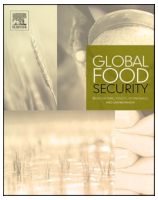
Global Food Security 46 (2025) 100877

Contents lists available at ScienceDirect

Global Food Security

journal homepage: www.elsevier.com/locate/gfs



A global scoping review of alternative food movements calls for food justice and justice beyond individual humans

Laxmi Prasad Pant [a,*], Sharada Prasad Wasti [b], Charoula Konstantia Nikolaou [a], Prajal Pradhan [c,e], Georgie Hurst [a], Kiran Kumari Bhattarai [d]

[a] Natural Resources Institute, Faculty of Engineering and Science, University of Greenwich, Central Avenue, Chatham Maritime, Kent, ME4 4TB, UK
[b] School of Human Sciences, Faculty of Education, Health and Human Sciences, University of Greenwich, Old Royal Naval College, Park Row, Greenwich, London, SE10 9LS, UK
[c] Integrated Research on Energy, Environment & Society, Energy and Sustainability Research Institute Groningen, University of Groningen, Groningen, 9747 AG, The Netherlands
[d] Ontario Public Interest Research Group, University of Guelph, 24 Trent Lane, Guelph, Ontario, N1G 2W1, Canada
[e] Potsdam Institute of Climate Impact Research (PIK), Member of Leibniz Association, Potsdam 14473, Germany

ARTICLE INFO

Keywords:
Food justice
Topic modeling
Nutrition
Food security
Non-dualism
Food system transformation
Alternative food movements

ABSTRACT

This study aims to synthesise evidence on an under-researched area of food systems, the justice implications of alternative food movements (AFMs) globally across all possible contexts (e.g., geographic, socio-political, and historical). The search strategy involves two sets of keywords, representing food justice and alternative food movements, and three databases (Scopus, Web of Science, and Medline). A total of 140 peer-reviewed studies met the inclusion criteria and were subjected to topic modeling. The modeling exercise resulted in nine topics: (1) genesis of food banks; (2) second-generation food banks; (3) food aid for nutrition security; (4) food aid for health equity; (5) food policy coalitions; (6) food advocacy coalitions; (7) bringing back nature into agriculture; (8) the new garden city movement; and (9) food sovereignty. Cluster analysis grouped these topics into two themes: technical aspects of food provisioning and institutional dimensions of food system governance. Together, these themes describe how the literature addresses multiple dimensions of food justice: anthropocentric, multispecies, and planetary justice. The findings reveal that literature on AFMs focuses more on reformist, protectionist approaches within urban-centric public and private welfare systems than on emancipatory, transformative food justice movements. Our findings suggest an important gap in the literature in understanding structural barriers to food justice and how expanding the subject of food justice beyond individual humans advances emancipatory food movements toward more-than-human non-dualism.

1. Introduction

Alternative food movements (AFMs) include diverse approaches and practices to transform food systems in response to the nutritional insecurities, health inequities, and social and environmental injustices generated by globalised industrial food regimes. AFMs encompass initiatives that promote sustainable, healthy, ethical, equitable, and/or local food systems, yet vary significantly in their approaches and beneficiaries.

In developed economies like the United Kingdom (UK), AFMs are considered to fall into two categories (Coulson and Milbourne, 2021): (1) those reconnecting consumers to rural roots regarding access to land or growing and marketing local, environmentally sustainable food to reduce the 'foodprint'; and (2) those addressing global food and nutrition insecurity and achieving zero hunger. The first category predominantly benefits urban and middle-class consumers, while the latter is based on humanitarian food assistance as a substitute for public welfare systems. Charitable food aid, though vital in food emergencies, also enables a cost-effective food waste diversion opportunity for major grocery retailers, thereby maintaining rather than challenging wasteful industrial food systems (Agyeman and McEntee, 2014; Clendenning et al., 2016). However, in the agrarian context of developing countries and Indigenous communities, food sovereignty is a prominent strand of AFMs that takes a rights-based, decolonial stance to the provision of

* Corresponding author
E-mail address: l.p.pant@gre.ac.uk (L.P. Pant).

https://doi.org/10.1016/j.gfs.2025.100877
Received 13 December 2023; Received in revised form 19 July 2025; Accepted 20 July 2025
Available online 26 July 2025
2211-9124/© 2025 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

food, emphasising communal control over local food systems and emancipation from industrial food regimes (Grey and Patel, 2015; Wittman, 2009). These approaches highlight the plurality of food justice orientations within AFMs, shaped by historical, geographic, and socio-political contexts.

Food justice within AFMs is commonly equated with distributive justice, which, by the liberal idea of justice as fairness (Rawls, 1971), denotes the equitable allocation of rights, responsibilities, risks, rewards, and resources (Alkon and Agyeman, 2011). However, the concept has also been expanded to encompass other dimensions, including procedural, recognitional, restorative, cosmopolitan, and more recently, multi-species and planetary justices (Kaljonen et al., 2021; Winter and Schlosberg, 2023). Procedural and recognitional justice relate to the meaningful engagement of culturally and politically marginalised groups in food decision-making (Fraser, 2009). Restorative justice, while less conceptually defined, can include repair for harms caused by industrial food systems on human and ecological wellbeing, such as erasures of food heritage, biodiversity loss, chemical pollution, greenhouse gas emissions, and growing non-communicable chronic diseases (McCauley et al., 2024). This tenet of justice applies to food sovereignty and reparation movements against systemic and structural injustices, such as food apartheid inflicted upon racial minorities and Indigenous communities over temporal scales or geographic disadvantages from historic redlining policies that still affect access to healthy, nutritious foods in BIPOC (Black, Indigenous, and People of Colour) communities (Gilbert and Williams, 2020) and LGBTQ+ (lesbian, gay, bisexual, transgender, queer or other gender minority) communities (Russomanno and Tree, 2020). Cosmopolitan justice widens the spatial-temporal scale of justice responsibilities, recognising obligations to distant others and future generations (Newman et al., 2021; Thiery et al., 2021).

Multispecies and planetary justice go further by challenging Western liberal anthropocentric ideas of justice and the assumption that humans possess a higher moral status—and are hence more important—than other species or non-human entities (Celermajer et al., 2021). Multispecies justice expands the subject of justice beyond individual humans, advocating for a relational, non-dual understanding of justice in which human society is embedded within, rather than external to nature (Winter and Schlosberg, 2023; Boulangeat et al., 2022). Planetary justice builds on these perspectives by promoting justice that transcends political, generational, geographic and ecological boundaries, embracing ethical responsibility toward all manner of beings: human and non-human, animate and inanimate, sentient and non-sentient, and known and unknown (Antadze, 2019; Winter and Schlosberg, 2023; Biermann and Kalfagianni, 2020).

Despite this growing diversity in justice frameworks, a gap remains in synthesising how the literature captures these multiple dimensions of justice in AFMs, especially the interaction between anthropocentric and more-than-human values across diverse geographic, socio-political, and historical contexts.

To explore these trends, this review draws upon Nancy Fraser's (2013; 2017) 'triple movement theory', a contemporary interpretation of Karl Polanyi's (1945) 'double movement', which describes the three forces that shape societal transformation – marketisation, social protection, and emancipation. While marketisation refers to free market politics, social protection emerges as a counter movement advocating for social welfare systems to shield citizens, workers, and the environment from unruly market forces. Fraser's revision (2013) incorporates emancipatory movements, whose focus on social injustice and oppression has rejected at various points both the social exclusions of welfare states and economic liberalism. Applying Fraser's analytic framework to food justice movements, Smith (2019) conceptualises the 'triple food movement', with corporate agriculture, local food movements, and intersectional agriculture respectively aligned with marketisation, social protection, and emancipation. Smith's (2019) conceptualisation of intersectional agriculture involves food production, distribution, and consumption activities that resist and address inequalities perpetuated by both corporate agriculture and local food movements, emphasising participation and recognition of gender minorities, African American, Hispanic, and Indigenous peoples, in co-creating alternative food movements. However, while Smith's (2019) emancipatory food justice movements advance justice beyond distributive concerns to include procedural, recognitional, restorative, and cosmopolitan dimensions, it remains primarily anthropocentric. This rendering of emancipatory food justice does not include more-than-human ethics or ecological interdependencies, which are central to multi-species and planetary justice (Kaljonen et al., 2021; Winter and Schlosberg, 2023).

We propose a reconceptualisation of emancipatory food justice movements to recognise their potential for advancing multispecies and planetary justice, moving beyond traditional anthropocentric justice frameworks to biocentric values that include ethical responsibilities toward more-than-human worlds. A holistic and robust synthesis of how the literature on AFMs captures multiple dimensions of justice, including anthropocentric, multispecies, and planetary justice, is missing, especially in geographic, socio-political, and historical contexts. This review employed an inductive approach by not predefining the topics to better reflect the existing literature and evidence synthesis, avoiding bias (Pradhan et al., 2023). Machine learning techniques, such as topic modeling, represent a suitable method for an unbiased synthesis of the literature (Blei, 2012).

Our study aims to synthesise the literature on AFMs based on the above-highlighted multiple dimensions of justice - anthropocentric, multispecies, and planetary justice - as they apply to known and unknown, humans and non-human others. Taking Fraser's (2013) definition of alternative movements from the 'triple movement theory' further, we consider AFMs to include both reformist and emancipatory approaches to food justice and use this lens to examine their capacity to transform food systems in response to ongoing crises in the industrial food regime. An emancipatory approach in food justice movements is relevant to discussing global food security as it addresses the underlying causes of structural injustices that create and perpetuate food and nutrition insecurity, dietary ill-health, greenhouse gas emissions, chemical toxicity, soil, water and air pollution, and biodiversity loss (Gottlieb and Joshi, 2010; Smith, 2019).

2. Methods

The review employed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018). We followed the nine steps proposed by the JBI (Joanna Briggs Institute) scoping review framework (Peters et al., 2015): (1) articulation of review objectives and questions; (2) development of inclusion criteria; (3) plan approach to searching, selecting, extracting, and charting evidence; (4) search for evidence; (5) select sources of evidence; (6) extract the evidence; (7) chart the evidence; (8) synthesise the results; and (9) consult with stakeholders on various occasions.

2.1. Search strategy

This study adopted the JBI's (Joanna Briggs Institute) recommendation to use the PCC (Population/Participants, Concept, Context) framework to identify the main concepts in a scoping review and develop a search strategy (Peters et al., 2015). We formulated review questions to cover the framework components and make sure that these components are covered by the inclusion criteria – who participates in AFMs and who benefits, what are the conceptual foundations, and in what contexts. The questions are as follows: What type of alternative food movements are promising for food system transformation and show more promise for underprivileged or marginalised groups? What are the health benefits of alternative food movements? What are the social and environmental justice concerns addressed by alternative food

movements in different contexts? The keyword search covers two sets of search terms: food justice and alternative food movements (Table 1). We purposefully avoided dimensions of justice, as such, in the search terms to deliberately conduct an inductive topic modeling where themes emerge from the corpus of full-text articles. We searched articles in two interdisciplinary databases (Scopus and Web of Science) and a health sciences database (Medline). We were confident that these databases resulted in unique records in the subject area of our interest because of their interdisciplinary nature, disciplinary coverage, and time span.

