La gouvernance des systèmes alimentaires locaux à travers le prisme des ODD[1]

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Résumé :

Plusieurs études se sont concentrées sur le fonctionnement des conseils locaux de politique alimentaire et sur leur rôle clé dans l'institutionnalisation de mécanismes de gouvernance participative. Néanmoins, cette littérature reste dispersée, peu concluante et principalement dissociée des objectifs de développement durable (ODD) qui sont de plus en plus utilisés. Basée sur une analyse systématique de 79 articles académiques, cette synthèse réaliste met en lumière les facteurs clés de succès qui sous-tendent l'efficacité des conseils locaux de politique alimentaire. Les résultats montrent que les systèmes alimentaires locaux peuvent jouer un rôle important dans la promotion des questions de développement durable, bien que la couverture des ODD reste très inégale selon les objectifs considérés. L'étude montre également le rôle clé de plusieurs principes de gouvernance collaborative, notamment la participation élargie, le leadership facilitateur et la recherche de consensus, dans la réussite de ces systèmes.

Mots-clés : Système alimentaire local, Objectifs de développement durable (ODD), Gouvernance des systèmes alimentaires, Revue systématique de la littérature, Synthèse réaliste

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1. INTRODUCTION

The impacts of dietary behaviors on sustainability issues are the subject of a growing body of research that has highlighted their fundamental importance for climate change mitigation, biodiversity conservation, and population health (e.g., El Bilali et al., 2019; Guillaumie et al., 2020). Studies on this issue have analyzed the impacts of different dietary habits on ecosystems and the global benefits that could result from changes in individual behaviors, particularly in rich countries (e.g., Henry et al., 2019; Röös et al., 2020; Rust et al., 2020). However, behaviors in this area are influenced by many factors, such as food insecurity, accessibility of quality products, or initiatives put in place to improve food system governance (Carey, 2013; Giambartolomei et al., 2021; Miedema, 2019). Among these initiatives, a particular attention has been paid in the literature to the strengthening of local food systems (Hebinck & Page, 2017). A local food system is defined as all the stakeholders operating on a local territory (a neighborhood, a municipality, or a region/county), who are concerned by the food and agri-food sector issues and mobilized to work collectively on these issues (Billion, 2017; Rastoin, 2014). It includes stakeholders from agri-food sub-sectors (e.g., production, supply, processing, distribution, marketing, consumption, waste management), local governments (e.g., municipal administrators, elected officials) as well as civil society and non-profit organizations (e.g., academics, health professionals, community groups) (Donkers, 2013). Local food policy councils have been set up to establish a coordinated action of stakeholders and ensure the day-to-day governance of local food systems (Lange et al., 2021; Lourival & Rose, 2022). These councils are particularly interested in nutrition and public health issues (e.g., access to healthy food and the fight against food insecurity, see Jhagroe, 2019), economic development and food

autonomy (e.g., promoting local development, regulating the supply chain and food, see Amilien et al., 2019), and environmental issues (e.g., climate change, food waste, see Freudenberg et al., 2018).

Although focused on food issues, these global challenges are closely linked to the Sustainable Development Goals (SDGs), which were developed by the UN as part of the 2030 Agenda for Sustainable Development following several years of international consultations to define priorities in this area (Heras-Saizarbitoria et al., 2022; Saner et al., 2019). The objective of this study is to analyze the contribution to the SDGs of local food system governance (LFSG) implemented in Western countries and the key success factors in the development and effectiveness of these systems.

This objective is relevant for three main reasons. First, sustainability initiatives by governments, institutions, and private or public organizations are increasingly centered around the 17 SDGs that were endorsed, in 2015, by 193 countries (Biermann et al., 2022; Heras-Saizarbitoria et al., 2022). However, how these goals are implemented in practical terms, including at the level of regional institutions and governance systems, remains understudied. This study therefore sheds new light on the possible contribution of a regional collaborative governance system—the LFSG—to the 17 SDGs. Second, food issues are characterized by their cross-cutting nature, which affects the social, environmental, and economic dimensions of sustainability (Hebinck et al., 2021; Iazzi et al., 2022). From this perspective, it can be assumed that LFSG can have a significant impact on the promotion of the main objectives covered by the SDGs. However, apart from a few studies that have briefly addressed this issue (Blay-Palmer et al., 2018; Landert et al., 2017; Lourival & Rose, 2022), the role of LFSG in promoting the SDGs has been clearly overlooked in the literature. Third, through its rapid development and participatory governance mechanisms, LFSG seems a priori well suited to managing sustainability issues, which requires the active participation of diverse stakeholders (Baldy & Kruse, 2019; Garcia-Gonzalez &

Eakin, 2019). Thus, numerous local food policy councils have been developed in North America (Christensen & Phillips, 2016; Sloane et al., 2019) and Europe (Baldy & Kruse, 2019; Lever et al., 2019), and have grown exponentially over the past decades (Boden & Hoover, 2018). In 2017, there were 341 such councils, compared to only 27 in 2003 (Lange et al., 2021). Similar approaches of LFSG include food system planning (Clark et al., 2017; O'Brien & Nisbett, 2019), urban food policy (Fridman & Lenters, 2013; Sibbing & Candel, 2021), and urban food strategy (Giambartolomei et al., 2021; Reynolds, 2009). These initiatives have in common to contribute to the food system governance based on the principles of food democracy, i.e. representativeness, participation, inclusion, collaboration, and consensus seeking among stakeholders (Hassanein, 2008).

Similarly, the academic literature on local food policy councils has gone very dense over the last two decades. It addressed a wide range of topics, including food security issues (McClintock et al., 2012), involvement of marginalized groups (Andreola et al., 2021; Clark et al., 2017), leadership of local governments (Baldy & Kruse, 2019; Berglund et al., 2021), as well as food policy priorities (Calancie, Cooksey-Stowers, et al., 2018; Lange et al., 2021). Several systematic reviews have been conducted to synthesize this rich and sparse literature. Among the most relevant, Kang et al. (2022) explored elements of collaborative governance in local food systems contributing to the transition to sustainable models of food production, distribution, and consumption. Ambrose et al. (2022) analyzed the formal written mandates of local food policy councils in the USA with the aim to characterize their membership, focus, and activities. Zhong et al. (2021) conducted a bibliometric review for characterizing the papers published worldwide on urban food systems. Lastly, El Bilali (2019) conducted a critical review of papers focusing on agri-food sustainability transitions with the aim to document the main research gaps. Despite the interesting contributions of these reviews, it remains difficult to establish, based on all the available literature, a comprehensive portrait of the factors

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contributing to the success of local food systems and their possible impacts on the 17 SDGs. Yet this would be a very useful source of information for both researchers and practitioners interested in the implementation of local food policy councils and their contributions to sustainability.

2. METHODOLOGY

2.1. STUDY DESIGN

This systematic review followed the realist synthesis framework originally proposed by Pawson (2005). Realist synthesis is characterized by identifying the critical mechanisms operating within an initiative, their outcomes, and the contextual factors influencing them (Nilsson et al., 2016; Rycroft-Malone et al., 2012). For MacDonald et al. (2016, p. 3), realist synthesis is essentially guided by answering the following question: "What mechanisms cause the desired outcomes to occur, and in what contexts are they triggered?" Considering that the objective of this review was to map the factors influencing acceptability and sustainability outcomes of local food policy councils, the realist synthesis emerged as the most appropriate study design. MacDonald et al. (2016) also recommended seven steps for conducting a realist synthesis: defining the scope of the review; locating existing theories and conceptual frameworks; conducting the literature search; selecting of included articles; extracting data; analyzing and synthesizing the data; and developing recommendations and a conceptual model resulting from the synthesis.

