and external influences, as noted by McClintock (2014). Moreover, a pivotal question lingers: Will the alignment of AFNs genuinely lead to more profound transformative outcomes?

A critical concept that has recently emerged in the context of urban studies is agroecological urbanism. Agroecological urbanism stems from urban planning and design scholarship intending to develop food-enabling cities through agroecological transitions (Deh-Tor, 2021; López-García and de Molina, 2021). Agroecological transitions refer to fundamental changes at various levels across the food system and in social, economic, cultural, ecological, and political dimensions (Duru et al., 2015; Ollivier et al., 2018; Sachet et al., 2021). Significantly, agroecological urbanism recognizes agroecology not only as a movement, science, or individual practice but as a “package” of value-based practices, such as AFNs, that aim to address environmental and social justice, acknowledge cultural diversity, and promote horizontal governance models (Deh-Tor, 2017). In essence, agroecological urbanism fosters the construction of a collective alternative journey that strategically organizes mutual interdependencies of the food system to dismantle disempowering and oppressive structures. This paradigm, as expounded by Tornaghi

¹ Neoliberalism is defined here as the “theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade” (Harvey, 2005, p. 2).

and Dehaene (2020), encompasses knowledge exchange to build intersectional solidarities and new subjectivities, active community participation, the integration of agroecology into public policy formulation, a reevaluation of land management models, and the cultivation of a new valuing system that follows a multi-species ethics of care (Tornaghi and Dehaene, 2020; Vandermaelen et al., 2022). Grounded in political agroecology and food sovereignty (Resler and Hagolani-Albov, 2021), agroecological urbanism acts as a political tool to build the ground for how food questions are collectively negotiated within the construction and assemblage of cities as collective structures.

Within this ongoing narrative, agroecological urbanism brings about the collective organization of AFNs as a pivotal catalyst for food systems change. The *urban* character of AFNs' interrelationships – rarely explicitly acknowledged in the literature – is particularly important in this context. Cities are thus viewed as spaces to promote place-based solidarities, whereby AFNs' collective organization becomes a linchpin that propels urban restructuring. Significantly, agroecological urbanism delineates a complex web of interconnected AFNs and other urban actors, intricately weaving interactions and overlaps that nurture the agroecological transition process. Agroecological urbanism envisions these interactions as fostering mutual interdependencies, whereby a collective consciousness is developed around the multiple, intersecting injustices of food systems, thus leading to the reassessment of individual and joint practices to recognize social group differences (Tormos, 2017). In this context, multi-actor networks can be powerful for agroecological transitions by re-framing local development projects and creating new alliances that challenge previous visions of social change (Vaarst et al., 2018; López-García et al., 2019; Resler and Hagolani-Albov, 2021). This entails reflecting on urban actors' roles, particularly marginalized voices like agroecology-oriented farmers and initiatives that aim to address food insecurity, in driving holistic and inclusive urban agroecological transitions (López-García et al., 2020; Simon-Rojo, 2021).

This study examines the challenges for developing interconnected networks of AFNs that align with constructing the place-based mutual interdependencies fostered by agroecological urbanism. In doing so, it emphasizes the contingent and complex nature of the transformative collective potential of AFNs, focusing on the relationships and processes, often political and contested, surrounding their interactions. To attain this goal, an analysis is conducted to understand how and why AFNs in Preston, England, United Kingdom (UK), and Vitoria-Gasteiz, Basque Country, Spain, establish connections and how these limit collective approaches. The following sections introduce the study's methodology, describe the selected case studies, and present the study's findings. Section five discusses the results in the context of agroecological urbanism, including how AFNs' dynamics would need to be reconfigured for just agroecological transitions.

2 Materials and methods

The research adopted a qualitative case study methodology in the form of a collective case study approach. Collective case studies analyze several cases to form a collective understanding of a phenomenon (Stake, 1995). In doing so, this research examines why networks of AFNs within a place take place, the conditions that affect their dynamics, and the consequences of these processes. Preston and

Vitoria-Gasteiz were selected as cases because they represent two distinct urban contexts, exhibiting distinct approaches to addressing food-related issues and sustainability concerns within their unique socio-economic and political contexts.

In the last decade, Preston, the administrative center of Lancashire, England, has been affected by post-industrial decline and increased public austerity. It is within England's 20% most deprived local authority areas (Steer Economic Development, 2019). This has led to a community wealth building strategy proposed by Preston's City Council (PCC), often termed the "Preston Model" (CLES, 2017, 2019). Preston sits in the middle of the Lancashire agricultural hub, engaging in various food production activities, including livestock, dairy farming, field vegetables and crops. Vitoria-Gasteiz is the Basque Country's *de-facto* capital, one of the wealthiest regions in Spain that holds relative economic and political autonomy, where the Basque identity is acknowledged as separate, with its own native language: Euskera – Basque. Vitoria-Gasteiz is ranked as one of the best Spanish cities to live and has obtained the titles of European Green Capital 2012 and Global Green City Award in 2019. It is in the Basque province of Álava-Araba, where the agricultural sector is mainly dedicated to large-scale cereal, beet, vineyards, and potato production. In this context, Vitoria-Gasteiz City Council (VCC) places a stronger emphasis on the development of sustainable food systems in the city, exemplified by the implementation of a municipal food plan in 2017 (Zerbian et al., 2022).

This research used multiple sources of evidence and data collection methods to gain an in-depth understanding about the studied areas and enhance the study's credibility. Data collection methods included semi-structured interviews (26 in Preston and 21 in Vitoria-Gasteiz) and participant observation (4 occasions in Preston and 3 in Vitoria-Gasteiz). Table 1 provides more information on the data collected for each city, which was collected from June 2020 to July 2021.

Interviews were semi-structured to allow for a guided and dynamic investigation of research themes by merging structure with flexibility (Ritchie and Lewis, 2003). Overall, interviews aimed to gather insights into the barriers and facilitators of the different collaborations that AFNs might undertake in each city. For this,

TABLE 1 Data collection.

Type of data	Source	Preston	Vitoria-Gasteiz
Online semi-structured interviews	Representatives of AFNs	20	17
	Local food experts: academics, activists, and policymakers	6	4
Total		26	21
Participant observation	Farm walks	0	1
	Social mobilization and awareness-raising events	0	2
	Collective network meetings	4	0
Total		4	3

interviews were conducted with representatives of AFNs and local food experts, using purposive sampling to identify and select potential interviewees (Atkinson and Flint, 2011; Patton, 2018). Interviews with representatives of AFNs covered the activities of AFNs, including their mission and motivation; contextual influences on their activities; relationships with other AFNs and the strength of these connections; and questions to induce self-reflection and considerations for the future. This provided a general picture of *individual* AFNs' motivations and barriers to collaboration from the perspective of AFNs' representatives. In order to contrast these insights with a more critical account of the collective organization of AFNs in each case, interviews with local food experts were also conducted (see Table 1). Local food experts were people who had extensive knowledge about each city's diverse landscape of AFNs (Patton, 2018). This included people working within the studied cases during a prolonged period, such as academic researchers, activists, and policymakers who had been involved in developing and articulating synergies between AFNs. As such, local food experts were able to provide in-depth insights into the complexity of the AFN landscape in each city, as well as contextual background to current AFNs' interactions, helping explain identified tensions between the analyzed AFNs. Given face-to-face restrictions during data collection due to the Covid-19 pandemic, all interviews were conducted remotely.