The articles for the review were selected based on the following inclusion criteria: articles that deal with methodological, theoretical, or conceptual dimensions of injustice in various alternative food movements, such as food banks, food pantries, farmers' markets, community gardens, food forests, social supermarkets, and urban agriculture. We kept the beginning date open and included articles published until March 2023 because the history of AFMs varies with region and the type of movements. The search resulted in articles after the 1990s suggesting that injustices in food systems that AFMs attempt to address surfaced in the literature only recently. We included peer-reviewed articles from the three databases, hand search, and backward and forward reference search in the articles selected for full-text review.

2.2. Screening

The review involves three stages: (1) identification and screening of unique objects; (2) inductive topic modeling to identify the most salient topics; (3) synthesis to develop ideas for just and sustainable alternative food systems. The identified articles were collated and uploaded into EndNote and duplicate records were removed, and finally imported into the Rayyan systematic review web application for double-blind screening and selection (Ouzzani et al., 2016). The first three authors of the study team independently screened the titles and abstracts and any disagreements in the title/abstract were resolved through the deliberations in a series of meetings. At least two authors had to agree to include a reference that was rejected at the independent screening stage.

2.3. Data synthesis

The 140 unique records are subjected to topic modeling, which is particularly useful for reviewing a large body of literature that would otherwise be time-consuming for already resource-starved academics (Pradhan et al., 2023). Topic modeling, an unsupervised machine learning, is a statistical model that clusters words and phrases within the documents into a predefined number of topics and identifies a probability distribution of documents called theta (θ) and a probability distribution of each topic, called beta (β) or phi (ϕ). In other words, topic modeling groups together words and phrases found in documents into a set number of topics. These topics help describe what the documents are about. However, choosing the right number of topics is crucial. If there are too few numbers, the topics might be too broad and not very useful. But if there are too many, the topics could overlap or be hardly interpretable.

This study employed the R software package 'topic models' (Grün and Hornik, 2011) for topic modeling. For identifying the right number of topics, it followed the method suggested by Nikita and Chaney (2020), which consists of four metrics. In simple terms, jumps in these metrics are used to identify the right number of topics (see Fig. S1). Narrative synthesis was performed to address the research questions. Considering the heterogeneity of included studies, meta-analysis was not appropriate.

Table 1
Search terms.

Sets of search terms	Search terms
Food justice	"food just*" OR "food security" OR "food govern*" OR "food policy" OR "food politics" OR "dietary change" OR "dietary shift*" OR "food ethic*" OR "food wellbeing" OR "food right*" OR "food democracy" OR "food sovereignty" AND
Alternative food movements	"alternative food movement*" OR "food pharmacy" OR "farmers' market*" OR "organic food" OR "local food" OR "slow food" OR "community-supported agriculture" OR "vegetable box scheme*" OR "fresh box scheme*" OR "community garden*" "urban farming" OR "food aid*" OR "food bank*" OR "food pantr*"OR "food forest*" OR "food forag*" OR "edible garden*" OR "social prescribing" OR "social supermarket" OR "permaculture" OR "biodynamic agriculture" OR "agroecolog*"OR "regenerative agriculture"

3. Results

3.1. Search outcomes

The search in the three databases resulted in 4293 unique records: 1287 (Scopus), 2336 (Web of Science), and 670 (Medline) (Fig. 1). We screened 2753 records after removing the duplicates. Title and abstract screening resulted in 156 articles. 137 articles met the inclusion criteria through the full-text screening and 3 articles were included from hand search and citation search resulting in 140 full-text records (see Table S1 for a list of articles, topical groups, and key findings). The most common research methods used in the selected articles were case studies, comparative case studies, randomised controlled trials, surveys, and interviews.

The articles were from the Global North, primarily the USA, Canada, and Europe, with some exceptions from emerging countries, such as South Africa and Brazil (Fig. 2). Other countries include Ecuador, Cuba, and Nicaragua in South America. Cuba champions AFMs in the region, which could have been the reflection of the trade embargo with the USA in the aftermath of the Cold War, after the collapse of the Union of Soviet Socialist Republics (USSR), the main trading partner. Our findings suggest a regional bias in the study of justice in alternative food movements, mostly focused on the USA, Canada, and Australia, except for food sovereignty movements that originated in South America.

3.2. Topic modeling

Relevant tests resulted in nine topics suitable for the analysis of the 140 full-text articles (Fig. S1). The topic modeling identified nine topics: (1) genesis of food banks (n = 15); (2) second generation food banks (n = 12); (3) food aid for nutrition security (n = 29); (4) food aid for health equity (n = 23); (5) food policy coalitions (n = 15); (6) food advocacy coalitions (n = 16); (7) bringing back nature into agriculture (n = 7); (8) The New Garden City Movement (n = 12); and (9) food sovereignty (n = 11). Here, n represents the number of articles in which the topic is considered as the primary topic.

The topics were named by analysing the top probable words in each topic, which means words with a large value for β or ϕ. This interpretation of the topics was based on the most probable topic indicated by a large θ value. The topics were clustered into two themes considering the Hellinger distance of 0.4 (Fig. S2): (1) the articles that study technical aspects of food provisioning (e.g., food banks, food pantries, social markets, soup kitchens, food prescription, and supplemental nutrition programmes); (2) the articles that study a diverse type of conceptual and ideological aspects of food system governance, including agroecology, food sovereignty, land use planning, food policy coalitions, and food advocacy coalitions. The naming of the topics was based on the word cloud, and words with the highest probabilities occurred in the corpus of 140 articles (Fig. 3 and S3).

3.3. Temporal and spatial distribution of topics

The AFM literature that addresses food justice first appeared in the 1990s (Smith and Hoerr, 1992), which suggests that until this time AFMs

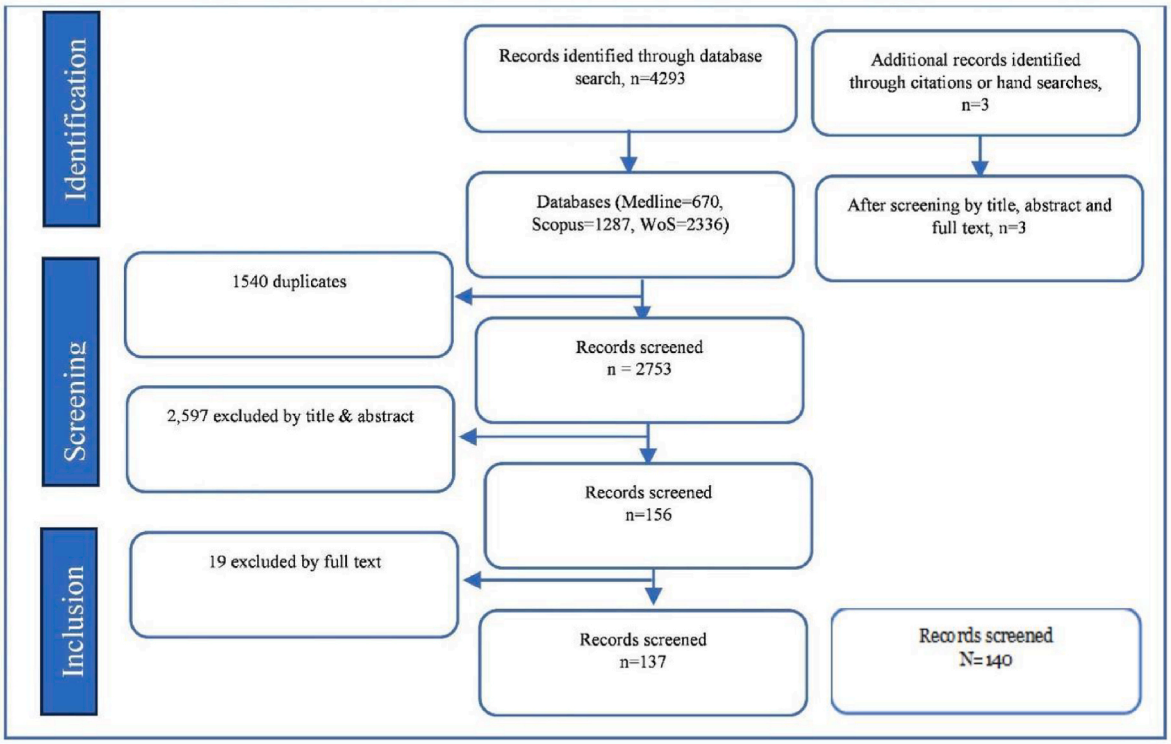


Fig. 1. PRISMA flowchart of the number of unique records at each stage.

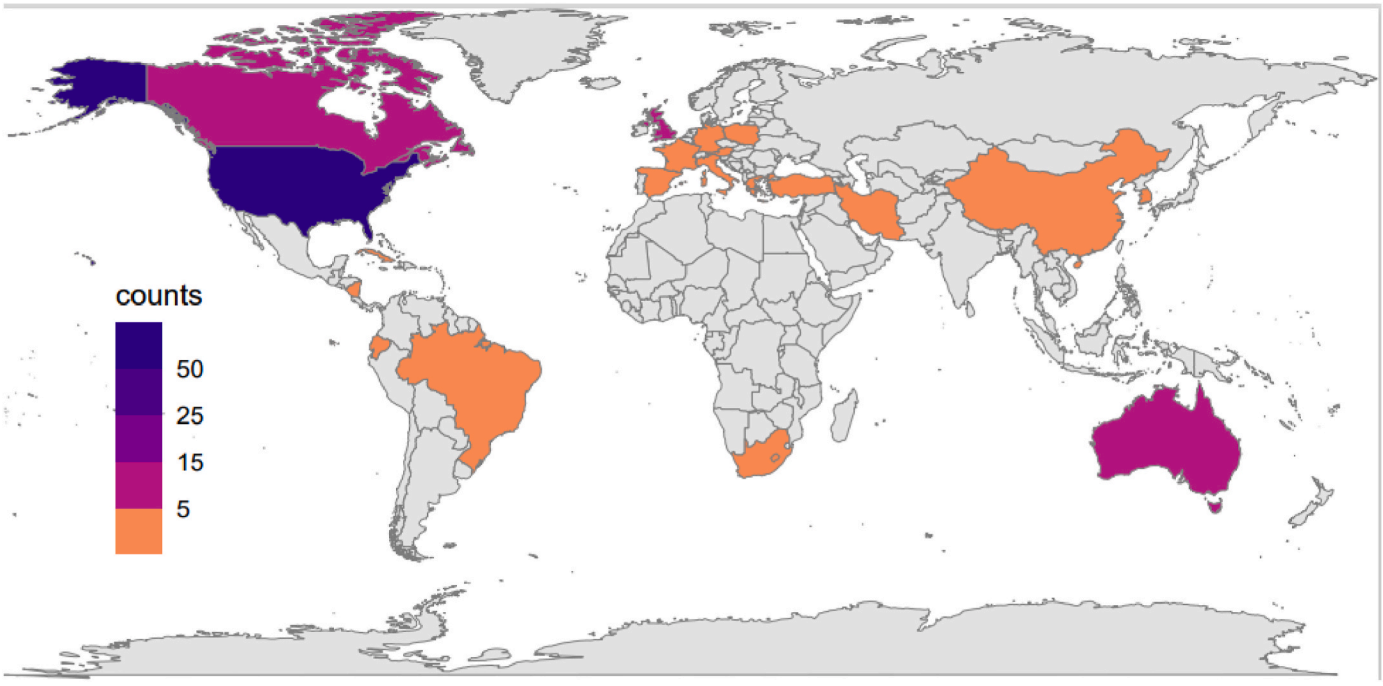


Fig. 2. Global distribution of articles.

were considered immune to injustices or transformational solutions toward fair, equitable, and sustainable food systems (Fig. 4). While the critical research on how food banks address injustices in food systems increased in the following decade, the concerns for nutrition security were still not frequently reported in the literature. The concerns for health equity grew in dominance, responding to the ubiquitous marketing of ultra-processed unhealthy foods, and the topics in the second cluster that were conceptual, institutional, and ideological were increasingly reported during this period. These concerns further increased during the 2010s. At the beginning of the 2020s, concerns for nutrition security and health equity made a comeback.