2.2. SCOPE OF THE REVIEW

This review focused on factors influencing acceptability and sustainability outcomes of local food policy councils in Western countries. Particular attention was paid to articles that described these initiatives in detail, collected empirical data, and attempted to conceptualize their mechanisms and key success factors to address the main issues covered by the SDGs. The review had a practical orientation and aimed to provide a synthesis of best practices and promising strategies to overcome common sustainability challenges related to local food

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systems. The research team, including knowledge users, collaboratively decided on the scope of the study and had the opportunity to refine and agree on the research question and objectives guiding this work.

2.3. CONCEPTUAL FRAMEWORK

This realist synthesis was guided by the collaborative governance model (Ansell & Gash, 2008) and the main sustainability issues covered by the 17 SDGs. The collaborative governance model was selected to guide the coding and data analysis of issues related to the dynamics of actors, key success factors, and democratic values embodied in LFSG. Indeed, similarly to what is done in LFSG, this model conceptualizes the setting up of formal and collective meetings by public actors, the inclusion and strong participation of non-state actors in these meetings, and the inclusion of these actors' views in decision-making by consensus on public policy issues. Collaborative governance is defined by Ansell and Gash (2008, p. 544) as "a governance arrangement in which one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensual, and deliberative and that is intended to develop or implement public policies or manage public programs or assets." This model is characterized by five sets of variables, including the starting conditions, the institutional design, the collaborative process, the facilitative leadership, and a contingent variable consisting of the factors "time, trust and interdependence."

2.4. LITERATURE SEARCH

Studies were identified by searching electronic databases related to management (ABI/Inform Global, Business Source Premier), agriculture and food (CAB Abstract), sustainable development (Geo-base), and interdisciplinary research (Web of Science). The keyword strings were built around three main concepts: "food governance/council/planning/strategy/politic," "sustainability," and "local/municipal/regional/territorial level." Two members of the research

team independently conducted the initial search in the titles and abstracts (Appendix A). The last search was conducted on 15 December 2021.

2.5. SELECTION OF INCLUDED ARTICLES

Several inclusion criteria were used: 1) The study had to focus on one or several governance initiatives in which various actors in a territory were brought together, in a formal setting and with the support of local authorities, to address food system issues from a planning and policy development perspective; 2) The study had to cover one or more dimensions of the 17 SDGs, namely no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, and partnerships for the goals; 3) The governance initiative had a local or regional focus (e.g., district, municipality, county, region); 4) The study addressed concrete and operational issues relating to the governance initiative and explored at least two of the objectives assigned to this review, i.e., to explore the contexts, the mechanisms, and sustainability outcomes of LFSG; 5) The study was conducted in a Western country (e.g., North America, Western Europe) and written in English, for practical reasons. Exclusion criteria were also used. Studies that dealt with governance initiatives that were not related to the food system approach (e.g., agricultural network governance) or that were not at a local level (e.g., global food system governance) were excluded. Studies that addressed the governance initiative in a superficial way or did not provide concrete examples were excluded. Lastly, non-peer-reviewed research (e.g., reported in professional journals, conference proceedings) was also excluded.

The selection process included several steps. First, 5,970 articles were collected by keywords strings and were imported into Covidence software (2021). Second, after eliminating

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duplicates, 173 articles were selected by two independent reviewers based on titles and abstracts. Third, based on full-text analysis, 79 articles were finally selected by two independent reviewers for evaluation (Figure 1). For the title and abstract selection phase, as well as for the full-text selection phase, inter-rater reliability was measured using *Cohen's kappa* coefficients and was found to be very good for both phases, with 0.87 and 0.93 respectively. The discrepancies observed at all these stages were resolved by discussion.

Figure 1. Flow diagram
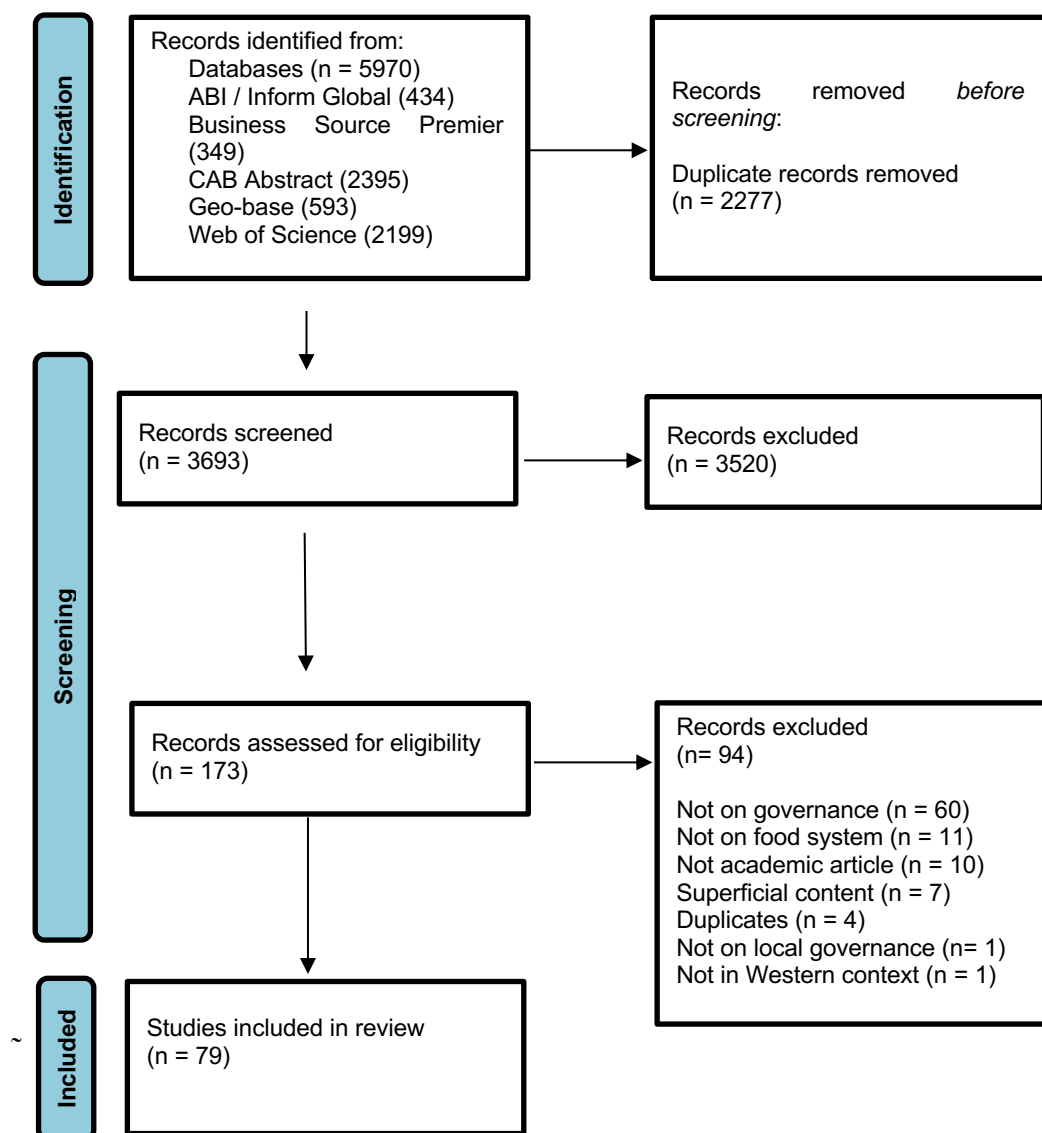
2.6. DATA EXTRACTION