Participant observation was undertaken during fieldwork and depending on the availability and recurrence of selected events to supplement the interviews (Laurier, 2010). Opportunities for participant observation were prioritized to be present in situations in which AFNs' interactions would take place (Flick, 2014), such as collective network meetings, events, or farm walks open to the public and with a specific focus on presenting new methods to other organizations or people. For this study, the role of "observer-as-participant" was adopted (Grigsby, 2019). Accordingly, participation was explicitly conducted to achieve the aim of collecting data. Moreover, group members were aware of the observation of activities; observations were overt (Corbetta, 2003). Similar to the case of interviews, participant observation was held remotely in Preston due to public health safety concerns concerning the Covid-19 pandemic. This meant that participation was held mainly in virtual spaces that organizations had set up to continue to carry out collective operations. Given the fewer restrictions during data collection in the Basque Country, conducting in-person participant observation in this case was possible, following social distancing and face mask guidelines.

Four meetings were attended as part of the fieldwork in Preston. One meeting was facilitated by PCC, which gathered organizations to discuss improving food access in the city. The other three were part of the revival of Preston's Food Partnership, a cross-sector group that aimed to discuss Preston's challenges concerning food and propose possible solutions. In Vitoria-Gasteiz, participant observation was undertaken in three events: a farm walk organized by a public institute focusing on innovative technological strategies for agriculture within the region to showcase new organic production methods in which farmers from several AFNs in Vitoria-Gasteiz participated, a social mobilization where various AFNs based in Vitoria-Gasteiz gathered to protest the construction of a macro tomato greenhouse in a nearby town, and an agroecological fair held at the local university where several AFNs presented their work. Data during these events was recorded through detailed field notes, including detailed descriptions, analytic notes, and subjective reflections of the observations (Ritchie

et al., 2014). Field notes expressed the deepening of knowledge of AFNs' interactions in each case, emerging sensibilities, evolving substantive concerns, and potential theoretical insights (Emerson et al., 2011).

All gathered data was analyzed and interpreted using inductive thematic analysis (Braun et al., 2019). Inductive thematic analysis is a data-driven method used to identify, analyze, and report patterns, referred to as themes, identified in collected data without trying to fit it into a pre-existing coding frame (Braun and Clarke, 2006). Transcribed interviews and fieldnotes were analyzed in QSR NVivo data management program following this process. To ensure confidentiality and anonymity, generic descriptors will be used to refer to the AFNs identified in this study and for verbatim quotes in the results section.

The entire data set was initially coded to identify AFNs' individual approaches, and barriers and facilitators for synergies within each case. To search for cross-case themes in the collected data, a system of categories and subcategories – or second cycle codes – was developed to organize initial codes, following Bazeley's (2013) taxonomic approach. Themes were then developed by analyzing relationships between these categories and subcategories using QSR NVivo queries, comparing the coded text under each of them. A memo describing and interpreting each potential theme was developed. This helped refine the themes while allowing for cross-checking and identifying potential repetition and synergies. The results of this study are presented using three cross-case themes identified through this process: divergent conceptualizations of food questions, education and awareness-raising as a limited convergence point, and constrained resources. The discussion then focuses on crucial insights gained by identifying common patterns across these themes in both cities regarding constructing the place-based mutual interdependencies imagined by agroecological urbanism via AFNs' interconnections. As seen in Section 5, reading across the themes and cases led to identifying a common dynamic across the cities: the collective organization of AFNs into two sub-systems with limited interaction.

3 Introducing the context and landscape of AFNs in each case

To avoid a deterministic reading of AFNs and their relationships, this study followed a relational understanding of how they produce alternative practices, emphasizing the role of networks and diverse market, state, and civil society institutions affecting their transformative potential (Misleh, 2022). AFNs' collective potential is thus inseparable from other systems and processes involved in a city's food system. This broadens the understanding of what initiatives are involved in producing alternatives, which becomes a critical question in searching for possibilities for agroecological urbanism. It explicitly emphasises diversity and inclusivity in building collaborative efforts.

This was especially relevant when deciding how to identify AFNs and whether this included initiatives typically on the outskirts of AFN research, particularly those addressing hunger or emergency food concerns. Prior research has shown that these initiatives can play new roles in building alternative practices by collaborating with local farmers to serve low-income communities, promoting food growing skills among their beneficiaries, and establishing programs for gleanings, gardening, and collective farming (Alkon and Mares, 2012;

Vitiello et al., 2015; Brinkley, 2017). Following a relational view of AFNs, these initiatives also compose the landscape of AFNs as a function of their interrelationships with more “typical” AFNs. As this study focused on the collective potential and interactions between AFNs, these initiatives were also treated as part of the diversity of AFNs within the cases when they displayed patterns of inter-organizational collaborations that denoted relocation and sustainability values. A detailed description of the landscape of AFNs in each case is introduced next.

3.1 Preston

Preston, a non-metropolitan district with city status, has a population size of around 150,000 inhabitants (Office for National Statistics, 2022). It is recognized for its innovative economic development strategy, the “Preston Model”, fostering a favorable environment for economic growth. From 2014 to 2017, its unemployment rate was reduced by almost 50% (Manley, 2018). Serving as the administrative center of Lancashire, the city boasts a robust service sector, supported by institutions like the University of Central Lancashire (UCLan) and the Royal Preston Hospital (Lockey and Glover, 2019). However, Preston still falters on several socio-economic indicators. Although with no current robust data on food insecurity, recent reports point to almost 20% of childhood food insecurity within the city (Bhattacharya and Shepherd, 2020). Previous research indicates that the issue of ensuring healthy food access and affordability is particularly present in deprived wards (Caraher et al., 2010). Indeed, the city suffers from entrenched spatial inequalities, particularly concerning higher levels of deprivation in the central and southern parts of the city (Lancashire County Council, 2019).

The challenging socio-economic landscape of Preston has prompted collaborative efforts to address food insecurity (Zerbian et al., 2022). In response to holiday hunger,² PCC facilitated the implementation of Holiday Hunger Markets, with some now running as community supermarkets by various faith-based organizations and community centers to redistribute surplus and donated food throughout the year. These markets are part of a broader network of organizations tackling food insecurity, including food banks,³ community pantries, and soup kitchens. Several of these initiatives, often with limited involvement from food banks, collaborate with community gardens and allotments to boost local food accessibility in deprived areas and provide cooking and growing workshops. Most community gardens are organized under a network of local environmental and food growing projects, and are fundamentally conceived to foster social cohesion and overall wellbeing to support deprived communities.

Contrary to the burgeoning landscape of AFNs focusing on food access and food growing, “typical” AFNs fostering short food supply

chains are marginal. Two AFNs offering local vegetable and fruit box schemes were identified that had previously been active in the city. However, these initiatives no longer existed at the time of the study. Their previous representatives were still interviewed for the research to provide a perspective on the challenges of AFNs in the city. One of the banner active AFNs promoting local food is the Preston Market, an indoor and outdoor municipal market that includes a diversity of local food retailers, which underwent an initial refurbishment between 2017 and 2018 as part of the installment of the “Preston Model”. Besides this space, there is one monthly local farmers’ market in the city run by volunteers and connected to a local church. Although AFNs selling and distributing sustainable food are largely absent, the city has seen the emergence of social enterprises promoting sustainable food systems. One such enterprise, led by university students, specializes in sustainable and healthy cooking workshops. Another is a café and community hub that advocates for local, ethical, and quality food, providing training programs and supporting healthy, local cooking for families while collaborating with local retailers and producers.