Regarding the spatial distribution, the most dominant topics in the USA were alternative food movements based on conceptual, institutional, and ideological grounds, such as food policy coalitions,

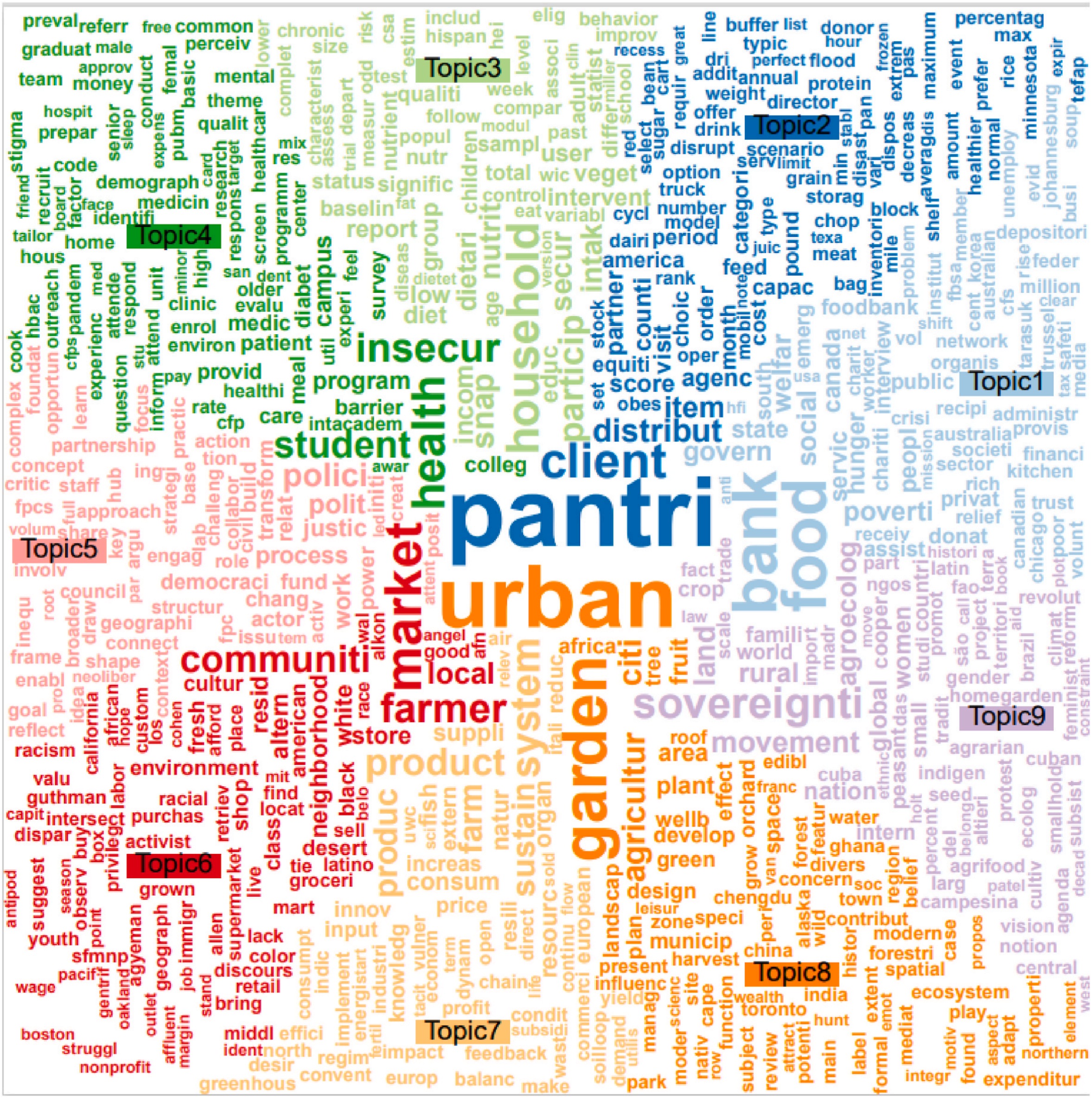


Fig. 3. Word cloud clustered by nine topics: (1) genesis of food banks; (2) second generation food banks; (3) food aid for nutrition security; (4) food aid for health equity; (5) food policy coalitions; (6) food advocacy coalitions; (7) bringing back nature into agriculture; (8) the New Garden City Movement; and (9) food sovereignty.

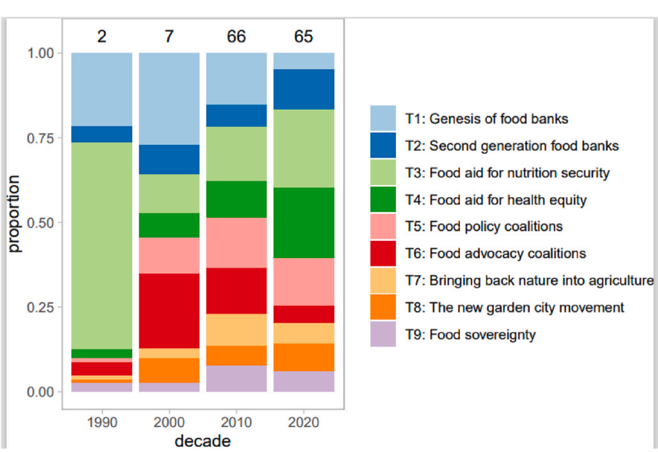


Fig. 4. Temporal distribution of topics.

agroecology, the New Garden City Movement in urban land use planning, and food sovereignty (Fig. 5). This also applies to countries like Canada, Brazil, Ecuador, Cuba, Nicaragua and Italy. However, the technical aspects of alternative food provisioning, such as food banks and food aid for nutrition security and health equity, dominated the literature from the UK, Brazil, and Germany. Australia is an exception with the simultaneous coverage of topics in both themes.

3.4. Salient topics in alternative food movements

3.4.1. Genesis of food banks

The origin of modern food banks can be traced back to major crises of capitalism, although sharing food has been common throughout human civilization. For example, the Great Depression (1929–1933) in the USA led to interventions in food aid. The first formal food bank was established in Phoenix, Arizona, in the late 1960s (Riches, 1986). In Canada, the burst of the oil industry bubbles in Alberta and the subsequent recession led to charitable handouts to feed the oil industry workers in

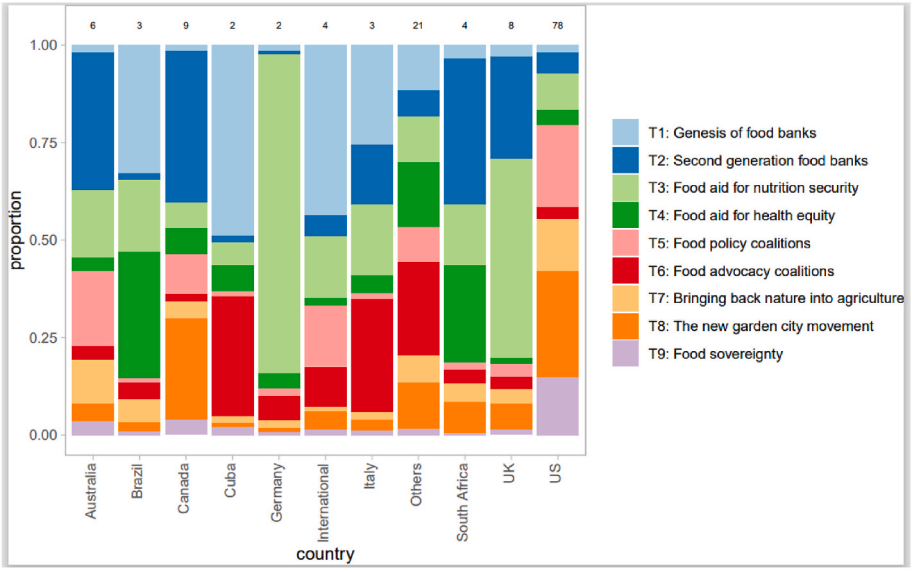


Fig. 5. Spatial distribution of topics.

the early 1980s (Riches, 2002). The economic downturn due to the relocation of manufacturing industries, a phenomenon that began in the 1990s, led to the establishment of food banks in South Australia (Booth et al., 2018). The United States model of food banks was imported to South Korea during the financial crisis in the late 1990s, although it remained primarily a government-led initiative (Kim, 2015). A public-private partnership model to deliver charitable food assistance is reported from South Africa (Warshawsky, 2016). A relatively recent origin of food banks is reported in the UK and Europe, in particular Nordic countries, Germany, and The Netherlands, although scholars disagree that some forms of charitable or faith-based food aid have no recorded history (Williams and May 2022; Loopstra and Lambie-Mumford, 2023). Nevertheless, in the UK, the number of food banks and food bank users exponentially increased during the 2008/2009 financial crisis, with subsequent tensions among government ministers, church leaders, and food bank operators (Wells and Caraher, 2014).

The recent institutionalisation of food banks points to troubling developments because it came with the dismantling of the welfare state, for example, in Canada (Tarasuk and Eakin, 2003) and the UK (Beck and Gwilym, 2022). Food banks have been increasingly normalised in response to the failed social security in times of financial crises and fiscal austerity (Tarasuk et al., 2014; Beck and Gwilym, 2022; Riches, 2002). In Canada, food banks have emerged as the fastest-growing charities (Riches, 2002). In South Australia, receiving charitable food is seen as disempowerment, trapping vulnerable people in a vicious cycle of food poverty (Booth et al., 2018). A similar study in the Southeastern Australian state of Victoria concluded that the use of food banks is considered a loss of dignity, particularly because charities are often blamed for delivering unsafe and unhealthy food handouts, undignified services, services far removed from user needs, conditionality, denial, and limited access in time of dire needs (Lindberg et al., 2017). In the Netherlands, unwanted fish catches were included in food parcels to valorise fish waste without considering the dignity of food bank users (Rao et al., 2021). A study of food banks in the capital city of Perth in Western Australia calls food banking a triple failure – government failure, market failure, and voluntary sector failure (Pollard et al., 2018).

3.4.2. *Second generation food banks*

Second-generation food banks appear in various forms, often in response to the apparent limitations of food banks amid the demise of social security and increasing financial austerity (Booth et al., 2018). Besides provisioning services, these food banks also include on-site gardens, seed banks, tool libraries, and cooking and canning classes (Kaiser and Hermsen, 2015). In Australia, food banks are used as sites to deliver food literacy classes, lifestyle change initiatives, and health promotion strategies (Butcher et al., 2014). In the Canadian Arctic, community organisations provide food aid to Indigenous communities in the form of soup kitchens and friendship centres, which could have better addressed the historical context of semi-nomadic hunting and gathering (Ford et al., 2012).