The initial codebook was based on the research questions (e.g., contexts, mechanisms, and outcomes) and the conceptual framework. Discussions with the research team after an initial coding of fifteen studies helped to refine the codebook and ensure the reliability of the coding process. After reaching a consensus on the codebook and the coding process, background information was extracted on authors, year of publication, country, objectives, type of LFSG initiative reported, geographical level, study design, and theoretical approaches. In line with the realist synthesis approach, a summary of the context-mechanisms-outcomes chain (CMO chain) was also documented for each study in the form of a memo. Then, a reviewer coded the content of the included articles using NVivo 11 software. Regarding sustainability issues, the 17 SDGs provided a comprehensive framework that was used to categorize information related to LFSG outcomes. To facilitate the coding process, the main characteristics of each SDG were clearly defined from official UN documents (United Nations, 2023) by incorporating the targets and key issues associated with each of them. A total of 60 categories were included in the categorization grid and used to code 3,189 passages.

2.7. DATA SYNTHESIS AND RESULTING CONCEPTUAL FRAMEWORK

Background information was synthesized using frequencies and percentages. Memos on CMO chains were analyzed to develop key profiles of LFSG and synthesize their inherent logical structure (MacDonald et al., 2016). Segments coded in each category were read, summarized, and the most revealing extracts were highlighted. The NVivo 11 frequency analysis tool was used to characterize the categories and the segments coded. Beyond the number of occurrences, the originality of the segments' content contributed to synthesize the salient results of the study. Ultimately, findings were synthesized in a conceptual framework and recommendations for research and practice were made in the discussion section (MacDonald et al., 2016). Findings were placed in the context of the wider literature to further explore lessons learned, and strengths and limitations of the study were discussed (Lodenstein et al., 2013).

3. RESULTS

This review analyzed 79 articles published between 2002 and 2021. Articles covered several countries, mainly the USA (41%) and Canada (22%). They described various types of food system governance initiatives, and most were reported as local food policy councils (37%). In most cases (almost 40% of studies), these initiatives were implemented in jurisdictions with more than 200,000 inhabitants, suggesting they are mainly implemented in the most populated territories. The studies included were mainly qualitative (73%) and most often aimed at sharing experiences. A few publications (38%) mentioned being based on theoretical models (Table 1). The data analysis was structured around two main themes:

- The sustainability outcomes of local food systems according to the 17 SDGs

- The conditions and key success factors for improving the governance of food systems and their sustainability benefits

Table 1. Characteristics of the included studies

Characteristics	Percentage
Publication year	
2002–2012	11%
2013–2015	18%
2016–2018	35%
2019–2021	35%
Country	
USA	42%
Canada	22%
UK	10%
Italy	6%
Netherlands	6%
Multiple countries	5%
Others: Australia (4), Belgium (3), Germany (3), Portugal (2), France (1), Hungary (1), Ireland (1), New Zealand (1), Norway (1), Spain (1), Switzerland (1)	24%
Type of initiative (as reported in the articles)	
Food policy council	37%
Urban food strategy	14%
Urban food policy	11%
Food system planning	9%
Food system governance	8%
Local food strategy	4%
Local food policy	3%
Not reported or unclear	15%

Number of inhabitants concerned by the initiative	
1,000–5,000	3%
5,000–20,000	0%
20,000–50,000	5%
50,000–200,000	15%
More than 200,000	41%
Not reported or unclear	37%
Geographic level*	
Municipal	48%
Community	19%
Local	9%
Regional or county-level	3%
Not reported or unclear	22%
Study design	
Qualitative study	73%
Mixed methods study	9%
Position paper	8%
Quantitative study	6%
Conceptual/theoretical study	4%
Main theoretical approach	
Relating to participation and food democracy (e.g., food citizenship)	16%
Relating to policy and governance (e.g., collaborative governance)	14%
Relating to sustainability and socioecological transition (e.g., sustainable landscape governance approach)	6%
Relating to food system approach (e.g., food policy integration)	6%
Not reported or unclear	65%

*Note: *In this table, community was defined as a part of a municipality's territory and local as a group of municipalities.*

3.1. THE SUSTAINABILITY OUTCOMES OF LFSG

3.1.1. An uneven coverage of the SDGs

Although all the studies reviewed showed the benefits of local food systems on one or more sustainability issues, SDGs are rarely explicitly mentioned in these articles. Surprisingly, only six articles (Blay-Palmer et al., 2018; Crivits et al., 2016; Freudenberg et al., 2018; Landert et al., 2017; Lourival & Rose, 2022; Zerbian & de Luis Romero, 2021) clearly highlighted the importance of LFSG's initiatives for promoting SDGs. This low percentage can be partly explained by the relatively recent launch of the SDGs (2015) and the lack of studies specifically addressing this issue. It can also be explained by the very broad and inclusive nature of the SDGs and the focus of most articles on a limited number of sustainability issues that seem, a priori, more directly impacted by local food systems. While some SDGs (e.g., SDGs 1, 2, 3, 4,

12, and 13) are widely covered, others (e.g., SDGs 14, 15, 16, and 17) are neglected in research.

Figure 2 provides an overview of the very uneven coverage of sustainability issues associated

with the 17 SDGs in the literature. A more detailed analysis of the three main dimensions of

the SDGs according to the 2030 Agenda (People, Planet, and Prosperity) provides a better

understanding of the contribution of LFSG to the main sustainability issues and the reasons

behind the substantial or more limited consideration of these issues in the studies analyzed.