Some local producers sell their produce in Preston through outlets like the Preston Market and local retailers, and supply the mentioned social enterprise. Additionally, while not selling directly in the city, other local, sustainable producers within the region had been involved with Preston’s AFN landscape through informal connections. Those included in the study had been part of discussions to construct joint projects with one of the social enterprises, such as developing a network of food hubs that would allow farmers to sell produce directly to people in Preston.

3.2 Vitoria-Gasteiz

Vitoria-Gasteiz is ranked among the 50 wealthiest cities and ten cities with lowest unemployment in Spain (INE, 2020). Despite the relatively prosperous state of Vitoria-Gasteiz, 7.7% of the population was living in real poverty (material deprivation) in 2020 (Gobierno Vasco, 2021a). This is higher than the average figures in the Basque Country (5.6%), but lower than Spanish national figures (21%) (EAPN, 2020). This could be related to the city’s history of well-planned growth (Beatly, 2012), backed by strong environmental, health, and social urban planning strategies, and the Basque Country’s robust social welfare system that targets socio-economic exclusion (Gobierno Vasco, 2021b). The city has also had a relatively steady growth in population over the years, reaching approximately 250,000 people. Notably, migration has increasingly gained weight in the city’s demographics, with the non-Spanish population accounting for 10.5% (Vitoria-Gasteiz, 2020).

Similar to the rest of the Basque Country, Vitoria-Gasteiz differentiates itself from the rest of Spain in terms of culture. For example, the Basque language, Euskera, is one of the oldest languages in Europe, and to date, there is no evidence of common linguistic origins with other languages (Urla, 2012). The Basques, due to their distinct ethnic identity and historical experiences, maintain a strong sense of nationalism (Ruiz, 2004). In 1959, ETA (Basque Homeland and Freedom) was founded in opposition to the Franco dictatorship, leading to a violent nationalist and pro-Basque-independence campaign (Hamilton, 2007). Although

² Holiday hunger in England refers to the experience of food insecurity by some children, particularly from low-income families, that do not receive school meals during holiday periods.

³ Food banks in the UK are not-for-profit and charitable initiatives that distributes emergency food parcels to people in need.

ETA dissolved in 2018 (Zernova, 2019), attempts to maintain a Basque identity continue, albeit in non-violent forms, such as actively promoting the Basque language and culture (Urla, 2012; Naylor, 2019).

Protecting the Basque identity and economic development is intimately tied to food. Several AFNs actively promote artisanal, local, and traditional small-scale food consumption and production (Zerbian et al., 2022); many with an explicit agroecological focus. The city hosts three weekly municipal markets where local farmers sell horticultural products and artisanal foods and a regular indoor market with a section dedicated to organic produce. One of the biggest AFNs that foster short food supply chains is an online food retailer that delivers weekly organic boxes around the city, aiming to source from producers as close to the city as possible.

Compared to Preston, Vitoria-Gasteiz is situated within a municipality, also named Vitoria-Gasteiz, which encompasses 40% farmland (UAGA, 2011). This has translated into many AFNs in Vitoria-Gasteiz having strong urban–rural ties, especially those from civil society. Two city-based organic farmers' associations⁴ provide representation and technical support for organic farmers in the province, with one managing a consumer group. Other associations include one promoting regional gastronomy in collaboration with local producers, an organic consumption group running a community organic store for its members, and a Fairtrade and responsible consumption network. The city is also the main headquarters of the Basque Regional Seed Network, a civil society organization dedicated to preserving native seeds. At the same time, the City Council has implemented a municipal project to provide access to peri-urban land to new local organic producers. Most producers in this project sell locally either through box schemes or in municipal markets, and prioritize agroecological food production practices.

Other civil society organizations in the city actively promote food growing by managing municipal organic gardens (charities and community development associations) and self-managed community gardens (neighborhood associations). Moreover, a solidarity urban agriculture initiative – the Agricultural Program for Employability – provides practical training for agricultural employment, enhancing employability skills for individuals at risk of social exclusion, such as migrant communities. Despite low levels of overall food insecurity (3.7%) (Gobierno Vasco, 2021a), the city maintains a robust emergency food provision system led by VCC and Banco de Alimentos of Álava-Araba, a regionwide organization facilitating food surplus redistribution by connecting food companies and charities or associations. Local farmers actively contribute to the Banco de Alimentos of Álava-Araba.

4 Results

4.1 Divergent conceptualizations of food questions

4.1.1 Preston

The prevalent sentiment among AFNs in Preston underscores the urgency of addressing food (in) security, commonly denoted by interviewees as “food poverty”. This concern takes center stage in the agendas of numerous AFNs in Preston, exemplified by initiatives like Holiday Hunger Markets, community pantries, and soup kitchens, hereafter referred to food access-oriented AFNs. Interviewees from these AFNs perceived food poverty as a nuanced issue beyond mere financial constraints on food access, often intertwining food access initiatives with broader socio-economic inclusion efforts. While food access-oriented AFNs frequently collaborate with AFNs focusing on local food growing, such as community gardens and allotments, the promotion of local and sustainable food was frequently regarded during interviews as peripheral to their core activities:

“We don't operate in quite the same way I know others operate with the having access to local food and sourcing only... We don't operate like that because it's very difficult, because the food that comes to us, the sources, we don't have that. It's not a luxury, but we don't have that [...] fundamentally really, it's about reducing food waste, reducing food poverty, getting people involved, which can then help them do that cycle of self-worth, self-confidence in training and bringing people round.” (Community pantry – Preston)

Significantly, food access-oriented AFNs mainly regarded their role in constructing sustainable food systems by reducing food waste. On the other hand, a smaller proportion of interviewees from AFNs, particularly local farmers and retailers, emphasized the need to change current food supply chains, highlighting the role of a “cheap” food environment constructed by the conventional food system:

“The way it would work is if food was more expensive. I realize that that would have implications, but a lot of it is down to society's values. In my opinion. Society... Doesn't really value food that much or a lot of it. OK, when I talk about society... sweeping statements, but a lot of people don't value the food that they eat. They really don't care. As long as it's convenient, as long as it's affordable and cheap.” (Local producer – Preston)

This perspective strongly highlights the need for value changes in consumer attitudes to address the detrimental effects of current food supply chains. Moreover, many representatives of these AFNs advocated for food relocalization and short food supply chains as a crucial strategy to increase value for local producers and thus address their marginalization in current food systems. Within this context, food access-oriented AFNs were perceived as perpetuating issues in current food systems and fostering dependency instead of empowerment. In these instances, food access-oriented AFNs were usually discussed in the context of broader food banking models and, thus, perceived as part of that system rather than relevant actors in changing food systems.

⁴ Association in Spain refers to a legal entity formed by a group of individuals or organizations who come together with a common purpose, whether it is for social, cultural, recreational, or any other lawful objectives. Associations are usually non-profit and, thus, a crucial part of various aspects of civil society.