Recognising the limitations of traditional food banks as offering pre-filled bags (food parcels in the UK), the literature on food pantries addressed ways to improve healthy food choices, including a provision of client choice bags (Chapnick et al., 2019; Caspi et al., 2021a, 2021b; Gunen et al., 2022). A natural experiment in the US also revealed that food pantry operators prefer to select healthier foods (such as brown rice, fresh produce, low-fat dairy, and lean meat) when nutrition information is available on the online platforms used to procure foods for distribution (Martin et al., 2021), while healthier food options provide more informed selection among food bank users (Gunen et al., 2022). Mobile pantries travel to targeted food deserts where neither grocery stores nor food banks are available to serve vulnerable communities (Stauffer et al., 2022).

In the USA, the voluntary sector provides food assistance to students and seniors who would not be eligible for government assistance programmes, such as the United States Department of Agriculture's Supplemental Nutrition Assistance Programme (SNAP) (Berner and O'Brien, 2004; Musa et al., 2023). A nationally representative longitudinal sample in the USA showed that after the Great Recession (2007–2009) the number of food pantry users increased with associated changes in their characteristics – older, divorced, separated, or widowed, and unemployed users showing a close association of food insecurity with the classic determinants of poverty and inequality (Heflin and Price, 2019). Despite the changes in food bank user characterises, the eligibility criteria to participate in SNAP remained stringent, which excluded older people who built equity on their assets over the years and received retirement benefits, forcing them to seek help from charitable pantries and soup kitchens rather than government assistance (Musa et al., 2023). On-campus food pantries have emerged in response to the stringent eligibility requirements to enrol college and university students into federal programmes, such as SNAP (Martinez et al., 2022).

3.4.3. Food aid for nutrition security

Under this topic, most of the papers were from the USA, which were published in the early 2020s. The SNAP, popularly known as Food Stamps, is one of the federal initiatives to provide emergency food assistance in the USA (Berner and O'Brien, 2004). Overtime, the federal programme diversified its services, such as the Special SNAP for Women, Infants, and Children, National School Lunch Programme, School Breakfast Programme, food vouchers to use at farmers' markets, and anti-hunger campaigns under the umbrella term Feeding America (initially established as the Second Harvest in 1979). Policies that increase access to and affordability of whole foods, such as fruits, nuts, and vegetables, were more effective in improving nutrition security than the behaviour change interventions alone (Leung et al., 2022).

In Greece, a randomised controlled trial of a school feeding programme showed that a multicomponent intervention (school meal with nutrition education) significantly enhanced nutritional security compared to nutrition education alone (Dalma et al., 2020). Food vouchers at farmers' markets not only enhanced the affordability of fruits and vegetables but also supported local farmers, generating new demands for local foods (Amaro and Roberts, 2017; Porter et al., 2022). A voucher to buy Community Supported Agriculture (CSA) shares also enhanced fresh fruit and vegetable consumption (Seguin-Fowler et al., 2021). However, the study of a food voucher scheme in Saint Denis in the northern suburbs of Paris concluded that a voucher scheme did not enhance nutritional security despite an increase in the availability of fresh fruits, nuts, and vegetables (Buscail et al., 2019).

3.4.4. Food aid for health equity

Besides nutrition security, health equity is another topic that appeared most prominently in the early 2020s. The 2020 Global Nutrition Report echoed the importance of strengthening the food-health nexus (Mannar et al., 2020). While undernutrition (e.g., stunting and wasting) and micronutrient deficiency (e.g., iron deficiency anaemia and Vitamin A deficiency) continue to be a major diet-related determinant of health in developing countries, overnutrition (e.g., overweight and obesity, Type 2 Diabetes (T2D), liver cancer, hypertension, dementia, and heart diseases) has emerged as a global threat in developed as well as developing countries. While food safety and quality issues associated with traditional food processing and handling continues to be a challenge, mass produced foods can also lead to foodborne illnesses, posing significant public health risks (Kirk et al., 2015). Many Small Island Developing States (SIDS) face the double burden of climate and food insecurity, and they experience some of the highest rates of non-communicable diseases (NCDs) due to the increasing consumption of ultraprocessed foods although local food production and consumption are still common (Guell et al., 2021). The promotion of export-oriented commercial agriculture increases the reliance on imported nutrient-poor ultra-processed foods, further escalating health inequity in SIDS, as reported from Fiji in the Pacific and Saint Vincent and the Grenadines (SVG) in the Caribbean.

As food aid primarily aims to address distributional injustice for immediate food insecurity, the impacts on health equity have been mixed because the focus is on adequate supply of macronutrients (calories, proteins, and fats) rather than micronutrients (vitamins and minerals). A recent study in the USA revealed that food banks contribute to an increase in nutritional intake when working in partnership with healthcare workers to address the drivers of food insecurity and health inequity (Gurganus et al., 2021). Second generation food banks attempt to offer a range of food items that can support a more balanced diet, reduce diet-related diseases, and prevent NCDs (Cooksey-Stowers et al., 2017) while also providing relief from financial strain and improving the mental well-being of food aid recipients (Jones et al., 2016). A study conducted in Federally Qualified Health Centers in the US Midwest concluded that food aid and nutrition education improved glycated haemoglobin (HbA1c), which is a form of haemoglobin chemically linked to sugar, profiles to achieve optimal glycemic control among both food secure and food insecure participants of a clinic-based food aid program targeted to T2D patients (Blitstein et al., 2021). However, a randomised controlled trial with T2D patients at a hospital in Minneapolis who had SNAP information and fresh food boxes delivered at home did not improve long-term average blood sugar levels (Kempainen et al., 2023).

Mental health impacts remained questionable because of the fast-paced food aid environments. A study in central Florida suggested that service providers were quick to serve those in need of emergency relief but lost compassion and care for those who needed frequent assistance over a long period (Hill and Guittar, 2023). Further, SNAP participants with responsibilities to care for children with food allergies, such as food-induced Anaphylaxis, experienced stress, anxiety, and depression, because mass handling of food assistance, often by unpaid volunteers, in fast-paced environments can potentially contaminate food with allergens (Tackett et al., 2018).

3.4.5. Food policy coalitions

Food policy councils have emerged as an effective mechanism to coordinate stakeholders from different sectors to reform the food system. A study of five German food policy councils concluded that place-based civic engagement can facilitate networking with a wide range of actors in the food system to design more just and sustainable food systems (Birnbaum and Lutke, 2023). However, case studies of food policy councils in two German cities revealed that citizen participation and food democracy depend on supportive state actors that facilitate interactions between relevant actors, avoiding top-down directionality (Baldy and Kruse, 2019).

A study of urban food partnerships across all nations of the UK (England, Wales, Scotland, and Northern Ireland) and all levels of municipal governance (city, town, county, and borough) revealed that despite the strengths of bringing together multiple stakeholders to address food injustices, food policy councils run the risk of depoliticisation of urban food landscapes, reformist policy innovations that are often directional, and incremental co-option by neoliberal ideologies dominant in industrial food systems (Coulson and Sonnino, 2019). A similar conclusion was reached from a study of the London Food Strategy, developed in 2018, which found that although procedural and recognitional justice increase with improved democratic representations, the policymaking remained top-down and consultative, with a limited transformative potential (Hasson, 2019), while also facing challenges in the coordination with national food policies (Parsons et al., 2021). As it relates to the Global South, Cape Town in South Africa – despite being a signatory of the Milan Urban Food Policy Pact (MUFPP) – faced challenges to foster diversity and difference in opinions in their food policy councils, particularly to address restorative injustices based on historical legacies of discrimination in the Apartheid era, 1948 to 1994 (Pereira et al., 2020).

A new role of food policy council coordinator has been increasingly recognised as important to maintain institutional memory. A study of 11 food policy staff positions in city or county governments in the US concluded that, despite some reservations about engaging with food justice movements, these positions provide stability to food policy councils, help to coordinate and nurture local food programmes and policies, while also facilitating the participation of individuals and groups in food system reform (Berglund et al., 2021).

3.4.6. Food advocacy coalitions

In contrast to food policy coalitions, which are typically top-down, food advocacy coalitions stand out in the literature on AFMs, including food justice movements (FJMs). FJMs, such as the West Oakland Food Collaborative and the Karuk Tribe in the US, have challenged the inabilities of place-based local food policy initiatives often facilitated by the state, such as Food Policy Councils, to serve disenfranchised communities (Alkon and Norgaard, 2009). The closure of an ethnic food store and the opening of a 'whole food store' in Boston, USA,

not only reduced access to culturally appropriate foods but also eliminated a safe space to form advocacy coalitions against racism, food privilege, and whiteness (Anguelovski, 2015). Racialised communities and their allies protested the opening of the 'whole food store' as an example of food gentrification in the name of AFMs to reduce "food deserts". Protestors argued that middle-class gentrifiers define the discourses and acceptable practices around alternative food consumption, such as healthy, local, and organic foods. However, fundamental questions that emanate from this study include whether urban planners should find more effective ways to foster equity, diversity, and inclusion in urban landscapes and foodscapes, and how we make organic or local foods more accessible, affordable, and culturally appropriate in racialised and ethnic communities. What discourages the participation of food insecure people in AFMs is not only the limited availability of culturally appropriate food but also the unaffordability of healthy foods in the creation of predominantly white, middle-class food environments (for example, farmers' markets and community-supported agriculture) that are inaccessible or less welcoming for or far removed from the needs of disadvantaged and low-income communities (Kato and McKinney, 2015; Guthman, 2008).

FJMs have two choices: to withdraw from or confront the adoption and co-option of mainstream neoliberal food systems. For example, in contrast to niche activism, which is often associated with withdrawal strategies, a coalition of activists and civil society organisations in New York and Los Angeles had spearheaded the 'Good Food, Good Jobs' movement to support confrontational tactics uniting food, environmental concerns, health and labour under the umbrella of food justice (Myers and Sbicca, 2015). Despite the emergence of this movement, there are internal and external barriers to success. Externally, activists need to combat the widespread belief that 'any job is better than no job'. Vulnerable communities living in poverty, unemployment, and food security do not have political and economic connections to stage protests for a living wage, which threatens the ability of the movement to facilitate upward social mobility. Internally, as in many AFMs, they can benefit from moving beyond the 'bread and butter campaigns' to embrace holistic unification of labour, food, and ecological politics as informed by more-than-human non-dualism.

Another study in New York City uses critical race theory to determine urban agriculture's role in either reinforcing or disrupting unjust economic, social, and political structures (Reynolds, 2015). Failure to disrupt the status quo perpetuates food injustices as it enhances the legitimacy of progressive narratives about the positive impact of urban farming and gardening on food access, food literacy, job creation, access to green spaces, public health, and wellbeing without a genuine commitment to more-than-human non-dualism. FJMs call for advocacy coalitions of activists and civil society organisations at the intersection of race, class, gender, and sexuality to challenge inequalities perpetuated not only by marketisation in industrial food systems but also through the social protection or welfare narrative promoted by AFMs without enough efforts on empowerment and capacity development (Smith, 2019). A survey suggests that very few food insecure LGBTQ + communities sought help from local food assistance programmes, suggesting a need for community-wide solutions to ensure food insecure sexual minorities have safe, welcoming spaces to receive food assistance (Russomanno and Tree, 2020). For example, in Toronto, Canada, urban middle-class food environments put a premium price on local produce making them unaffordable for marginalised communities, whereas, in Belo Horizonte, Brazil, local farmers' markets operate in marginal physical spaces with an unapologetic bargain (Pratley and Dodson, 2014). Hence, food advocacy coalitions can promote FJMs by employing the lens of gender, intersectionality, and reflexive localism.