Figure 2. Coverage of the 17 SDGs in the LFSG literature
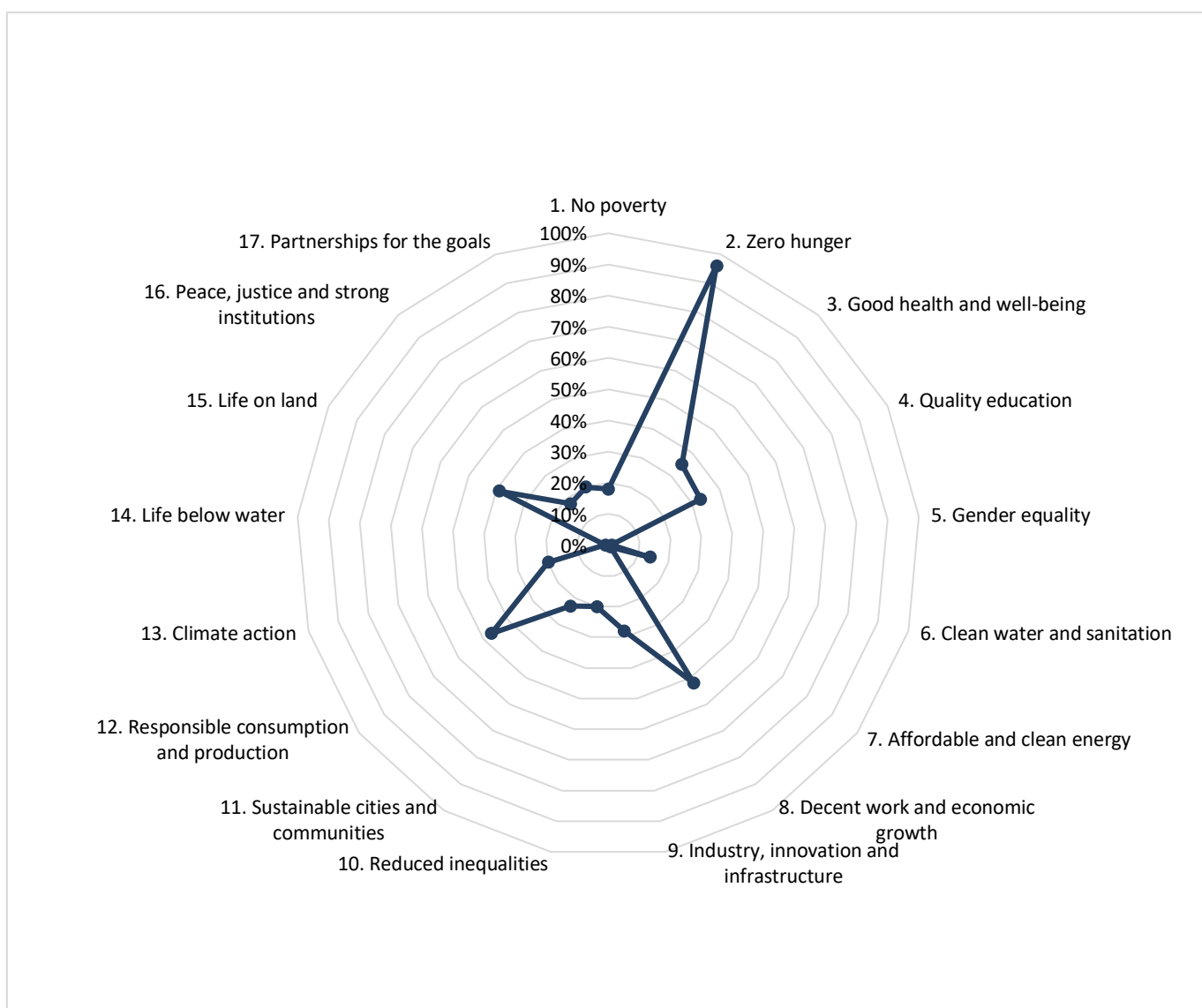
3.1.2. People

The social dimension of sustainability includes seven main SDGs (SDGs 1, 2, 3, 4, 5, 16, and

17) and was covered, to varying degrees, by all the articles analyzed (see Table 2). In general,

the very good coverage of SDGs associated with social issues is explained by the rationale of LFSG, which essentially aims to improve the activities of a regional food system through the collaboration of several stakeholders concerned with these issues and their benefits for local populations, particularly in terms of health and quality of life (Biehl et al., 2018; Scherb et al., 2012). Not surprisingly, zero hunger (SDG 2) is the most covered in the studies, with 96% of articles explicitly mentioning how LFSG helps to promote healthy, sustainable diets, and contributes to reducing malnutrition. Although less covered in the literature, good health and well-being (SDG 3) and no poverty (SDG 1) also seem to be well aligned with LFSG since food has a direct impact on health and is a significant part of household expenditures, especially for the poorest populations (Blay-Palmer et al., 2016; Parsons et al., 2021). Food inflation and the increasingly difficult access to affordable, quality products tend to reinforce the need for concerted measures to fight poverty through food policies adapted to the specificities of the regions concerned. Peace, justice and strong institutions (SDG 16) and partnerships for the goals (SDG 17) are closely linked to the participatory nature of the LFSG. Collaboration among stakeholders on issues of public interest is consubstantial to the LFSG (Buchan et al., 2015; Giambartolomei et al., 2021). It is therefore logical that this collaboration encourages the establishment of targeted partnerships on issues related to specific SDGs. Furthermore, this collaboration tends to strengthen the institutions that play an important role for food security and the adaptation of food security policies to the needs of populations (Hernandez et al., 2018; Rico Mendez et al., 2021). The importance of quality education (SDG 4)—covered in 33% of the studies—was quite unexpected and is mainly explained by the educational role played by LFSG that focusses on promoting good eating habits through better information on this issue (Franzen-Castle et al., 2021; Sloane et al., 2019). The very low coverage of gender equality (SDG 5) was also unexpected given the growing importance of gender-based research in various disciplines. The role of food system on gender discrimination and women's

empowerment does not seem to be considered in the literature as a major issue and, to our knowledge, has not been the subject of specific studies.

Table 2. Outcomes and benefits of LFSG on people

People: "End poverty and hunger, in all their forms and dimensions, and […] ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment" (United Nations General Assembly, 2015, p. 2).	
SDG (Percentage of articles)	Main outcomes and benefits observed from the implementation of LFSG
SDG 1 No poverty (18%)	- Promoting campaigns against poverty and food insecurity in disadvantaged regions (e.g., Blay-Palmer, 2009; Donkers, 2013; Mendes, 2008) - Improving access to affordable food that better meets the specific needs of poor populations in certain regions (e.g., Blay-Palmer et al., 2016; Hebinck & Page, 2017) - Developing activities that promote social justice and well-being, such as ensuring better access to land for marginalized residents (e.g., Berglund et al., 2021; Hammelman, 2019; Palmer et al., 2020)
SDG 2 Zero hunger (96%)	- Carrying out a diagnosis of the food system (strengths, weaknesses, specific needs) in order to put in place policies adapted to local realities, in particular in terms of food security (e.g., Beckie et al., 2013; Carey, 2013; Lourival & Rose, 2022) - Strengthening food security through increased cooperation of different stakeholders (citizens, farmers, municipal officials, and so on) (e.g., Bassarab et al., 2019; Berglund et al., 2021; Blay-Palmer, 2009) - Strengthening local food production initiatives (rooftop gardens, community gardens) in disadvantaged urban areas (e.g., Andreola et al., 2021; Beckie & Bogdan, 2010; Reynolds, 2009; Shey & Belis, 2013) - Setting up community kitchens to encourage the sharing of healthy and affordable meals (e.g., Balázs, 2012; Fridman & Lenters, 2013; Giambartolomei et al., 2021) - Establishing food hubs and food business incubators contributing to the strengthening of local food systems (e.g., Christensen & Phillips, 2016; Crivits et al., 2016; Fridman & Lenters, 2013; Hayhurst et al., 2013) - Developing charitable food initiatives such as food banks and gleaning food donations to reduce food insecurity (e.g., Blay-Palmer et al., 2016; Calancie, Allen, et al., 2018; Calancie, Stritzinger, et al., 2017)
SDG 3 Good health and well-being (35%)	- Promoting measures to reduce the prevalence of diet-related diseases and health problems such as obesity, diabetes, and cardiovascular disease in certain regions (e.g., Parsons et al., 2021; Sibbing et al., 2021; Yee & Harvie, 2020) - Launching programs to increase access to healthy food through local sourcing, responsible catering, organic farming initiatives, and so on (e.g., Doernberg et al., 2019; Rico Mendez et al., 2021; Sloane et al., 2019) - Implementing community activities that contribute to the citizens' well-being and quality of life, such as community gardening, urban agriculture, improving access to green spaces, supporting recreational and sports activities