However, food-access oriented AFNs Preston proved very diverse, with many distinguishing themselves from traditional food banks by aiming for an inclusive and empowering approach. For example, Holiday Hunger Markets operate on a pay-as-you-feel basis, and community pantries function as community supermarkets with a nominal entry fee, enabling customers to choose their items—services accessible to all community members. Most of these activities are used by these AFNs as an avenue to promote participation in additional services like mental health support or housing advice and, thus, address socio-economic exclusion. Additionally, many of these AFNs offer beneficiaries opportunities, such as participating in food growing projects and cooking workshops, reflecting a multifaceted approach to addressing food insecurity.

This dynamic results in a division between AFNs, with interactions mainly revolving around the redistribution and donation of food from local farms and retailers to food access-oriented AFNs. This division is also engrained even within the same organization. For example, the local church that runs the monthly local farmers' market also holds a Holiday Hunger Market. However, when discussing the synergies between these two initiatives, the representative of the local farmers' market mentioned that they were separate projects with separate objectives and, thus, with no interactions. The situation is further complicated by the alignment of AFNs with common visions, particularly in their perception of food relocalization and sustainable food as a priority. This has led to the formation of two distinct, albeit informal, alliances at the time of data collection. One focused on addressing food poverty, including community pantries, Holiday Hunger Markets, food banks, and the local environmental and growing projects network. The other was more strongly dedicated to promoting local and sustainable food. It was led by a social enterprise that worked closely with local food producers and retailers to develop joint projects for sustainable food systems in the future. Although the social enterprise of this latter alliance had been trying to combine the agenda of ensuring equitable food access and sustainable food systems through food relocalization, such as the development of a solidarity scheme providing people with vouchers to buy in local shops, the role of predominantly food access-oriented AFNs in this context was seen as marginal.

4.1.2 Vitoria-Gasteiz

In contrast to the situation in Preston, the landscape of Vitoria-Gasteiz's AFNs exhibits a stronger emphasis on sustainable, locally sourced food, prioritizing a transformative shift toward traditional production systems. Within this landscape of AFNs, a subset of AFNs with a pronounced focus on agroecological transitions, henceforth referred to as agroecology-oriented AFNs, have coalesced into an informal "sustainable food movement", as articulated by interviewees. This informal movement actively engages in joint projects and more politically oriented events, such as collective demonstrations advocating for agroecology-based food systems and organic farming. Notably, they advocate for family farms, known as "baserris" in the Basque language, and local, traditional foods as crucial components of agroecology-oriented approaches, often perceived as elevating quality standards and minimizing reliance on industrial methods. Interviewees frequently linked this commitment to a robust sense of pride in the Basque identity, where local food serves as a cornerstone of the culture:

"Here in the Basque Country, we are so from the Earth, we are so proud of being Basque that when we add the Basque flag [ikurriña] to any product [...] the best potatoes are ours..." (Local food expert 3 – Vitoria-Gasteiz).

Compared to Preston, organizations in Vitoria-Gasteiz concentrating on food access, such as community pantries or soup kitchens, demonstrated limited engagement with urban food growing and local food projects and even less so with those emphasizing sustainable food practices. As a result, their role in shaping the AFN landscape was relatively restricted. Nonetheless, notable distinctions were still identified among AFNs in Vitoria-Gasteiz that engaged in food relocalization. Certain AFNs prioritize socio-economic inclusion and community development for urban residents more prominently rather than advocating for changes in agricultural systems to foster environmental sustainability, a hallmark of their agroecology-oriented counterparts.

AFNs with an identified pronounced focus on socio-economic inclusion were typically overseen by charities or community organizations with broader community development objectives that run urban agriculture initiatives and community gardens while following certain organic food production methods. When discussing similarities and possibilities of collaboration with agroecology-oriented AFNs, interviewees from AFNs focusing on socio-economic inclusion perceived that their overall activities were not interrelated with agroecology and organic food. For them, food growing served as a means to enhance employability and community integration, fostering practical, social, and soft skills applicable to future job opportunities and creating inclusive spaces for social cohesion. As such, they highlighted stark differences with agroecology-oriented AFNs concerning the end-purpose for which food is grown – for economic/environmental or social purposes:

"It has nothing to do to produce to sell than to produce as is our case. Our goal is not the sale [...] We can be very in favor of that [...] of ecological exchanges [...] But it has nothing to do with it." (Community garden – Vitoria-Gasteiz)

"And we continue to maintain contact, being two collectives that intersect – they in terms of nutrition and moving toward a more ecological perspective, and we more focused on social integration. So, we meet on occasion, but our objectives are two different goals. They would hardly embrace our motto, and our slogan is that tomatoes can rot, but people cannot." (Agricultural Program for Employability – Vitoria-Gasteiz)

The divergent overarching goals of promoting agroecology-based food systems or addressing socio-economic inclusion are also present in AFNs with seemingly similar structures, such as organic community gardens. While community gardens overseen by charities or community development associations do not strongly advocate for agroecology or organic production as a means for social change—viewing it more as a practical aspect of their work—self-organized community gardens, managed by neighborhood associations, actively endorse agroecology as a means of increasing the right to food and grow whilst simultaneously addressing environmental sustainability issues.

This dichotomy significantly limited interactions between agroecology-oriented AFNs and those emphasizing socio-economic inclusion, resulting in primarily occasional and informal exchanges. Interactions were not actively sought but emerged organically due to shared activities, such as growing organic food, leading to invitations to similar events or shared spaces. For example, the Agricultural Program for Employability and producers associated with one of the organic farmers' associations sold produce in the same municipal market, but their overall projects did not interact.

4.2 Education and awareness-raising as a limited convergence point

4.2.1 Preston

Preston's socio-economic disparities drive many efforts and available funding toward initiatives countering derived negative impacts, including social isolation and material deprivation. This is translated into a shared priority across AFNs – despite the conceptual differences discussed before – to develop people's capabilities by providing people with resources, be it skills or information, as a form of empowerment and community development:

“So, once they have those skills and knowledge then that's something that can be built upon, and the more sort of sustainable Preston will become. They [AFNs] are upskilling people. They might be unemployed people, they might not have achieved very, highly academically, uhm or educationally, and so they can now learn skills that are transferable, which they can then use, you know, in... Jobs in other organizations or volunteering elsewhere, or even setting up their own initiatives as well, which complement the work as well.” (Local food expert 3 – Preston)

This priority is translated into many AFNs utilizing food as a vehicle for social change. For instance, one of the social enterprises working on sustainable food systems aims to improve employability skills through food-related certifications such as food hygiene. At the same time, several AFNs focus on providing cooking workshops and food-growing opportunities for citizens to build transferable skills and change food consumption habits beyond processed foods bought at supermarkets. Both of the identified social enterprises working on sustainable food systems also used these opportunities to raise awareness about broader environmental sustainability issues, such as reducing food waste or the environmental impacts of food consumption.

The emphasis on food education and cultivating individuals' transferable skills through food constitutes a crucial element in fostering collaborations across AFNs. For instance, the “grow-to-cook” initiative, facilitated by the network of local environmental and food growing projects in previous years, developed strategic partnerships with community centers that manage community gardens and primary schools. Its operational framework encompassed the delivery of food-growing sessions by the network of environmental and food growing projects, subsequently integrated into cooking workshops facilitated, at times, by another AFN, thus optimizing the utilization of available resources. As Preston includes various culturally diverse communities, interviewees highlighted the need to be culturally sensitive in these

projects, such as encouraging the use of recipes related to participants' cultural backgrounds.