3.4.7. *Bringing back nature into agriculture*

A study of agroecological transitions in European food systems argues that organic farming has the potential to enhance food system resilience (low chemical inputs, diversity of produce, ecosystem services, and niche markets) but a more consolidated organic food system risks the problem of commodification, such as certification, marketisation and conventionalisation, common in industrial food systems (Brzezina et al., 2016). An examination of the emergence and expansion of AFMs in Turkey's two cities, Istanbul and Ankara, demonstrated that re-localisation and regionalisation of food systems enhance socio-ecological resilience, planetary justice, and more-than-human non-dualism, specifically through the conservation and use of heritage seeds, non-pesticidal management, and participatory guarantee systems rather than a costly organic certification (Atalan-Helicke and Abiral, 2021). An assessment of organic agriculture in the United Arab Emirates and Sicily, Italy, also shows the benefits of local food production and direct marketing, although there are many operational challenges, including the employment of illegal migrants and refugees on organic farms (Al Shamsi et al., 2018). However, in the US Arctic state of Alaska, cultivated foods are considered local whereas foods of Indigenous Alaskans sourced through hunting and gathering are classified as subsistence (Burke et al., 2018). Since so-called subsistence games are neither sold in farmers' markets nor served in food pantries, this policy provision undermines the role of local food movements in promoting more-than-human non-dual Indigenous worldviews.

3.4.8. *The new garden city movement*

Urban planners have faced ongoing challenges in the competing ideas of ecosystem services from open spaces, as anthropocentric landscaping for aesthetics (e.g., lawns) competes with pollinator-friendly edible land use practices (e.g., urban gardening). Some land use practices can provide more complementary services beyond human needs. One example of contemporary relevance to justice is the Persian gardens' historical origin as a heritage, aesthetic value, freshness, exceptional greenery, and health benefits (Amani-Beni et al., 2022). The early twentieth-century Garden City Movement promoted satellite communities separated by agricultural belts or greenbelts, for example, the creation of the first Letchworth Garden City in England in 1903 (Sutcliffe, 1990). A longitudinal study in New York City concluded that urban agriculture could reverse the demise of localised food production after the mass nationalisation and globalisation of food systems that were made possible by modern transport systems, such as interstate trucking, air freight, and refrigerated cargo rails (Ackerman et al., 2014). A study of an urban agriculture project in Quito City, Ecuador, demonstrates how capitalist expansion and the neoliberal food regime paint the picture that the continuation of traditional or subsistence agriculture in the countryside is a lack of progress or backwardness, undermining its role in multiple dimensions of justice - anthropocentric, multispecies and planetary justice (Rodriguez et al., 2022). Further, urban forestry policy does not sufficiently recognise the food production potential of trees; for example, a study of 58 Brazilian Urban Forestry Master Plans revealed that only a quarter of them considered harvesting urban fruit trees (Brito and Borelli, 2020).

Community orchards are often promoted as nature-based solutions to the loss of urban ecosystem services, including food provisioning, temperature regulation, carbon sequestration, supporting pollination and nutrient cycling, and cultural, spiritual, and aesthetic values. A case study of the Osage Orchard project in Pawhuska, Oklahoma, USA, showcases cultural foods and practices of Osage ancestors for the benefit of contemporary Indigenous communities (Lovell et al., 2021). A case study of the Seeds of Our City project in Toronto, Canada, showed how community gardens served as counter-hegemonic spaces to discuss food politics while challenging the rational planning processes that gentrified urban neighbourhoods (Baker, 2004). Despite these well-intended principles of urban agriculture, community garden sites in Toronto illustrate some of the limitations of AFMs, such as geographical and cultural barriers that prevent vulnerable groups from participating. For example, Chinese seniors stopped attending the gardening project activities because they did not like the selection of seeds, the promotional materials were in English, and they were unable to travel to the event

venues in the city.

A study in São Paulo, Brazil showed that urban agriculture manifests spatial injustices – well-off city dwellers operate in urban cores whereas poor residents practice urban farming on the margins of the city (Proust, 2022). This phenomenon also applies at the global scale as urban farming in Ghana and India enhanced food security for the urban poor while promoting socio-ecological resilience and more-than-human non-dualism in multispecies and planetary justice (Bannor et al., 2021). A study of food deserts in Cape Town, South Africa revealed that food insecurity as a development problem only applies in the context of rural development (Battersby, 2012). Also in South Africa, a study found that the most important constraints to adopting urban agriculture are the availability and use of urban open spaces, cultural preference for lawns and ornamental plants, and increasing reliance on neoliberal food markets (Du Toit et al., 2022). A case study in Chengdu City, China, concluded that policymakers and planners should look at the underlying constraints to developing urban agriculture, including food environment research and better integration of edible species in urban land use planning (Wang et al., 2021).

3.4.9. Food sovereignty movements

The global food sovereignty movement, spearheaded by La Via Campesina, is a popular agrarian movement originating in South America with implications for local or regional autonomy in various sectors, including food, energy, technology, seed, and other inputs (Altieri and Toledo, 2011). The International Planning Committee for Food Sovereignty (IPC) organised the first International Forum for Agroforestry at the Nyéléni Centre in Selingue, Mali, in 2015, where a declaration was reached among the delegates positioning agroecology as the alternative to industrial food production. Food sovereignty is thus imagined as a lever for just and sustainable food futures as it entails multiple dimensions of justice as informed by 'kincentric' philosophies that seek to nurture relations between humans and non-human entities (including lands, rivers, plants and animals) as kins and resist narratives of commodification (IFA, 2015; Grey and Patel, 2015).

With its origin in the South American rural agrarian movement, this review captures food sovereignty studies conducted in Brazil, Nicaragua, Cuba and Ecuador, which entail various forms of emancipatory movements at different spatial and temporal scales and are understood differently by different actors partly because of its significance in global food security (Conversi, 2016). For example, it complements Indigenous struggles to secure human rights to culturally appropriate foods and protect traditional Indigenous knowledge, which supports both food provisioning and multispecies and planetary justice (Altieri and Toledo, 2011). Food sovereignty movements also assist in hostile regional politics and climate change impacts, such as in Cuba (Leitgeb et al., 2016; Reardon and Perez, 2010). Yet another understanding of food sovereignty entails the rights of nations or regions to achieve self-sufficiency within a foodshed, a region with real or potential capacity to produce food that is sufficient to feed people within the jurisdiction (Agarwal, 2014).

In South America, food sovereignty campaigners involve in the promotion of alternative food movements, such as home garden coffee cooperatives to work across structural barriers challenging the dominant food security discourse on availability, access, utilisation, and stability in rural Nicaragua (Boone and Taylor, 2016) and to promote urban farming in São Paulo, Brazil (Proust, 2022). Furthermore, food sovereignty movements complement feminist political ecology movements as illustrated in the Brazilian women's movements from the field, the forests, and the waters with implications for more-than-human ethics of care (Borghoff Maia and Teixeira, 2021). Food sovereignty movements have influenced food justice movements beyond South America. For example, in Poland, the alliance of farmers' movements enhanced the legitimacy of food sovereignty despite resistance from those who hold religious and conservative values (Bilewicz, 2020). However, critics argue that the food sovereignty movement does not subscribe to other related alternative food movements, particularly the Slow Food Movement, founded in 1989 to promote food traditions and cultures (Amo, 2023).

4. Discussion

This scoping review synthesised a corpus of 140 full-text peer-reviewed articles that examined justice implications of AFMs across nine topics and two themes representing the technical aspects of food provisioning and institutional dimensions of food system governance. While the literature on the former primarily focuses on distributive justice, the latter entails other anthropocentric ideas of justice (procedural, recognitional, restorative, and cosmopolitan) as well as the idea of more-than-human non-dualism in multispecies and planetary justice (Tschakert, 2022). In this section, we also discuss the strengths and limitations of the review.

4.1. Food provisioning

The first theme encompasses Topics 1 to 4, which discuss various types of charitable food assistance. While these programmes are commonly framed as instruments of distributive justice, food assistance frequently functions as a temporary fix to structural inequities like nutrition insecurity, arising from financial austerity, decline of social welfare systems, social exclusion, and market dependency (Riches, 1986, 2002). Despite providing social protections to mitigate against the harshest impacts of marketisation, these initiatives risk reinforcing the issues they aim to redress. For example, recipients of charitable foods experience a loss of dignity, exposure to unsafe and unhealthy foods, limited choice, and exclusionary eligibility criteria (Lindberg et al., 2017), while handouts are seen as dehumanising, trapping recipients in a vicious cycle of poverty (Booth et al., 2018). Additionally, these programmes often serve to sustain structural injustices in the industrial food regime by relying on corporate food donations and surpluses, and government-subsidised agribusiness products, while failing to address the underlying causes of food insecurity (e.g., low wages, corporate food control, poor access to productive resources and decision-making processes). Consequently, hunger is depoliticised and framed as a matter of charity rather than justice.

Normalising charitable handouts on a long-term basis without broader strategies of empowerment and structural transformation represents what Pollard et al. (2018) consider a triple failure: of the market, the state, and civil society. Attempts are being made towards distributing more wholesome foods, such as fruits and vegetables (Buscail et al., 2019; Chiappone et al., 2023) and food catered to specific health conditions, such as T2D and certain cancers (Toma et al., 2022). These alternatives, however, fail to address the structural and intersectional exclusions faced by racialised communities, gender minorities, LGBTQ + populations, and low-income groups (Alkon and Agyeman, 2011; Russomanno and Tree, 2020). Furthermore, charitable food assistance rarely interrogates or mitigates the ecological harms perpetuated by the industrial food regime, including exploitative, extractive, and intensive modes of production on terrestrial and aquatic species, habitat degradation, and biodiversity loss, thereby neglecting justice claims made for more-than-human actors.

4.2. Food system governance

The second theme (Topics 5 to 9) addresses the institutional dimensions of AFMs, especially those related to policy, governance, communing, and collective action. These topics tend to privilege anthropocentric ideas of justice grounded in Western political thought, often overlooking relational ontologies that characterise multispecies and planetary justice.

While many AFMs (such as farmers' markets, organic and local foods, and community-supported agriculture) are oriented towards

ecological resilience, they primarily benefit urban and middle-class consumers who can afford to 'vote with their fork' as well as local producers who own or have access to private land. While these movements promote more ethical and sustainable relations with more-than-humans, they tend to exclude low-income groups, communities of colour, and BIPOC and LGBTQ + communities from multispecies and planetary justice efforts, as they are less able to access or afford such alternatives (Smith, 2019; Russomanno and Tree, 2020). This reflects a significant failure of many AFMs to resist the marketisation of food systems and achieve procedural justice by widening participation in transformative efforts.

In contrast, food sovereignty movements represent a more emancipatory and rights-based strand of AFMs that integrates multispecies and planetary justice concerns into struggles for decolonisation, land rights, collective action, and self-determination. These movements centre on historically marginalised and oppressed peoples as well as the natural environment and human–non-human interdependencies. Our findings affirm that multispecies and planetary justice involves relational and intergenerational responsibilities to distant and nonhuman others (Tschakert, 2022).

Food sovereignty, with its genesis in agrarian struggles in Latin America, stands out as a paradigmatic example of an AFM that enshrines a relational approach to food justice (Oliver et al., 2022). Though traditionally associated with rural contexts, it also holds potential for transforming urban food governance. One compelling example is Cuba's urban agriculture model, which, inspired by food sovereignty principles, illustrates how cities might dismantle human-nature dualisms and cultivate resilient, community-based food systems that can assist in averting food crises (Leitgeb et al., 2016). However, the application of food sovereignty in urban food environments remains under-theorised and under-documented in the literature, limiting its broader translational value (Clendenning et al., 2016).