	(e.g., Balázs, 2012; Berglund et al., 2021; Carey, 2013; Crivits et al., 2016; Porter & Ashcraft, 2020) - Supporting various activities related to public health and occupational health and safety (e.g., Biehl et al., 2018; Blay-Palmer, 2009; Van de Griend et al., 2019)
SDG 4 Quality education (33%)	- Strengthening local knowledge and expertise in food (healthy eating, catering skills, and so on) (e.g., Fridman & Lenters, 2013; Mah & Thang, 2013; Reynolds, 2009) - Improving education and public awareness on agricultural and nutritional topics, including in schools, neighborhoods, and organizations (e.g., Doernberg et al., 2019; Franzen-Castle et al., 2021; O'Brien & Cobb, 2012) - Improving access to affordable, local, and quality food in schools (e.g., Buchan et al., 2015; Parsons et al., 2021; Porter & Ashcraft, 2020)
SDG 5 Gender equality (1%)	- Considering gender equality and gender equity as an indicator of food and agricultural systems sustainability (Landert et al., 2017)
SDG 16 Peace, justice and strong institutions (18%)	- Promoting measures to foster social justice and the rights of workers in the agricultural and agri-food sector from various minorities (migrants, Indigenous communities, and so on) (e.g., Blay-Palmer, 2009; Crivits et al., 2016; Porter & Ashcraft, 2020) - Implementing policies targeted at local institutions (government agencies, schools, municipalities) to reduce external dependency and increase the regionality of the food system (e.g., Baldy & Kruse, 2019; Hernandez et al., 2018; Jhagroe, 2019)
SDG 17 Partnership for the goals (20%)	- Strengthening the links between key players in the food system (local producers and consumers, municipal employees, health organizations, citizens) to implement food-related initiatives that require concerted action (fighting food inflation, launching gastronomic events, establishing local food markets, creating cooking schools, and so on) (e.g., Balázs, 2012; Ballantyne-Brodie & Telalbasic, 2017; Buchan et al., 2015; Giambartolomei et al., 2021) - Establishing coalitions and partnerships to promote objectives related to the SDGs (reduction of food insecurity, promotion of local procurement as part of GHG emission reduction policies, and so on) with political and economic decision makers (e.g., Clayton et al., 2015; Lever et al., 2019; Miedema, 2019; Sloane et al., 2019) - Promoting and improving regional and international cooperation integrating the organic farming multifunctionality (e.g., Rico Mendez et al., 2021)

3.1.3. Planet

The environmental dimension of sustainability is widely covered in the LFSG literature, although some issues, particularly those related to clean energy (SDG 7) and biodiversity (SDGs 14 and 15) remain relatively unexplored (see Table 3). The consideration of environmental issues is mainly explained by the major impacts of food habits on ecosystems,

the growing institutional pressure on these issues, and the importance of stakeholder participation (which is encouraged by LFSG) to manage the complexity and cross-cutting nature of sustainability issues. Responsible consumption and production (SDG 12) is covered by almost half of the studies. Among other things, LFSG encourages local consumption and production, which are considered more responsible as they reduce the environmental impacts associated with transportation (Hubeau et al., 2017; Reynolds, 2009). They also tend to favor the development of regions that find it difficult to compete with food products from regions subject to less stringent regulatory and environmental constraints (Buchan et al., 2015; Lavallée-Picard, 2018). The LFSG also provides appropriate structures to promote a circular economy focusing on the reuse of food residues for composting, soil fertilization, and so on (Calancie, Cooksey-Stowers, et al., 2018; Landert et al., 2017). Climate issues (SDG 13) are closely linked to transportation and to the promotion of diets that limit the major impact of excessive animal protein consumption (Balázs, 2012; Reynolds, 2009). The relatively low coverage of issues related to clean water and sanitation (SDG 6) (14%) can be explained by the highly variable importance of this issue depending on the regions studied in the articles, which may or may not be subject to problems of water scarcity or contamination in connection with food production. Biodiversity issues are mainly related to the life on land (SDG 15), which can be threatened by intensive agriculture and by certain production methods (physical treatment of soils, use of pesticides harmful to ecosystems, and so on). Surprisingly, initiatives related to the protection of life below water (SDG 14)—e.g., the promotion of seafood from responsible fisheries—and measures for affordable and clean energy (SDG 7)—e.g., the use of renewable energies in food production—are virtually ignored in the literature included in the study (see Table 3).

Table 3. Outcomes and benefits of LFSG on the environment

Planet: "Protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change" (United Nations General Assembly, 2015, p. 2)	
SDG (Percentage of articles)	Main outcomes and benefits observed from the implementation of LFSG
SDG 6 Clean water and sanitation (14%)	- Promoting agroecological methods that contribute to water conservation and quality (e.g., Blay-Palmer et al., 2018; Donkers, 2013; Rico Mendez et al., 2021) - Improving access to drinking water through the installation of filling systems and water fountains (e.g., Freudenberg et al., 2018; Parsons et al., 2021; Sibbing & Candel, 2021)
SDG 7 Affordable and clean energy (1%)	- Designing strategies to measure how much energy the city uses to feed itself (Hayhurst et al., 2013)
SDG 12 Responsible consumption and production (47%)	- Strengthening responsible consumption and production through various projects (gastronomic festivals, local food markets, and so on) (Amilien et al., 2019; Balázs, 2012; Ballantyne-Brodie & Telalbasic, 2017; Buchan et al., 2015; Giambartolomei et al., 2021; Yee & Harvie, 2020) - Improving waste management through various measures to reduce, recycle, compost, reuse, and reduce food waste (e.g., Calancie, Cooksey-Stowers, et al., 2018; Landert et al., 2017; Mansfield & Mendes, 2013; Porter & Ashcraft, 2020; Rico Mendez et al., 2021; Robert & Mullinix, 2018)
SDG 13 Climate action (20%)	- Supporting sustainable agricultural practices that help reducing GHG emissions or improving adaptation to climate change (Blay-Palmer et al., 2018; Mansfield & Mendes, 2013) - Implementing direct GHG emission reduction initiatives (optimizing transportation of agricultural products, promoting vegetarian and seasonal meals, and so on) (e.g., Crivits et al., 2016; Freudenberg et al., 2018; Landert et al., 2017; Reynolds, 2009; Shey & Belis, 2013)
SDG 14 Life below water (1%)	- Protecting the sea and local fish stocks from contamination (Amilien et al., 2019)
SDG 15 Life on land (39%)	- Promoting agroecological methods to reduce the ecological footprint and increase biodiversity (e.g., Blay-Palmer et al., 2018; Calancie, Stritzinger, et al., 2017; Hayhurst et al., 2013; Koski et al., 2018; Miedema, 2019; Sibbing et al., 2021; Sieveking, 2019; Zerbian & de Luis Romero, 2021) - Implementing measures to preserve agricultural land and life on land (regulation, control of agricultural practices that contribute to soil erosion, and so on) (e.g., Beckie et al., 2013; Blay-Palmer, 2009; Buchan et al., 2015; Donkers, 2013; Landert et al., 2017; Lourival & Rose, 2022; Robert & Mullinix, 2018; Scherb et al., 2012)