However, the success of these collaborative initiatives often hinged on available resources, such as time and volunteer availability, leading to inconsistency; an issue further discussed in the following theme. In addition, questions during interviews regarding long-term collaborations for broader citywide impact revealed a relative unawareness of each other's initiatives, particularly between food access-oriented AFNs and those promoting local and sustainable food. Moreover, when considered, devising collaborations were usually discussed in operational and practical terms:

“Uhm... I think some might be growing a little bit of food, but I don't think that's really what they do anymore. There aren't really very many food projects, or I'm not really aware of any other food projects in Preston. But there are organizations that have a bit of a food agenda. I had a meeting this morning, so we were talking about how we could join forces and I've said look, you know we got online courses that you could use. It is on our YouTube; you can use it. Let's try to look at things and work together, so that's great we have started that conversation now...” (Social enterprise – Preston)

This perspective highlights a disconnect among AFNs that could engage in complementary activities due to the unfamiliarity with each other's efforts. For example, the social enterprise of the above quotation provides cooking workshops. Yet, they were rarely involved in the previous example of “cook-to-grow” sessions led by the network of environmental and food growing projects.

4.2.2 Vitoria-Gasteiz

A common concern among interviewees in Vitoria-Gasteiz was the decline of Vitoria-Gasteiz's food culture over the years. Nevertheless, respondents still recognized Vitoria-Gasteiz as a city with a relatively mature environmental consciousness. Environmental awareness in the city is a starting point for the work of many AFNs, harnessing the preoccupation of civil society around sustainability to tap into other issues related to promoting local and organic food consumption:

“Let's talk about responsible consumption for yourself that is healthy for you but seeks a balance with your environmental and social surroundings. I mean, if you buy from local producers, you are ensuring that those local producers can live in their town, maintain the landscape, and there can be good people engaging in economic activities in the villages.” (Organic farmers' association – Vitoria-Gasteiz)

Awareness campaigns promoting consumer change are thus deeply ingrained in AFNs' activities. For instance, AFNs involved in short food supply chains, such as the online food retailer delivering weekly organic boxes or the organic store run by the organic consumption association, regularly disseminate information to their members through websites and communication channels, emphasizing the significance of relocalizing the city's food system.

While some of these awareness-building efforts are inherent to AFNs' daily operations, most are also explicitly focused on targeted programs for city residents. These efforts encompass local food tastings,

farm visits, occasional organic and local markets, talks on food or seed sovereignty and agroecology open to the public, and cooking workshops. Funding for these activities often comes from the VCC or the Environmental Studies Centre (CEA), a public autonomous municipal body associated with the City Council. This financial support also enables AFNs, focusing on practical project implementation, such as self-organized community gardens, to incorporate cultural elements into their work, including courses, talks, summer cinema, or theater events addressing topics such as the relevance of organic agriculture and food sovereignty.

This sentiment is a foundational element for numerous collaborative activities to address the imperative to transform consumption patterns through organized talks and conferences involving two or more AFNs, many also publicly funded. A notable instance is the annual Food Civic Encounter (Encuentro Cívico Alimentario) or a university-backed agroecological fair featuring diverse sessions, workshops, and talks by AFNs. The organizing committee usually comprises multiple AFNs, emphasizing a collective effort. The specific emphasis on consumption in these events is intricately tied to its perceived potential for transformative change and political agency:

“Let’s understand the right to food or any type of responsible consumption in which we have the capacity for decision-making, or we should have it, in which.. not only political, but also personal, which is also political, right? Well, then, understanding the work toward transformative consumption under the umbrella of conscious and transformative consumption, well, that’s how we work with them, you know.” (Organic consumption association – Vitoria-Gasteiz)

Nevertheless, awareness-raising for consumer change proved to be a conflicting middle-point between agroecology-oriented AFNs and AFNs with an identified pronounced focus on socio-economic inclusion. AFNs with a stronger emphasis on socio-economic inclusion noted that this focus was somewhat restricted to middle-class, affluent citizens, as many collective events emphasized the consumption of organic or local “gourmet” food:

“Here, when it comes to food, someone should ask why there is a boom in the fruit trade controlled by two migrant populations, primarily the Pakistani and Moroccan communities [...] people are buying what they can afford for their meals, making choices within a certain range [...] Vitoria is a city of 300,000 inhabitants, with many belonging to the middle-lower middle class.” (Agricultural Program for Employability – Vitoria-Gasteiz).

From the perspective of agroecology-oriented AFNs, products under these schemes are not necessarily expensive if bought in “alternative” spaces and based on seasonality. However, delving deeper into who could access these schemes, interviewees from agroecology-oriented AFNs acknowledged that inequalities in food access were almost absent from discussions and, at times, usually referred to a problem of developing countries rather than local realities. Indeed, more disadvantaged communities, such as migrants, including Latin Americans, Muslims, Africans, were not actively present in the agroecological “scene” of Vitoria-Gasteiz observed during fieldwork, such as in the university-backed agroecological fair.

4.3 Constrained resources

4.3.1 Preston

Most AFNs in Preston are operated by not-for-profit organizations, primarily relying on volunteers and external public and private funding. This organizational structure is not exclusive to food access-oriented AFNs. Community gardens are similarly managed by community charities, local volunteers, or as part of community projects. Both social enterprises working on sustainable food mentioned operating under strict resource limitations, as their profit-generating activities did not suffice to fund their social objectives. Consequently, they actively searched for external funding and volunteers to support and execute specific projects. Although established as social enterprises, the two identified inactive AFNs offering local vegetable and fruit box schemes also mentioned being largely dependent on voluntary work – one of the predominant reasons for their closure.

Interviewees highlighted that the limitations imposed by finite resources, encompassing workforce, time, and funding, stemming from the predominantly voluntary and charity-based landscape, pose significant challenges to their ability to engage in collaborative efforts with others:

“I have a full-time job in the church. I have so much time that I can give, and I think how much time should I give to this? I have so many other roles and expectations upon me. So, that is true for me and for everybody else as a volunteer.” (Holiday Hunger Market – Preston)

The concern of balancing work and volunteer roles reflects the disadvantaged position of these types of initiatives in building inter-organizational connections in a broader context of the UK’s broader political-economic austerity and welfare reform, where there has been an increased reliance on voluntary sector groups to meet local needs. However, funding opportunities, such as government grants and donations, are limited. This leads to a competitive and challenging environment for AFNs, in which they must focus more on ensuring individual financial viability:

“So, they do have their own aims and they do have their own targets that they have to meet for their funding priorities. And like I said, they know each other, so there isn’t really a barrier there as far as not knowing or not being aware before each other is doing [...] the overall goal, which is kind of sustainability and food sovereignty kind of comes secondary to individual goals of each organization, which is to try and get this many participants involved or to try and make this much money so that the business can keep going.” (Local food expert 3)

This situation also partially elucidates why collaborations between AFNs from the two identified informal alliances – one emphasizing local and sustainable food and the other addressing food access – often overlooked cooperative ventures. As some AFNs within the alliances share similar activities, such as delivering cooking sessions, they also cater to similar funding and opportunities to harness more resources.