Despite their potential for enhancing food system governance, AFMs risk depoliticising food environments through incremental policy innovations, top-down governance, and neoliberal co-option (Coulson and Sonnino, 2019). Strategies such as farmers' markets, fair trade certifications, social supermarkets, and the corporate capture of veganism promise reforms while entrenching power imbalances and unequal participation.

Conversely, FJMs represent the emancipatory strand of the triple food movement, explicitly confronting structural injustices and advocating for inclusion of historically marginalised, typically urban, communities. These community-led food advocacy coalitions resist and challenge the incremental neoliberal co-option of AFMs. However, the literature suggests that FJMs have yet to embrace more-than-human ethics or relational ontologies as part of their emancipatory praxis (Clendenning et al., 2016).

Some institutional innovations, such as place-based urban or regional food policy councils, offer promise but remain limited by top-down technocratic planning, rational governance and neoliberal policy logics (Hasson, 2019). Notably, the New Garden City Movement, despite its infancy, illustrates how urban food environment planning might incorporate multispecies and planetary justice sensibilities by maintaining the fabric of open and third spaces, such as aesthetic and edible landscapes and urban food forests.

4.3. Strengths and limitations of the review

To our knowledge, this is the first study to comprehensively synthesise the evidence on how AFMs address injustices in food systems. This scoping review confirms what Smith (2019) calls the triple food movement (corporate agriculture, local food, and intersectional agriculture), subscribing to Fraser's (2013) triple movement theory. We are confident that this review captures how the AFM literature addresses anthropocentric ideas of justice popular in Western political thought (distributive, procedural, recognitional, restorative, and cosmopolitan) and, albeit to a lesser extent, more-than-human non-dual worldviews that emphasise multispecies and planetary justice in food systems. The synthesis of evidence from both qualitative and quantitative studies with a diversity of research methods, from case studies to experimental designs, is another strength of this review, which allowed us to improve the volume of evidence and capture a diversity of food justice ideas and practices presented in the AFM literature.

This study has conceptual as well as methodological limitations. At the conceptual level, we identify two limitations. First, we made a deliberate decision to focus on plant-sourced foods because it is the predominant focus on AFMs, which is particularly true in the domains of food provisioning. Nevertheless, our review captured one study from the Netherlands, where unwanted fish catches were included in food bank parcels, which come under valorisation of food waste, reinforcing the wasteful industrial food systems (Rao et al., 2021). Second, our study design excludes alternative movements that have implications beyond food systems, such as veganism. Vegan movements not only transcend beyond food systems embracing the concept of death (e.g., vegan leather, vegan fur), non-violence, compassion, and care but also are exploited by the corporate sector for capital accumulation (e.g., vegan industrial complex, Trauger, 2022; big veganism, Sexton et al., 2022). Further, veganism as an individual lifestyle choice is popularised by urban middle-class youths, which does not necessarily appeal to ethnic minorities and vulnerable communities whose justice is paramount in AFMs, including African American food justice movements to remove structural barriers to food security (Greenebaum, 2018).

A major methodological limitation of this review is that we included only English language articles. This study may have missed out on relevant studies published in other languages, including Mandarin, Spanish, Portuguese, Hindi, Arabic, and many European languages. Moreover, this scoping review did not appraise the quality of the study because it is not mandarory for scoping reviews and the included peer-reviewed papers are pivotal in the subject and significantly impact the credentials of the discipline. For the same reason, this review did not consider grey literature (e.g., theses, and reports), which could also be a probable limitation.

Our topic modeling approach also has some limitations, which require a pre-defined number of static topics. We address this limitation by estimating an optimum topic number and evaluating topic evolution across the study period. We interpret the word clusters provided by the topic modeling to describe the salient topics. This procedure might have author bias. However, we minimise this bias by reflecting the topics with the existing literature.

5. Conclusion

This study synthesised evidence on an under-researched area of global food systems, especially justice implications of alternative food movements using the lens of the 'triple movement theory' (marketisation, social protection, and emancipation). The findings reveal two distinct levels of alternative food movements against industrial food systems: one focused on reformist, protectionist approaches within public and private welfare systems and the other advancing emancipatory, transformative alternatives. The emancipatory strand of the triple movement theory appeared in the AFM literature as an important paradigm to address food injustices from two philosophical worldviews: first, the human-nature dualism popular in Western political ideas of justice (distributive, procedural, recognitional, restorative and cosmopolitan justice); and second, to a lesser extent, more-than-human non-dual worldviews emphasising multispecies and planetary justice. However, an important gap remains on how the anthropocentric idea of justice relates to or conflicts with multispecies and planetary justice in AFMs, calling for explorations into relational and ontological shifts in emancipatory food justice movements, informed by more-than-human worldviews.

This review concludes that alternative food movements literature

addressed injustices in food systems with mixed results, often citing examples of aggravating or recreating injustices. For example, the anthropocentric idea of justice privileges the growing urban middle class, and only limited food justice initiatives transcend the human-nature dualism in food systems. Further, the literature addresses social and environmental justice implications of alternative food movements primarily in the context of developed countries, but an evidence gap remains on how the idea of more-than-human non-dualism challenges the traditional food justice frameworks based on human-nature dualism in both developed and developing country contexts. Advocates of alternative food movements can learn from the findings to avoid co-opting neoliberal ideas of commodified food provisioning and top-down directional food system governance, and as informed by the triple movement theory, those engaged in emancipatory food justice food movements can benefit from closely embracing more-than-human non-dual worldviews.

CRediT authorship contribution statement

Laxmi Prasad Pant: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Sharada Prasad Wasti:** Writing – review & editing, Methodology, Investigation, Formal analysis, Conceptualization. **Charoula Konstantia Nikolaou:** Writing – review & editing, Resources, Methodology, Conceptualization. **Prajal Pradhan:** Writing – review & editing, Visualization, Software, Methodology, Investigation, Formal analysis. **Georgie Hurst:** Writing – review & editing, Methodology, Investigation. **Kiran Kumari Bhattarai:** Writing – review & editing, Methodology, Investigation, Formal analysis.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

This research received REF-QR funding from the Natural Resources Institute, University of Greenwich, the United Kingdom (#E0449). Laxmi Prasad Pant and Charoula Konstantia Nikolaou acknowledge funding from the Medical Research Council/Global Alliance for Chronic Diseases, the United Kingdom (#MR/Z000513/1). Georgie Hurst's research is funded by the UK Food Systems Doctoral Training Programme of the Transforming UK Food Systems Strategic Priorities Fund of the UK Research and Innovation, the United Kingdom (#BB/V011391/1). Prajal Pradhan acknowledges funding from the European Research Council for the BeyondSDG project, the European Union (#101077492). We acknowledge two anonymous reviewers, who provided critical comments to strengthen the ideas presented in the paper, and especially the second reviewer, who challenged us with insightful comments and suggestions in multiple iterations.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.gfs.2025.100877.

Data availability

Data will be made available on request.

References

Ackerman, K., Conard, M., Culligan, P., Plunz, R., Sutto, M.P., Whittinghill, L., 2014. Sustainable food systems for future cities: the potential of urban agriculture. Econ. Soc. Rev. 45 (2), 189–206.
Agarwal, B., 2014. Food sovereignty, food security and democratic choice: critical contradictions, difficult conciliations. J. Peasant Stud. 41 (6), 1247–1268.
Agyeman, J., McEntee, J., 2014. Moving the field of food justice forward through the lens of urban political ecology. Geography Compass 8 (3), 211–220.
Al Shamsi, K.B., Compagnoni, A., Timpanaro, G., Cosentino, S.L., Guarnaccia, P., 2018. A sustainable organic production model for "food sovereignty" in the United Arab Emirates and Sicily-Italy. Sustainability 10 (3), 620.
Alkon, A.H., Agyeman, J., 2011. Cultivating Food Justice: Race, Class and Sustainability. MIT Press, Cambridge, MA.
Alkon, A.H., Norgaard, K.M., 2009. Breaking the food chains: an investigation of food justice activism. Sociol. Inq. 79 (3), 289–305.
Altieri, M.A., Toledo, V.M., 2011. The agroecological revolution in Latin America: rescuing nature, ensuring food sovereignty and empowering peasants. J. Peasant Stud. 38 (3), 587–612.
Amani-Beni, M., Xie, G.D., Yang, Q.J., Russo, A., Khalilnezhad, M.R., 2022. Socio-cultural appropriateness of the use of historic Persian gardens for modern urban edible gardens. Land 11 (1), 38.
Amaro, C.M., Roberts, M.C., 2017. An evaluation of a Dollar-for-Dollar match program at farmers' markets for families using supplemental nutrition assistance program benefits. J. Child Fam. Stud. 26 (10), 2790–2796.
Amo, E., 2023. The slow food movement and the terra-madre project: food sovereignty and translocal assemblages. Globalizations 20 (4), 644–660.
Anguelovski, I., 2015. Alternative food provision conflicts in cities: contesting food privilege, injustice, and whiteness in Jamaica plain. Geoforum 58, 184–194. Boston.
Antadze, N., 2019. Who is the other in the age of the anthropocene? Introducing the unknown other in climate justice discourse. Anthropocene Rev. 6, 38–54. https://doi.org/10.1177/2053019619843679.
Atalan-Helicke, N., Abiral, B., 2021. Alternative food distribution networks, resilience, and urban food security in Turkey during the COVID-19 pandemic. J. Agri. Food Sys. Commun. Develop. 10 (2), 89–104.
Baker, L.E., 2004. Tending cultural landscapes and food citizenship in Toronto's community gardens. Geogr. Rev. 94 (3), 305–325.
Baldy, J., Kruse, S., 2019. Food democracy from the top Down? state-driven participation processes for local food system transformations towards sustainability. Polit. Govern. 7 (4), 68–80.
Bannor, R.K., Sharma, M., Oppong-Kyeremeh, H., 2021. Extent of urban agriculture and food security: evidence from Ghana and India. Int. J. Soc. Econ. 48 (3), 437–455.
Battersby, J., 2012. Beyond the food desert: finding ways to speak about urban food security in South Africa. Geogr. Ann. Ser. B Hum. Geogr. 94 (2), 141–159.
Beck, D.J., Gwilym, H., 2022. The food bank: a safety-net in place of welfare security in times of austerity and the Covid-19 crisis. Soc. Pol. Soc. 22 (3), 545–561.
Berglund, E., Hassanein, N., Lachapelle, P., Stephens, C., 2021. Advancing food democracy: the potential and limits of food policy positions in local government. J. Agri. Food Sys. Commun. Develop. 11 (1), 81–98.
Berner, M., O'Brien, K., 2004. The shifting pattern of food security support: food stamp and food bank usage in North Carolina. Nonprofit Voluntary Sect. Q. 33 (4), 655–672.
Biermann, F., Kalfagianni, A., 2020. Planetary justice: a research framework. Earth Sys. Govern. 6, 100049.
Bilewicz, A.M., 2020. Beyond the modernisation paradigm: elements of a food sovereignty discourse in farmer protest movements and alternative food networks in Poland. Sociol. Rural. 60 (4), 754–772.
Birnbaum, A., Lutke, P., 2023. Food and governmentality in the green city: the case of German food policy councils. Urban Planning 8 (1), 388–398.
Blei, D.M., 2012. Probabilistic topic models. Commun. ACM 55 (4), 77–84. https://doi.org/10.1145/2133806.2133826.
Blitstein, J.L., Lazar, D., Gregory, K., McLoughlin, C., Rosul, L., Rains, C., Hellman, T., Leruth, C., Mejia, J., 2021. Foods for health: an integrated social medical approach to food insecurity among patients with diabetes. Am. J. Health Promot. 35 (3), 369–376.
Boone, K., Taylor, P.L., 2016. Deconstructing homegardens: food security and sovereignty in northern Nicaragua. Agric. Hum. Val. 33 (2), 239–255.
Booth, S., Pollard, C., Coveney, J., Goodwin-Smith, I., 2018. 'Sustainable' Rather than 'subsistence' food assistance solutions to food insecurity: south Australian recipients' perspectives on traditional and social enterprise models. Int. J. Environ. Res. Publ. Health 15 (10), 2086.
Borghoff Maia, A., Teixeira, M.A., 2021. Food movements, agrifood systems, and social change at the level of the national state: the Brazilian Marcha das Margaridas. Sociol. Rev. 69 (3), 626–646.
Boulangeat, I., Allain, S., Crouzat, E., Girard, S., Granjou, C., Poirier, C., Ruault, J.F., Paillet, Y., Arpin, I., 2022. From human-nature dualism towards more integration in socio-ecosystems studies. In: Misiune, I., Depellegrin, D., Egarter Vigl, L. (Eds.), Human-Nature Interactions: Exploring Nature's Values Across Landscapes. Springer International Publishing, Cham, pp. 37–49.
Brito, V.V., Borelli, S., 2020. Urban food forestry and its role to increase food security: a Brazilian overview and its potentialities. Urban For. Urban Green. 56, 126835.
Brzezina, N., Kopainsky, B., Mathijs, E., 2016. Can organic farming reduce vulnerabilities and enhance the resilience of the European food system? A critical assessment using system dynamics structural thinking tools. Sustainability 8 (10), 971.