3.1.4. Prosperity

Unlike the social and environmental dimensions, all SDGs associated with the economic dimension are relatively well covered by the studies analyzed (see Table 4). Decent work and economic growth (SDG 8) is by far the most studied. The majority of LFSG seem to emphasize the economic impact of initiatives related to the food production and distribution system (Feenstra, 2002; Yee & Harvie, 2020). This is mostly explained by the large number of regional jobs that depend on these activities (food production and processing, catering, community markets, and so on). LFSG can also contribute to limiting the impact of inequalities (SDG 10) through food aid programs targeted at particularly vulnerable categories of the population (disadvantaged neighborhoods, homeless people, marginalized ethnic groups, and so on) (Calancie, Stritzinger, et al., 2017; Zerbian & de Luis Romero, 2021). By their regional roots and the participation of several stakeholders from urban or rural areas, LFSG also appears to be particularly well adapted to the implementation of food policies responding to local economic needs and contributing to sustainable communities (SDG 11) (Blay-Palmer et al., 2018; Miedema, 2019). Lastly, several studies have highlighted the contribution of LFSG to innovation and the strengthening of infrastructures (SDG 9), in particular through the launch of projects improving regional food autonomy or the support to organizations that have developed innovative products and services in terms of sustainable food (Balázs, 2012; Blay-Palmer et al., 2016).

Table 4. Outcomes and benefits of LFSG on the prospetity

Prosperity: "Ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature" (United Nations General Assembly, 2015, p. 2)	
SDG (Percentage of articles)	Main initiatives and outcomes observed from the implementation of LFSG
SDG 8 Decent work and economic growth (52%)	- Supporting economic development to fight poverty and hunger (e.g., Amilien et al., 2019; Blay-Palmer et al., 2018; Feenstra, 2002; Freudenberg et al., 2018; Yee & Harvie, 2020) - Promoting a green economy through various initiatives related to agritourism, community agriculture, or job creation in this field (e.g., Blay-Palmer et al., 2016; Fridman & Lenters, 2013; Parsons et al., 2021)

	- Improving the living and working conditions of agricultural workers and small entrepreneurs (decent wages, respect for workers' rights, equity in the distribution of resources, and so on) (e.g., Crivits et al., 2016; Donkers, 2013; Lavallée-Picard, 2018; Palmer et al., 2020; Sadler et al., 2015)
SDG 9 Industry, innovation and infrastructure (28%)	- Constructing or improving food processing, storage and distribution networks and infrastructure (e.g., Balázs, 2012; Blay-Palmer et al., 2016; Clark et al., 2017) - Supporting the creation and development of businesses contributing to local food supply or innovative sustainable food products and services (Carey, 2013; Christensen & Phillips, 2016; Doernberg et al., 2019; Hammelman, 2019; Lavallée-Picard, 2018)
SDG 10 Reduced inequalities (20%)	- Facilitating access to fresh and local products to a larger part of the population by providing food aid or vouchers to be used in the markets (e.g., Calancie, Stritzinger, et al., 2017; Palmer et al., 2020; Zerbian & de Luis Romero, 2021) - Fighting against economic inequalities through a better redistribution of resources and greater consultation in the decision-making process (e.g., Crivits et al., 2016; Hernandez et al., 2018; Miedema, 2019; Palmer et al., 2020)
SDG 11 Sustainable cities and communities (23%)	- Developing land use planning projects and integrated urban food policies (transportation, housing, green spaces, and so on) (e.g., Ballantyne-Brodie & Telalbasic, 2017; Christensen & Phillips, 2016; Fox et al., 2015; Hayhurst et al., 2013) - Implementing food programs that help strengthening the relationship between urban, peri-urban, and rural areas (e.g., Blay-Palmer et al., 2018; Donkers, 2013; Giambartolomei et al., 2021; Rico Mendez et al., 2021)

3.2. IMPROVING THE EFFECTIVENESS OF LFSG

Although the studies analyzed clearly show the significant contribution of LFSG to the main facets of sustainability, the proper functioning of these collaborative governance structures is not automatic and depends on several key success factors. These factors can be grouped into four main governance mechanisms whose implementation significantly enhances the effectiveness of LFSG and its contribution to the SDGs:

- A favorable territorial context

- Inclusive governance mechanisms promoting leadership and participation

- Well-planned projects and monitored implementation processes

- Well-funded and adequately evaluated projects

3.2.1. A favorable territorial context

Three starting conditions appeared to influence the emergence of LFSG in included studies: the acknowledgement of food system issues, the commitment of government actors, and a rich tradition of community initiatives.

The acknowledgement of food system issues was mentioned at the beginning of all LFSG initiatives. It covers issues mainly related to food insecurity experienced by populations and difficulties for local businesses to promote healthy food access and food autonomy. The perceived importance for LFSG was especially higher following natural disasters (e.g., the Christchurch earthquake in New Zealand, see Haylock & Connelly, 2018), economic crises (e.g., the 2008 Madrid global financial crisis, see Zerbian & de Luis Romero, 2021), or health crises (e.g., the COVID-19 pandemic, see Palmer et al., 2020).

The commitment of government actors for LFSG emerged as a starting condition. Municipalities were described as a major driving force having the capacity to prioritize efficiently local challenges and to act fast (Hebinck & Page, 2017). At a higher scale (e.g., county or regional level), local governments were described as having the potential for regulating the food system, developing land-use policies, promoting access to local and healthy food and facilitating networking with stakeholders (Beckie et al., 2013; Manganelli, 2020). Federal and state policies as well as fundings for the food system were also reported as favoring LFSG (e.g., the 2011 amendment of the Hungarian law on local food procurement by public bodies, see Balázs, 2012; the launch in 2001 of the Investment Agriculture Foundation in British Columbia, Canada, see Buchan et al., 2015). At the international level, a few initiatives were mentioned, such as the Milan Urban Food Policy Pact (MUFPP) launched in 2015 and signed by over 200 cities for strengthening cooperation and make urban food systems more sustainable (Doernberg et al., 2019). However, events such as changes in provincial regulations, strikes, or changes in municipal authorities are likely to add to the complexity of the policy environment in the initial phases of the food strategy (Mah & Thang, 2013).

A rich tradition of community initiatives appeared to facilitate LFSG in some localities. Local movements were described as having a rich knowledge of the territory, trustworthy relationships with the inhabitants through various forms of assistance, and a strong capacity to mobilize and raise awareness (e.g., the mobilization carried out by the Greater Edmonton Alliance in Canada during the planning of the city's food strategy, see Beckie et al., 2013). Governance initiatives also appeared supported by organizations from civil society providing support to local governments such as research centers and foundations (e.g., the collaboration between the Center for a Livable Future and various organizations in the USA, see Biehl et al., 2018).

3.3. INCLUSIVE GOVERNANCE MECHANISMS PROMOTING LEADERSHIP AND PARTICIPATION

The governance model is necessary to ensure the structuring of policy changes and the involvement of diverse stakeholders in decision-making that are essential to the success of an LFSG (Porter & Ashcraft, 2020; Schiff, 2008).