Scarce resources also hindered AFNs concentrating on short food supply chains from expanding their engagement with the majority of AFNs in Preston beyond food donations. Local food retailers and farms highlighted the challenge of surviving in a competitive

landscape dominated by supermarkets and industrialized farms, imposing limitations on collaborative endeavors. For example, one local producer explained why developing the network of food hubs in collaboration with one of social enterprises was an ongoing challenge:

“Yeah, it's supply and demand, isn't it? We've got a load of pumpkins at the moment. Could they use them? Can they give us the price for them? To buy them, to make it worth our while transporting them to or not. Probably not. And specially if they are getting food donated to them, you know.” (Local producer – Preston)

Two situations were identified that could break this cycle of limited resources, leading to prioritizing individual needs and neglecting collaborations: funding bids stressing the need for inter-organizational collaboration or when collaborations offered an opportunity to expand reach and enhance effectiveness. Nevertheless, within intermittent funding primarily focused on short projects, most interactions remained one-time occurrences. Routine connections focused on practical aspects, such as sharing resources like recipes, videos, or surplus food. As such, interviewees highlighted the need for an individual or organization, usually PCC, to commit time to fostering long-term alliances with more strategic objectives.

4.3.2 Vitoria-Gasteiz

The closer rural orientation of several AFNs, particularly agroecology-oriented AFNs, translated into interviewees recurrently mentioning the negative effects of the organization of the regional agricultural system on small-scale farmers. In particular, the dominance of the corporate food system and the regional (Basque) food industry was mentioned as a crucial concern due to its strong influence on farm policies. In this context, interviewees from agroecology-oriented AFNs indicated the presence of informal alliances that span across political and technical realms, including regional and local governments, the regional farmers' union, and conventional farmers' cooperatives:

“[...] I believe that we must allocate more resources to the agricultural sector and promote the local product and whatever you want. But it is a machinery that is in motion and when the machinery, both the institutional machinery and that of all the sectoral organizations, [...] do not see this as meeting their interests, it is difficult to put them later in a common interest...” (Local producer – Vitoria-Gasteiz)

These informal alliances showcase the weight of the agri-food industry in public policies, leading to increased embeddedness of economic and efficiency-driven narratives among resource holders. As these informal alliances prioritize conventional food supply chains and production systems, small agricultural holdings must adapt to their rules as a condition to accessing public and private funding and resources, limiting potential alternatives for adopting organic production methods:

“After many years of looking at it, I believe that in my project of making organic cheese that had to close the final decision was

mine, but with all the obstacles we encountered along the way, I have the feeling that they were even political, that someone was pulling strings to prevent anyone from leaving the system and showing that it's possible [...] it's the system itself, politically speaking too, there are political interests that dictate that you have to give your raw materials, your grain, to the cooperative because that cooperative has to be maintained” (Local food expert 3 – Vitoria-Gasteiz)

For representatives of AFNs with a focus on socio-economic inclusion, such as community gardens run by charities or community development associations, the main challenges revolved around the static and bureaucratic structure of the City Council when trying to introduce alternative initiatives to address Vitoria-Gasteiz' societal concerns:

“The difficulties are institutional, what is normalized, I mean, structured under rules. The requirements when you must function not as life asks for it, but as the system asks for it.” (Community garden – Vitoria-Gasteiz)

Adapting to the structural rules of public administrations is then a concern that runs across AFNs. This is related to the fact that many AFNs in the city directly rely on them to function, for example, via an external contract to provide technical services for farmers in the case of farmers' associations or support socio-economic inclusion by managing municipal organic gardens in the case of several charities or community development associations. While this created a more stable environment for AFNs than those in Preston regarding resources, interviewees mentioned a potential limitation in their ability to counteract policies because it could potentially lead to decreased funding.

While differing from the drivers influencing AFNs in Preston, the current disparate landscape in Vitoria-Gasteiz also translated to a recurrent mention by interviewees of challenges regarding resource limitations, especially concerning staffing and time allocation. Many AFNs operate with part-time staff members who primarily focus on ensuring the organization meets its objectives of funded projects and public contracts. Consequently, interviewees mentioned that collaborative activities often necessitate additional effort and predominantly rely on voluntary commitments when no funding is available for joint projects. Interviewees also mentioned that because many AFNs have similar focuses concerning supporting local farmers and enhancing local food production, there is a reluctance to collaborate due to them competing for the same public funding opportunities, such as the case of the Agricultural Program for Employability, the two city-based organic farmers' associations and the association promoting regional gastronomy in collaboration with local producers. These dynamics resulted in AFNs aligning more closely with those sharing similar values, especially whether agroecological transitions was used as a guiding framework for actions. This contributed to the distinction between agroecology-oriented AFNs that regularly interact and those emphasizing socio-economic inclusion with limited engagement in these shared spaces.

5 Addressing the divergences of AFNs for building mutual interdependencies

The examination of the cases points to three interlinked barriers to building an interconnected network of AFNs underpinned by the mutual interdependencies imagined by agroecological urbanism: divergent conceptualizations of food questions, education and awareness-raising as a limited convergence point, and constrained resources. Despite contextual differences, a dynamic arising from these barriers in both cases is the organization of AFNs into two sub-systems with limited interaction. The first sub-system consists of *access-oriented* AFNs, including food access-oriented AFNs in Preston and those focusing on socio-economic inclusion in Vitoria-Gasteiz. The second sub-system comprises *supply-oriented* AFNs, including agroecology-oriented AFNs in Vitoria-Gasteiz and those promoting sustainable and local food in Preston. The implications of this separation are discussed under three main points: *the practical divorce among urban social justice and environmental and agrarian goals; the role of restrictive narratives; and the need for inclusive socio-ecological narratives.*

5.1 The practical divorce among urban social justice and environmental and agrarian goals

The results of this study point at two underlying dynamics that influence the collective organization of AFNs into the supply-oriented and access-oriented blocks identified: (i) the expected end-result of using food as a means for social change; and (ii) the subject of justice through which AFNs frame their activities (see Table 2). The division of the empirical examples of AFNs found in our cases into these sub-systems offers a binary approach that could oversimplify the characteristics of AFNs. However, such a binary approach proved useful in representing the actual dynamics between AFNs we found and helped analyze AFNs' collective organization through agroecological urbanism.

Regarding the expected end-result of using food as a means for social change, differences in social and environmental goals provide the first backbone of the identified sub-systems. In both cases, most supply-oriented AFNs usually referred to food education as a vector to change consumption habits to develop sustainable food supply chains and achieve environmental sustainability. On the other hand,

access-oriented AFNs referred to food-related activities such as food growing and education as a means to address underlying causes of food insecurity and socio-economic exclusion by increasing access to skills, capabilities, and spaces for community development and empowerment.

This separation of the purpose of food between access-oriented and supply-oriented AFNs reflects how a systemic and multidimensional conceptualization of food challenges is predominantly lacking in practice within AFNs. Notably, in both instances, access-oriented AFNs perceived food security and socio-economic inclusion as distinct objectives from environmental sustainability. At the same time, supply-oriented AFNs saw food security and socio-economic inclusion aims as distant. In Vitoria-Gasteiz, this translated into the formation of an informal "sustainable food movement" composed of agroecology-oriented AFNs which recurrently develop joint projects for awareness-raising events, emphasizing the need to support organic or local food producers in the context of agroecology-based food systems. However, integrating this focus with those AFNs focusing on socio-economic inclusion, such as the Agricultural Program for Employability or community gardens run by charities and community development associations, proved difficult due to a perception of having separate purposes. Similarly, in Preston, several AFNs promoting sustainable and local food had limited interactions with food access-oriented AFNs, such as community pantries, as they were seen as not fitting within the broader development of sustainable food systems. This was the case even though AFNs engaged in similar activities in some cases, such as delivering cooking sessions for enhanced community empowerment or even when AFNs were hosted at the same organization.