Burke, T.K., Durr, C., Reamer, D., 2018. The importance of local foods to users of food pantries in accessible rural Alaska. J. Agri. Food Sys. Commun. Develop. 8 (1), 53–69.
Buscail, C., Gendreau, J., Daval, P., Lombrail, P., Hercberg, S., Latino-Martel, P., Julia, C., 2019. Impact of fruits and vegetables vouchers on food insecurity in disadvantaged families from a Paris suburb. BMC Nutrition 5 (1), 26.
Butcher, L.M., Chester, M.R., Aberle, L.M., Bobongie, V.J.A., Davies, C., Godrich, S.L., Milligan, R.A.K., Tartaglia, J., Thorne, L.M., Begley, A., 2014. Foodbank of Western Australia's healthy food for all. Br. Food J. 116 (9), 1490–1505.
Caspi, C.E., Davey, C., Barsness, C.B., Gordon, N., Bohen, L., Canterbury, M., Peterson, H., Pratt, R., 2021a. Needs and preferences among food pantry clients. Prev. Chronic Dis. 18, E29.
Caspi, C.E., Davey, C., Barsness, C.B., Wolfson, J., Peterson, H., Pratt, R.J., 2021b. Applying the healthy eating Index-2015 in a sample of choice-based Minnesota food pantries to Test associations between food pantry inventory, client food selection, and client diet. J. Acad. Nutr. Diet. 121 (11), 2242–2250.
Celermajer, D., Schlosberg, D., Rickards, L., Stewart-Harawira, M., Thaler, M., Tschakert, P., Verlie, B., Winter, C., 2021. Multispecies justice: theories, challenges, and a research agenda for environmental politics. Environ. Polit. 30, 119–140. https://doi.org/10.1080/09644016.2020.1827608.
Chapnick, M., Barnidge, E., Sawicki, M., Elliott, M., 2019. Healthy options in food Pantries-A qualitative analysis of factors affecting the provision of healthy food items in St. Louis, Missouri. J. Hunger Environ. Nutr. 14 (1), 262–280.
Chiappone, A., Gribben, K., Calloway, E.E., Parks, C.A., Fricke, H.E., Stern, K.L., Blaser, C., Yaroch, A.L., 2023. Food pantry use and intake of foods with added sugar, sugar sweetened beverages and fruits and vegetables among low-income parents in a large Midwestern city. J. Hunger Environ. Nutr. 18 (2), 261–271.
Clendenning, J., Dressler, W.H., Richards, C., 2016. Food justice or food sovereignty? Understanding the rise of urban food movements in the USA. Agric. Hum. Val. 33, 165–177. https://doi.org/10.1007/s10460-015-9625-8.
Conversi, D., 2016. Sovereignty in a changing world: from westphalia to food sovereignty. Globalizations 13 (4), 484–498.
Cooksey-Stowers, K., Schwartz, M.B., Brownell, K.D., 2017. Food swamps predict obesity rates better than food deserts in the United States. Int. J. Environ. Res. Publ. Health 14 (11), 1366.
Coulson, H., Milbourne, P., 2021. Food justice for all?: searching for the 'justice multiple' in UK food movements. Agric. Hum. Val. 38 (1), 43–58.
Coulson, H., Sonnino, R., 2019. Re-scaling the politics of food: place-based urban food governance in the UK. Geoforum 98, 170–179.
Dalma, A., Petralias, A., Tsiampalis, T., Nikolakopoulos, S., Veloudaki, A., Kastorini, C. M., Papadimitriou, E., Zota, D., Linos, A., Team, D.P.R., 2020. Effectiveness of a school food aid programme in improving household food insecurity; a cluster randomized trial. Eur. J. Publ. Health 30 (1), 171–178.
Du Toit, M.J., Rendón, O., Cologna, V., Cilliers, S.S., Dallimer, M., 2022. Why home gardens fail in enhancing food security and dietary diversity. Front. Ecol. Evol. 10, 804523.
Ford, J., Lardeau, M.-P., Vanderbilt, W., 2012. The characteristics and experience of community food program users in arctic Canada: a case study from Iqaluit, Nunavut. BMC Public Health 12, 464.
Fraser, N., 2009. Scales of Justice: Reimagining Political Space in a Globalizing World. Cambridge University Press, New York.
Fraser, N., 2013. A triple movement?: parsing the politics of crisis after Polanyi. New Left Rev. 81, 119–132.
Fraser, N., 2017. A triple movement? Parsing the politics of crisis after Polanyi. In: Burchardt, M., Kirn, G. (Eds.), Beyond Neoliberalism: Social Analysis After 1989. Springer International Publishing, Cham, pp. 29–42.
Gilbert, J.L., Williams, R.A., 2020. Pathways to reparations: land and healing through food justice. Hum. Geogr. 13 (3), 228–241.
Gottlieb, R., Joshi, A., 2010. Food Justice. The MIT Press.
Greenebaum, J., 2018. Vegans of color: managing visible and invisible stigmas. Food Cult. Soc. 21 (5), 680–697. https://doi.org/10.1080/15528014.2018.1512285.
Grey, S., Patel, R., 2015. Food sovereignty as decolonization: some contributions from Indigenous movements to food system and development politics. Agric. Hum. Val. 32, 431–444.
Grün, B., Hornik, K., 2011. Topicmodels: An R package for fitting topic models. J. Stat. Softw. 40, 1–30.
Guell, C., Brown, C.R., Iese, V., Navunicagi, O., Wairiu, M., Unwin, N., 2021. "We used to get food from the garden." Understanding changing practices of local food production and consumption in small island states. Soc. Sci. Med. 284, 114214.
Gunen, B., Reznar, M.M., Yan, S., Poirier, L., Katragadda, N., Ali, S.H., Sundermeir, S.M., Gittelsohn, J., 2022. Fresh shelves, healthy pantries: a pilot intervention trial in Baltimore city food pantries. Int. J. Environ. Res. Publ. Health 19 (23), 15740.
Gurganus, E.A., Marfo, N.Y.A., Schwartz, M.B., Cooksey Stowers, K., 2021. Stakeholders' perspectives on the current status of partnerships between the food banking and healthcare systems to address food insecurity in the US. Nutrients 13 (12), 4502.
Guthman, J., 2008. Bringing good food to others: investigating the subjects of alternative food practice. Cult. Geogr. 15 (4), 431–447.
Hasson, A., 2019. Building London's food democracy: assessing the contributions of urban agriculture to local food decision-making. Polit. Govern. 7 (4), 154–164.
Heflin, C., Price, A., 2019. Food pantry assistance and the great recession. J. Hunger Environ. Nutr. 14 (1), 225–239.
Hill, A.E., Guittar, S.G., 2023. Powerlessness, gratitude, shame, and dignity: emotional experiences of food pantry clients. J. Hunger Environ. Nutr. 18 (2), 192–208.
IFA, 2015. Declaration of the international forum for agroecology, Nyéléni, Mali: 27 February 2015. Development 58 (2), 163–168.
Jones, A.D., Hoey, L., Blesh, J., Miller, L., Green, A., Shapiro, L.F., 2016. A systematic review of the measurement of sustainable diets. Adv. Nutr. 7 (4), 641–664.
Kaiser, M.L., Hermsen, J., 2015. Food acquisition strategies, food security, and health status among families with children using food pantries. Families Soc. J. Contempor. Soc. Serv. 96 (2), 83–90.
Kaljonen, M., Kortetmäki, T., Tribaldos, T., Huttunen, S., Karttunen, K., Maluf, R.S., Niemi, J., Saarinen, M., Salminen, J., Vaalavuo, M., Valsta, L., 2021. Justice in transitions: widening considerations of justice in dietary transition. Environ. Innov. Soc. Transit. 40, 474–485.
Kato, Y., McKinney, L., 2015. Bringing food desert residents to an alternative food market: a semi-experimental study of impediments to food access. Agric. Hum. Val. 32 (2), 215–227.
Kempainen, S., Cutts, D.B., Robinson-O'Brien, R., De Kesel Lofthus, A., ra, Gilbertson, D. T., Mino, R., 2023. A collaborative pilot to support patients with diabetes through tailored food Box home delivery. Health Promot. Pract. 24 (5), 963–968.
Kim, S., 2015. Exploring the endogenous governance model for alleviating food insecurity: comparative analysis of food bank systems in Korea and the USA. Int. J. Soc. Welfare 24 (2), 145–158.
Kirk, M.D., Pires, S.M., Black, R.E., Caipo, M., Crump, J.A., Devleesschauwer, B., Döpfer, D., Fazil, A., Fischer-Walker, C.L., Hald, T., 2015. World Health Organization estimates of the global and regional disease burden of 22 foodborne bacterial, protozoal, and viral diseases, 2010: a data synthesis. PLoS Med. 12 (12), e1001921.
Leitgeb, F., Schneider, S., Vogl, C.R., 2016. Increasing food sovereignty with urban agriculture in Cuba. Agric. Hum. Val. 33 (2), 415–426.
Leung, C.W., Fulay, A.P., Parnarouskis, L., Martinez-Steele, E., Gearhardt, A.N., Wolfson, J.A., 2022. Food insecurity and ultra-processed food consumption: the modifying role of participation in the Supplemental Nutrition Assistance Program (SNAP). Am. J. Clin. Nutr. 116 (1), 197–205.
Lindberg, R., Lawrence, M., Caraher, M., 2017. Kitchens and pantries-helping or hindering? The perspectives of emergency food users in Victoria, Australia. J. Hunger Environ. Nutr. 12 (1), 26–45.
Loopstra, R., Lambie-Mumford, H., 2023. Food banks: understanding their role in the food insecure population in the UK. Proc. Nutr. Soc. 82 (3), 253–263.
Lovell, S.T., Hayman, J., Hemmelgarn, H., Hunter, A.A., Taylor, J.R., 2021. Community orchards for food sovereignty, human health, and climate resilience: indigenous roots and contemporary applications. Forests 12 (11), 1533.
Mannar, V., Micha, R., Allemandi, L., Afshin, A., Baker, P., Battersby, J., Bhutta, Z., Corvalan, C., Di Cesare, M., Chen, K., 2020. 2020 Global Nutrition Report: Action on Equity to End Malnutrition. Development Initiatives, Bristol, UK, 1916445276. https://globalnutritionreport.org/reports/2020-global-nutrition-report. (Accessed 12 December 2023).
Martin, K., Xu, R., Schwartz, M.B., 2021. Food pantries select healthier foods after nutrition information is available on their food bank's ordering platform. Public Health Nutr. 24 (15), 5066–5073.
Martinez, S.M., Chodur, G.M., Esaryk, E.E., Kaladijian, S., Ritchie, L.D., Gr, ner, M., 2022. Campus food pantry use is linked to better health among public university students. J. Nutr. Educ. Behav. 54 (6), 491–498.
McCauley, D., Quintavalla, A., Prifti, K., Binder, C., Broddén, F., van den Brink, H., 2024. Sustainability justice: a systematic review of emergent trends and themes. Sustain. Sci. https://doi.org/10.1007/s11625-024-01565-8.
Musa, A.O., Carpio, C.E., Wilna, O.T., 2023. Who uses food banks and other private food charities? A comparison with SNAP users. J. Hunger Environ. Nutr. 18 (2), 164–177.
Myers, J.S., Sbicca, J., 2015. Bridging good food and good jobs: from secession to confrontation within alternative food movement politics. Geoforum 61, 17–26.
Newman, L., Newell, R., Mendly-Zambo, Z., Powell, L., 2021. Bioengineering, telecoupling, and alternative dairy: agricultural land use futures in the Anthropocene. Geogr. J. https://doi.org/10.1111/geoj.12392.
Nikita, M., Chaney, N., 2020. Tuning of the Latent Dirichlet Allocation Models Parameters [R Package Ldatuning Version 1.0. 2]: Comprehensive R Archive Network (CRAN).
Oliver, B., Deawuo, L.A., Rao, S., 2022. A food sovereignty approach to localization in international solidarity. Societies 12 (5), 145.
Ouzzani, M., Hammady, H., Fedorowicz, Z., Elmagarmid, A., 2016. Rayyan—A web and mobile app for systematic reviews. Syst. Rev. 5, 1–10.
Parsons, K., Lang, T., Barling, D., 2021. London's food policy: leveraging the policy sub-system, programme and plan. Food Policy 103, 102037.
Pereira, L., Drimie, S., Zgambo, O., Biggs, R., 2020. Planning for change: transformation labs for an alternative food system in Cape Town, South Africa. Urban Transform. 2, 13.
Peters, M.D., Godfrey, C.M., Khalil, H., McInerney, P., Parker, D., Soares, C.B., 2015. Guidance for conducting systematic scoping reviews. Int. J. Evid. Base. Healthc. 13 (3), 141–146.
Polanyi, K., 1945. The Great Transformation; Trade and Market in Early Empires. Beacon Press, Boston.
Pollard, C.M., Mackintosh, B., Campbell, C., Kerr, D., Begley, A., Jancey, J., Caraher, M., Berg, J., Booth, S., 2018. Charitable food systems' capacity to address food insecurity: an Australian capital City audit. Int. J. Environ. Res. Publ. Health 15 (6), 1249.
Porter, C.M., Wechsler, A.M., Naschold, F., 2022. WY markets matter pilot Study results: farmers market coupons improve food security and vegetable consumption. J. Hunger Environ. Nutr. 17 (1), 126–134.
Pradhan, P., Callaghan, M., Hu, Y., Dahal, K., Hunecke, C., Reusswig, F., Lotze-Campen, H., Kropp, J.P., 2023. A systematic review highlights that there are multiple benefits of urban agriculture besides food. Global Food Secur. 38, 100700.
Pratley, E.M., Dodson, B., 2014. The spaces for farmers in the city: a case study comparison of Direct Selling Alternative Food networks in Toronto, Canada and Belo