The hybrid governance model emerged as the preferred governance structure for LFSG initiatives. It consists in a government entity voluntary sharing governance and decision-making with a large range of stakeholders in the food system to favor a broader participation and support (Fitzgerald & Morgan, 2014; Gupta et al., 2018). In this context, government-level actors contribute to build legitimacy for the LFSG, while private companies and civil society actors propose changes to existing structures and policies, and generate genuine and inclusive public participation and engagement (e.g., hybrid models have been favored in food policy councils in the USA, see Fitzgerald & Morgan, 2014). However, while a broad-based council is beneficial, it also poses several challenges, as it requires time and several meetings to discuss and plan LFSG activities. It may also lead to frustration, accusing other groups of having hidden agendas, self-exclusion of groups that feel ignored, or incompatibility with other groups. Preexistent antagonisms may not contribute to the maturation of such initiatives (Baldy &

Kruse, 2019). Lack of clarity of roles and tasks, lack of trust due to previous failed cooperative experiences, lack of leadership, and lack of funds to support the organizational structure may affect the collaborative process, especially when the number of members increase (Rico Mendez et al., 2021).

To overcome these challenges and to get all stakeholders to converge towards a common goal, the board needs strong, charismatic leaders and dedicated staff. These leaders, through facilitation and mediation, must be able to drive the process even in difficult times, bringing all stakeholders to the table. They can establish and maintain clear ground rules, such as time allocation and scheduling of meetings, build trust, facilitate dialogue, and explore mutual gains. These leaders should be experienced, knowledgeable, act as ambassadors for the governance initiative, and able to lobby for more resources (e.g., in Vancouver, Canada, the creation of two dedicated staff positions was necessary to ensure consistent leadership, organizational stability, keep food system goals on the radar of local governments, and avoid disruptions in operations, see Mendes, 2008).

The level of inclusiveness, participation, and consideration of the views of all stakeholders appeared especially valued in LFSG initiatives (e.g., Shepparton Food Hub, Australia, with storytelling, convivial lunches, co-design workshops, prototyping between the community and local government, see Ballantyne-Brodie & Telalbasic, 2017). It requires broad communication and good cooperation so that these stakeholders feel involved and actively participate in the process (Gold & Harden, 2018; Thompson et al., 2020). Briefings and interviews are commonly organized to gather opinions. The organization of community meetings, forums, posters, door-to-door canvassing, word-of-mouth, and media campaign can also be used to ensure a broad participation (Lourival & Rose, 2022).

These processes also valued participation of disadvantaged people and minorities as primary targets of the governance initiative (e.g., strong desire to have low-income and minority

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community members in the council in Adam County, USA, see Boden & Hoover, 2018). Studies have highlighted several barriers to their participation, including lack of interest and time to volunteer, stigma, and racism (Hebinck & Page, 2017; Palmer et al., 2020). A recommended starting point was to provide a budget to invite people, build capacity and leadership to motivate these groups to become more interested, and genuinely redistribute power to marginalized groups and interested civil society (Blay-Palmer, 2009; Feenstra, 2002).

3.4. WELL-PLANNED PROJECTS AND MONITORED IMPLEMENTATION PROCESSES

Well-planned projects supported by a close monitoring of their implementation were reported as essential to support food system transformation. The first recommended activity for emerging LFSG was to set up its steering committee. This committee was described in charge of conducting focus-groups with stakeholders, planning food system analysis, publish an advisory report and adopt a strategic plan. Public and private actors concerned with food issues may meet, even informally, to launch the initiative. If progress is made, a legally and politically legitimized organizational structure is established such as a board or food system council including various interested and representative stakeholders. The committee is responsible for making important decisions in the early stages of the process, coordinating the implementation of strategies and actions, and monitoring achievements. In Oldenburg, Germany, the representative body of the council consisted of 15 members covering civil society, public administration, and business in equal measure (Sieveking, 2019).

Another important recommended activity for LFSG is food system analysis and strategic planning. Food system analysis can be done through various data collection activities and is followed by a report on possible food policy options. A mapping of the vulnerable components of the food system is usually included, as well as an examination of the interaction between the food sector and other sectors (Biehl et al., 2018). The official launch of LFSG often occurs with the publication of a report resulting from the food system analysis (Biehl et al., 2018). This

report should be designed in such a way that planners can interpret it and use it to develop a formal plan. The food system analysis then leads to a strategic planning. The outcome of this process is usually a vision statement (e.g., a food charter, agenda, manifesto, etc.) that explicitly defines the common goals of future food policies shared by the actors and a resulting action plan. The Cardinia Shire food strategy in Australia identifies five key themes divided into 67 recommended actions to form an eight-year (2019-2026) action plan (Lourival & Rose, 2022). After these start-up activities, LFSG implements or supports various projects targeting healthy, sustainable and equitable food system, and enhancing social, economic and environmental considerations. LFSG projects appeared mainly social in nature and focusing on food security, justice, and sovereignty (Boden & Hoover, 2018). Social activities involved for instance community kitchens (Fridman & Lenters, 2013), community food hubs (Crivits et al., 2016), and targeted cultural and social inclusion (Robert & Mullinix, 2018). Economic activities were also given particular attention. They targeted the increase of economic viability of local businesses and farmworker incomes, the promotion of local farming skills and practices, local sourcing, and the integration of sustainable diet in fast-foods and canteens (Feenstra, 2002). Finally, a few projects focused on environmental sustainability, mainly targeting the protection of ecosystems, the reduction of the ecological footprint, and food waste management (Duvernoy, 2018; Rico Mendez et al., 2021).

3.5. WELL-FUNDED AND ADEQUATELY EVALUATED PROJECTS

Resource availability, whether human, material or financial, was reported as an important aspect of LFSG allowing a balance between its ambitions and resources. Fundings usually appeared to come from competitive grants from state and federal governments, foundations, and private donors. Local governments typically provide physical facilities such as land, buildings, and staff resources. In the absence of fundings, volunteers contribute to build a strong coalition, to lead consultations, and to organize financial leverage (e.g., the initiative in Simeto

River Valley in Sicily, Italy, see Rico Mendez et al., 2021). In 2018, it appeared that 33% of US food policy councils operated on an annual budget of less than $10,000, 35% had no funding, and that their budget increased as the initiative became more mature (Bassarab et al., 2019). A few strategies are suggested in studies to deal with difficulties in accessing resources (e.g., participatory budgeting, see Crivits et al., 2016; recirculating local financial resources, see Feenstra, 2002). Time is also an important resource. The more time spent on developing a detailed action or engagement plan, the more likely it is to help promote and achieve more focused goals and lead to higher levels of participation (Lourival & Rose, 2022).

Evaluation activities were described as the best way to document the governance processes, the discrepancy between the activities planned and those effectively implemented, and the effects of food policies (Calancie, Allen, et al., 2017; Calori et al., 2017; Crivits et al., 2016). However, several studies reported not conducting these evaluations perceived as time consuming (e.g., the Hague Food Strategy, Netherlands, see Sibbing & Candel, 2021). In addition, studies also reported a negative perception of evaluation activities by board members, a lack of consensus on how to evaluate the initiatives, and an insufficient evaluation capacity either in terms of financial resources or evaluation tools (Calancie, Allen, et al., 2017; Calori et al., 2017; Crivits et al., 2016). Studies also reported a lack of geographical analysis, a focus on selected measures at implementation rather than on outcomes, the use of fixed metrics and static systems when food systems are in fact dynamic and complex, and the lack of formulated meta-indicators for monitoring and evaluation (Freudenberg et al., 2018; Zerbian & de Luis Romero, 2021). These barriers should be overcome to better evaluate LFSG projects (Landert et al., 2017).