Such a practical divorce between social and environmental sustainability aims represents a significant contradiction regarding the term's original meaning and its further development for constructing sustainable food systems envisioned by agroecological urbanism in practice (Lang and Barling, 2012). It signals that a framework for advancing sustainable food security – ensuring physical, social, and economic access to nutritious and culturally appropriate food considering the economic, social, and environmental aspects of food systems (HLPE, 2017) – is lacking amongst AFNs. This issue has been a significant point of discussion in the literature on AFNs, whereby AFNs linked with environmental sustainability aims are argued to fall short in addressing social justice (Mares and Alkon, 2011). Nevertheless, the results highlight that social justice concerns can be present in AFNs with stronger environmental goals, albeit oriented

TABLE 2 Access-oriented vs. supply-oriented AFN sub-systems.

Sub-system	Expected end-result of using food as a means for social change	Subject of justice	Example AFNs found in the cases
Access-oriented	Socio-economic inclusion	Urban citizens	Community gardens run by charities and community development associations – Preston and Vitoria-Gasteiz Food access-oriented AFNs, such as Holiday Hunger Markets and community pantries – Preston
	Food security		
Supply-oriented	Environmental sustainability	Rural and peri-urban farmers	Agroecology-oriented AFNs, such as organic consumption groups and organic farmers' association – Vitoria-Gasteiz AFNs promoting local and sustainable food, including farmers' markets, local retailers and farmers – Preston
	Sustainable food supply chains		

toward rural development and changing agricultural systems. In both cities, supply-oriented AFNs commonly discuss social justice in the context of mitigating the marginalization of small-scale farmers in peri-urban and rural areas due to entrenched conventional food system dynamics. For instance, agroecology-oriented AFNs in Vitoria-Gasteiz underscore the active involvement of small-scale farmers in collaborative projects, emphasizing fair price negotiations and transparency to foster a more equitable and sustainable agricultural landscape. Similarly, in Preston, AFNs promoting sustainable and local food perceived short food supply chains as empowering small-scale farmers, providing increased value and enhancing their visibility as vital actors in food systems.

Consequently, the dichotomy within AFNs found in both cities also hinges on the central question of *for whom* justice is sought. Thus, the subject of justice – urban citizens or rural and peri-urban farmers – serves as the second crux of the separation of AFNs found in this study. In Vitoria-Gasteiz and Preston, most supply-oriented AFNs, even if based in the city and catering mainly to urban consumers, such as farmers' markets or organic consumer groups, tended to prioritize addressing rural challenges. On the other hand, access-oriented AFNs primarily focused on urban social justice by prioritizing food security or socio-economic inclusion in cities without reflecting on how this related to agrarian questions, imagining urban issues as separate from agricultural systems and rural development.

5.2 The role of restrictive narratives

The separation between rural-oriented and urban-oriented efforts for food systems change has been discussed theoretically in the context of agroecological urbanism (González De Molina and Lopez-García, 2021). Significantly, agroecological urbanism calls for aligning these efforts under the banner of agroecology and food sovereignty. This mirrors previous calls to align AFNs at the conceptual level under a common goal or “master frame” with a unifying message (Lang and Barling, 2012; Bhattacharya and Shepherd, 2020). However, a closer look at the practical division between access-oriented and supply-oriented AFNs found in this study calls for an explicit consideration of how uncritically using certain narratives and discourses might inherently lead to divisions amongst AFNs, particularly regarding how agroecology, sustainability, or local food are framed in practice.

In Vitoria-Gasteiz, supply-oriented AFNs' framing of urban citizens' role and the right to food within food systems change reveals a key dynamic shaping AFNs' collective organization. Agroecology-oriented AFNs emphasized achieving the right to food through political consumption. In this view, urban citizens are imagined in consumer terms, which, through adopting new values, can support agroecological transitions and, thus, the financial viability of small-scale farmers. This predominantly economic discourse regarding urban citizens has led to access-oriented AFNs in Vitoria-Gasteiz perceiving agroecology as misaligned with broader social goals due to affordability issues and its primary focus on changing food supply chains. This raises the question of whether positioning agroecology as the common goal that drives coalitions of AFNs in cities is the most effective approach, as discourses attached to it by AFNs in practice may not serve as a point to discuss mutual interdependencies of

diverse issues of injustice. As highlighted by Tornaghi and Dehaene (Tornaghi and Dehaene, 2020), this narrowly conceives the city as a mere consumption hub, overlooking urbanization processes that actively create urban inequalities. This consideration is crucial for the ongoing development of agroecological urbanism, as it implies that, despite the intended pursuit of social justice for all in agroecological transitions (Levidow et al., 2014; Anderson et al., 2019), restrictive narratives based on the economic framing of urban citizens may inadvertently exclude these issues.

In Preston, although not to the same degree as in Vitoria-Gasteiz, supply-oriented AFN also discussed urban citizens under a restrictive economic narrative. Significantly, they emphasized changing the culture of “cheap food” consumption as a crucial priority, often referring to the lack of society's awareness of the “true cost” of food. However, this view undermines the fact that the predominance of this consumption pattern is also a function of the vast socio-economic inequalities permeating the city, limiting many urban citizens' participation in fostering sustainable food systems. Similar to Vitoria-Gasteiz, access-oriented AFNs in Preston saw themselves as not having a role in sustainable and local food spaces due to the perceived misalignment of this approach with urban socio-economic inequalities. In these cases, this misalignment was often related to the perception of higher prices of organic and local food, which was seen as contradictory with the priority to alleviate food insecurity. This concurs with previous studies that have identified socio-economic barriers to the participation of low-income communities in sustainable or local food consumption (Hodgins and Fraser, 2018).

A crucial point that arises for agroecological urbanism is that such a situation risks alienating AFNs already contributing to agroecological transitions and sustainable food systems without necessarily adopting this language or presenting it as a focal point for their activities. This phenomenon has been termed “quiet food sovereignty” in the context of food sovereignty (Visser et al., 2015) or “latent” potential for food systems change (Kneafsey et al., 2017). Many access-oriented AFNs run organic and local urban agriculture and food growing projects in Vitoria-Gasteiz and Preston. Despite not explicitly embracing broader political goals for restructuring food systems, these AFNs effectively address multiple gaps present in supply-oriented AFNs, particularly emphasizing aspects of urban social justice. The exclusion of these AFNs hinders opportunities to develop inclusive narratives surrounding local and sustainable food and agroecology that recognize social group differences as a function of the multiple intersecting injustices permeating food systems (Vandermaelen et al., 2022). Significantly, this impedes supply-oriented AFNs from expanding and “urbanizing” their discourses on food systems change while impeding access-oriented AFNs from broadening their framing of food systems as also integrating socio-economic inequalities and community development issues and not merely food supply chains.