Horizonte, Brazil. Canadian Food Studies/La Revue canadienne des études sur l'alimentation 1 (1), 72–87.
Proust, A., 2022. Food justice and land justice in São Paulo: urban subsistence farming on the margins of the city. Rev. Agri Food Environ. Studies 103 (4), 347–367.
Rao, M., Bilić, L., Duwel, J., Herentrey, C., Lehtinen, E., Lee, M., Díaz Calixto, M.A., Bast, A., de Boer, A., 2021. Let them eat fish!-exploring the possibility of utilising unwanted catch in food bank parcels in the Netherlands. Foods 10 (11). https://doi.org/10.3390/foods10112775Rao. Madhura.
Rawls, J., 1971. A Theory of Justice. Harvard University Press, Boston, USA.
Reardon, J.A.S., Perez, R.A., 2010. Agroecology and the development of indicators of food sovereignty in Cuban food systems. J. Sustain. Agric. 34 (8), 907–922.
Reynolds, K., 2015. Disparity despite diversity: social injustice in New York city's urban agriculture system. Antipode 47 (1), 240–259.
Riches, G., 1986. Food Banks and the Welfare Crisis. The Canadian Council on Social Development, Ottawa, Canada.
Riches, G., 2002. Food banks and food security: welfare reform, human rights and social policy. Lessons from Canada? Soc. Pol. Adm. 36 (6), 648–663.
Rodriguez, A., Jacome-Polit, D., Santandreu, A., Paredes, D., Alvaro, N.P., 2022. Agro-ecological urban agriculture and food resilience: the Case of Quito, Ecuador. Front. Sustain. Food Syst. 6, 550636.
Russomanno, J., Tree, J.M.J., 2020. Food insecurity and food pantry use among transgender and gender non-conforming people in the Southeast United States. BMC Public Health 20 (1), 1–11.
Seguin-Fowler, R.A., Hanson, K.L., Pitts, S.B.J., Kolodinsky, J., Sitaker, M., Ammerman, A.S., Marshall, G.A., Belarmino, E.H., Garner, J.A., Wang, W.W., 2021. Community supported agriculture plus nutrition education improves skills, self-efficacy, and eating behaviors among low-income caregivers but not their children: a randomized controlled trial. Int. J. Behav. Nutr. Phys. Activ. 18 (1), 112.
Sexton, A.E., Garnett, T., Lorimer, J., 2022. Vegan food geographies and the rise of big veganism. Prog. Hum. Geogr. 46 (2), 605–628. https://doi.org/10.1177/03091325211051021.
Smith, B.J., 2019. Food justice, intersectional agriculture, and the triple food movement. Agric. Hum. Val. 36 (4), 825–835.
Smith, P.K., Hoerr, S.L., 1992. A comparison of current food bank users, non-users and past users in a population of low income single mothers. J. Nutr. Educ. 24 (1), 59S–66S.
Stauffer, J.M., Vanajakumari, M., Kumar, S., Mangapora, T., 2022. Achieving equitable food security: how can food bank mobile pantries fill this humanitarian need. Prod. Oper. Manag. 31 (4), 1802–1821.
Sutcliffe, A., 1990. From town—country to town planning: changing priorities in the British garden city movement, 1899–1914. Plan. Perspect. 5 (3), 257–269.
Tackett, A.P., Farrow, M.L., McQuaid, E.L., 2018. Food security, utilization of food assistance programs, and caregiver perceptions of food-induced anaphylaxis risk in children with food allergies. Pediatric Allergy Immunol. Pulmonol. 31 (2), 91–96.
Tarasuk, V., Eakin, J.M., 2003. Charitable food assistance as symbolic gesture: an ethnographic study of food banks in Ontario. Soc. Sci. Med. 56 (7), 1505–1515.
Tarasuk, V., Dachner, N., Loopstra, R., 2014. Food banks, welfare, and food insecurity in Canada. Br. Food J. 116 (9), 1405–1417.
Thiery, W., Lange, S., Rogelj, J., Schleussner, C.-F., Gudmundsson, L., Seneviratne, S.I., Andrijevic, M., Frieler, K., Emanuel, K., Geiger, T., Bresch, D.N., Zhao, F., Willner, S. N., Büchner, M., Volkholz, J., Bauer, N., Chang, J., Ciais, P., Dury, M., François, L., Grillakis, M., Gosling, S.N., Hanasaki, N., Hickler, T., Huber, V., Ito, A., Jägermeyr, J., Khabarov, N., Koutroulis, A., Liu, W., Lutz, W., Mengel, M., Müller, C., Ostberg, S., Reyer, C.P.O., Stacke, T., Wada, Y., 2021. Intergenerational inequities in exposure to climate extremes. Science 374, 158–160. https://doi.org/10.1126/science.abi7339.
Toma, K.G., Masini, I., Johnson, G., Birring, P., Alkafaji, R., Do, C., Cui, C.L., Malinak, D., Beck, E., 2022. Implementation of an On-Site food prescription Project to address food insecurity in multiple free Clinic sites serving an adult latinx population. J. Hunger Environ. Nutr. https://doi.org/10.1080/19320248.2022.2097037. Online first.
Trauger, A., 2022. The vegan industrial complex: the political ecology of not eating animals. J. Political Ecol. 29. https://doi.org/10.2458/jpe.3052.
Tricco, A.C., Lillie, E., Zarin, W., O'Brien, K.K., Colquhoun, H., Levac, D., Moher, D., Peters, M.D.J., Horsley, T., Weeks, L., Hempel, S., Akl, E.A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M.G., Garritty, C., Lewin, S., Godfrey, C.M., Macdonald, M.T., Langlois, E.V., Soares-Weiser, K., Moriarty, J., Clifford, T., Tunçalp, Ö., Straus, S.E., 2018. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann. Intern. Med. 169 (7), 467–473.
Tschakert, P., 2022. More-than-human solidarity and multispecies justice in the climate crisis. Environ. Polit. 31, 277–296. https://doi.org/10.1080/09644016.2020.1853448.
Wang, N., Zhu, L., Bing, Y., Chen, L., Fei, S., 2021. Assessment of urban agriculture for evidence-based food planning: a case study in Chengdu, China. Sustainability 13 (6), 3234.
Warshawsky, D.N., 2016. Civil society and public–private partnerships: case study of the Agri-FoodBank in South Africa. Soc. Cult. Geogr. 17 (3), 423–443.
Wells, R., Caraher, M., 2014. UK print media coverage of the food bank phenomenon: from food welfare to food charity? Br. Food J. 116 (9), 1426–1445.
Williams, A., May, J., 2022. A genealogy of the food bank: historicising the rise of food charity in the UK. Trans. Inst. Br. Geogr. 47 (3), 618–634.
Winter, C.J., Schlosberg, D., 2023. What matter matters as a matter of justice? Environ. Polit. https://doi.org/10.1080/09644016.2023.2220640. Online first.
Wittman, H., 2009. Reworking the metabolic rift: La Vía Campesina, agrarian citizenship, and food sovereignty. J. Peasant Stud. 36 (4), 805–826. https://doi.org/10.1080/03066150903353991.