5.3 The need for inclusive socio-ecological narratives and more resources

Examining the challenges for constructing place-based mutual interdependencies amongst AFNs, such as those advocated by

agroecological urbanism, raises an essential question regarding what narratives are needed to support this process. The comparative analysis of Preston and Vitoria-Gasteiz highlights a need to develop inclusive socio-ecological narratives that simultaneously recognize environmental sustainability and social goals that can also bridge the rural–urban divide in AFNs' focuses. Embracing a more assertive agroecological urbanism approach could help drive AFNs toward this process as it emphasizes the construction of collective knowledge and mutual learning, highlighting a collective responsibility for changing food systems (Gómez-Benito and Lozano, 2014; Tornaghi and Dehaene, 2020). This is viewed as creating a collective consciousness based on the multiple, intersecting injustices of food systems, which serve as a meeting point to discuss food system challenges. Applying such an approach within AFNs would mean recognizing their responsibilities and obligations as part of a collective pathway of food systems change, including the consideration of the rights of others beyond those affected by their actions. It would also require positioning AFNs' individual roles concerning other AFNs, addressing underlying food system issues according to their circumstances, and fostering critical assessments of their individual and collective actions. Given the challenges discussed here, an agroecological urbanism approach would need to acknowledge how AFNs frame their objectives and activities and whether agroecology serves as a meeting or breaking point in building AFNs' coalitions.

Nevertheless, for AFNs to engage in such a process would mean addressing the prevailing resource constraints that currently shape the organization of AFNs, which remains a crucial concern in the literature (Levkoe, 2015). In both Preston and Vitoria-Gasteiz, constrained resources and limited capacity were identified as barriers to creating associations between AFNs. Significantly, the comparison between Preston and Vitoria-Gasteiz showcases that having a voluntary-led approach and reliance on project-based funding in AFNs increases a feeling of competition rather than cooperation, further accentuating the division of AFNs. In agreement with previous literature, the cases illustrate that these dynamics are associated with the difficulties of AFNs in working within the constraints of conventional food system logics and market-driven priorities across different governance levels (Guthman, 2008; Alkon and Mares, 2012). In other words, as AFNs function within a neoliberal context, there might be limited capacities to work out infrastructures to build integrated strategies. AFNs' collective organization is subject to socio-institutional environments that favor restructuring food systems' power dynamics and governance.

In this regard, there is evidence in Vitoria-Gasteiz and Preston of the potential role of public grants in helping address this barrier by fostering inter-organizational collaboration through specific projects, highlighting public authorities as crucial actors for fostering agroecological urbanism in the context of AFNs. However, the findings showcase that available funding usually promotes the proliferation of short-term collaborative projects, which often tend to prioritize organizational benefits, rendering their impacts, at a minimum, contradictory and limited (Marsden et al., 2018). In this context, a considerable portion of the collaborative strategic work in both Vitoria-Gasteiz and Preston, which previous research recognizes as crucial for developing common narratives (Allen, 2014), relies on voluntary willingness influenced by the capacity of AFNs. This emphasizes the importance of deviating from making resources

available for numerous short-term pilot projects toward fostering sustained cross-sectorial, long-term collaborations.

6 Conclusion

This paper analyzed the challenges for developing interconnected networks of AFNs underpinned by mutual interdependencies advocated by agroecological urbanism. The analysis of the findings highlighted the contingent and contested nature of AFNs' interactions, permeated by resource imbalances, divergent motivations, and limited actions for transformative change. These challenges were identified as being reinforced by the embeddedness of AFNs within a neoliberal context in which market-driven priorities and conventional food systems' logics remain dominant. In discussing these dynamics, it was underscored that AFNs organize into two subsystems in the analyzed cases: access-oriented initiatives (including those promoting socio-economic inclusion and food security) and supply-oriented efforts (including those promoting agroecology or the relocalization of food systems). Such division is underpinned by a practical divorce of urban social justice from agrarian and environmental goals, whereby the subject of justice – urban citizens or peri-urban and rural farmers becomes a central locus of dissent.

Overall, there is thus a need to strengthen AFNs by applying an agroecological urbanism approach regarding the values at stake and the activities that might comprehensively emerge from such values. Such a widening of the scope and aims of AFNs might be constructed in two complementary ways. On one side, the discourse surrounding agroecology, sustainable and local food would need to be augmented within some AFNs to include issues of urban social justice to avoid inadvertently excluding certain relevant actors from the discussion. On the other hand, the discourse surrounding food security and urban social justice within certain AFNs would need to recognize how environmental sustainability fits into this approach to advance toward a framework of sustainable food security.

The findings presented in this paper highlight the importance of developing inclusive socio-ecological narratives within the overarching framework of agroecological urbanism as a critical step in this process. In particular, the results point to fostering mutual interdependencies among AFNs that move beyond siloed approaches and a focus on individualized change. This would encourage collective responsibility and consciousness among AFNs, fostering awareness of the intersecting place-based injustices of food systems. For this, a comprehensive understanding of the systemic landscape of AFNs in each locality is required, acknowledging convergence, divergence, and contestation points, including how agroecology fits in each context. However, the current challenging landscape in which AFNs operate, filled with issues of limited capacity and resources, means that explicit measures for addressing these barriers are needed to support this process. Building AFNs' coalitions under this framework would depend on making resources available for long-term strategic collaborative efforts, whereby the findings underscore the crucial role of public authorities in such processes.

These insights underscore at least three different ways in which local public policies can stimulate positive AFNs' interdependencies along an agroecological urbanism approach. First, implementing comprehensive approaches to food policies and multi-actor food governance spaces under an explicit plural sustainability framing that includes social, environmental, and economic justice could enable the

integration of different actors – consumers, farmers, and others – and topics along the food supply chain, such as supply and access. Second, discussing food questions of such policies within broader urbanization dynamics and policies could help recognize how inequalities and environmental unsustainability in cities are expressly framed by their urban condition, shedding light on intersecting injustices and thus building mutual solidarities. Finally, place-based and user-oriented policies that make available resources that strengthen the social infrastructure of AFNs would be essential to address the perverse effects that AFNs' resource constraints induce on their collective organization through precariousness and competition. Particular focus should be placed on avoiding the dynamics of clientelism, co-optation, and externalization of public services to AFNs, as these can perpetuate the distancing between AFNs' efforts.

Finally, our research opens upon an emergent field of study on the actual forms that AFNs may adopt to advance toward sustainable food security, addressing social and environmental sustainability issues around food comprehensively. Further research should address issues such as food prices and affordability, the role of the public authorities, what socio-ecological narratives might enable AFNs to promote sustainable food security, and whether agroecological urbanism does indeed promote this process. Our findings also prompt further reflection on the continued use of the term AFNs to refer to a heterogeneous landscape of initiatives that practice food relocalization and local/organic food production and distribution. Many AFNs' motivations might depart from the normative conceptualization of AFNs as aiming to provide alternatives to or challenge conventional food supply chains.

Data availability statement

The datasets presented in this article are not readily available because Datasets are in the form of interview transcripts. Due to possible identification of those that were interviewed for the study through the information discussed during interviews, transcripts cannot be shared even if in raw, anonymized form. Requests to access the datasets should be directed to tanya.zerbian@cchs.csic.es.

Ethics statement

The study was approved by the University of Central Lancashire's Business, Arts, Humanities and Social Science (BAHSS) Ethics Committee. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

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Author contributions

TZ: Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. DL-G: Writing – original draft, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The handling editor JS-H declared a past co-authorship with one of the authors DL-G.

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