Although few studies have addressed the issues associated with evaluation activities, the included studies did mention three evaluation tools that may be used: the Food Policy Council Self-Assessment Tool (FPC-SAT) (Calancie, Allen, et al., 2017), the Sustainability Experiment Systems Approach (SESA) (Hubeau et al., 2017), and the Sustainability Assessment of Food

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and Agriculture systems (SAFA) (Landert et al., 2017). The FPC-SAT is a tool that is used to document board members' perceptions of LFSG's organizational capacity, social capital, and board effectiveness, and to document the overall strengths and areas for improvement in LFSG mechanisms (Calancie, Allen, et al., 2017). The SESA is an analytical framework that allows for reflective evaluation and cross-analysis of multi-stakeholder governance networks based on business and learning assessment criteria. This tool enables decision makers to design, support, or evaluate new sustainability experiments. It is also a self-assessment tool that allows practitioners to design and reflect on their sustainability experiment (Hubeau et al., 2017). The SAFA is a tool that includes four dimensions (good governance, environmental integrity, economic resilience, and social well-being) that is described as the most comprehensive and practical guidelines for LFSG assessment. It was developed in response to the growing number of sustainability frameworks in the food sector with the aim of harmonizing existing approaches into a common and widely accepted framework (Landert et al., 2017).

4. DISCUSSION

4.1. MAIN RESULTS

The objective of this paper was to analyze, through a realist synthesis, the contribution to sustainability of local food systems implemented in Western countries and the key success factors in LFSG implementation and effectiveness. Although the main purpose of LFSG is not to promote sustainability and remains focused on improving the food system, the results of this study clearly show its important contribution to the SDGs. However, this contribution is variable among SDGs. Moreover, the effectiveness of LFSG depends on institutional factors that can be particularly complex to implement due to underlying political and economic issues. Figure 3 summarizes the main results of the study.

Figure 3. LFSG success factors and sustainability outcomes
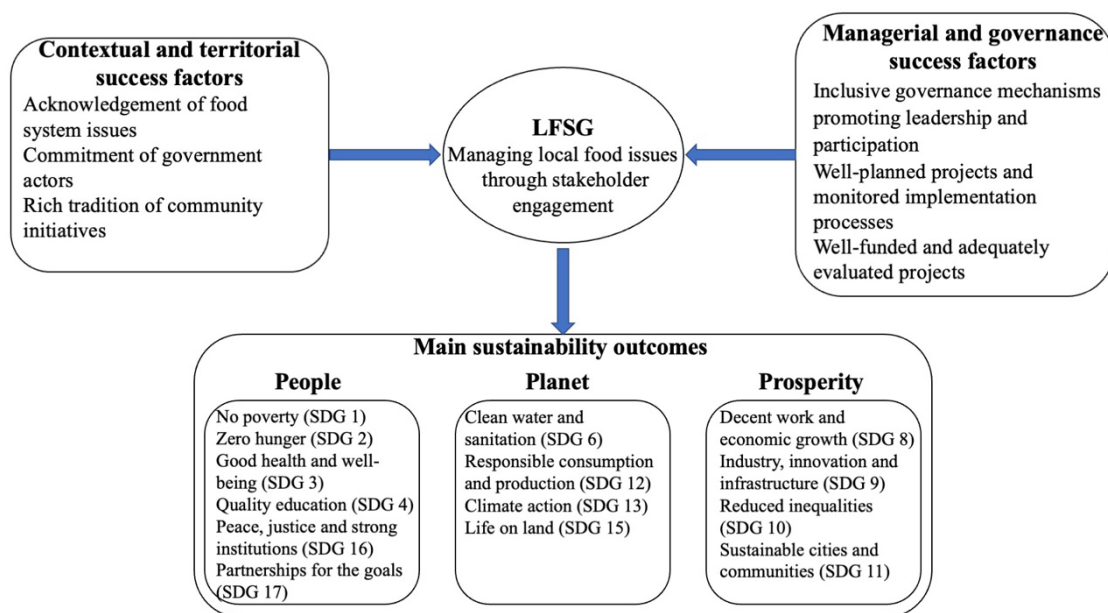
The LFSG success and effectiveness depends on both contextual and managerial factors. First, it depends initially on contextual aspects over which the stakeholders involved often have little or no control. For example, food system problems are not necessarily clearly recognized by stakeholders, and food system challenges can vary considerably across regions (e.g., combating hunger, see Miedema, 2019; increasing economic development, see Feenstra, 2002; addressing the environmental crisis, see Crivits et al., 2016; insufficient regulations, see Sadler et al., 2015). Moreover, in many cases, the commitment of governmental bodies to LFSG is uncertain at best and can quickly change depending on the food policies in place, the values of policymakers, and the particular agenda of elected officials. Finally, not all regions have a rich tradition of community-based initiatives, which can hinder the LFSG development and success (Lourival & Rose, 2022; Porter & Ashcraft, 2020). Second, managerial factors, related to the governance structure, leadership of influential stakeholders, communication with stakeholders, planning and monitoring of activities, and funding, also play a critical role. Although these factors seem to be more controllable than the contextual aspects, the analysis of studies on the subject shows that they represent a major challenge and that the winning conditions are rarely

perfectly met (e.g., poor planning, coordination, and lack of funding, see Rico Mendez et al., 2021; lack of monitoring and evaluation mechanisms, see Zerbian & de Luis Romero, 2021). Among other things, the resources needed to promote projects related to the SDGs are not necessarily available or may vary over time depending on the government programs in place or the contribution of private actors (Bassarab et al., 2019; Fitzgerald & Morgan, 2014). Despite the limitations and uncertainties around LFSG, its role seems very important to anchor the promotion of SDGs in food system regional realities.

Although the sustainability benefits reported by the studies analyzed remain very uneven, LFSG can clearly represent an effective lever for promoting policies and initiatives that contribute to the SDGs and that are adapted to the needs of the regions concerned. In terms of the social dimension of sustainability, the SDGs associated with nutrition (SDG 2), health (SDG 3), education (SDG 4), poverty alleviation (SDG 1), and institutions (SDGs 16 and 17) can greatly benefit from the activities of LFSG. However, other key issues, in particular gender equality (SDG 5), are still neglected. Regarding the environmental dimension of sustainability, the studies analyzed show that LFSG can contribute significantly to initiatives related to responsible consumption and production (SDG 12), climate action (SDG 13), preservation of biodiversity on land (SDG 15) and, to a lesser extent, clean water and sanitation (SDG 6). However, LFSG seems to play a very limited role in the promotion of clean energy (SDG 7) and biodiversity below water (SDG 14). Regarding the economic dimension of sustainability, LFSG seems well suited to the promotion of a green economy based on decent working conditions (SDG 8), developing environmentally friendly innovations and infrastructure (SDG 9), reducing economic inequalities through greater access to quality food products (SDG 10), and taking better account of sustainability issues in cities and communities (SDG 11).

4.2. CONTRIBUTIONS, MANAGERIAL IMPLICATIONS, AND AVENUES FOR FUTURE RESEARCH

This review makes several important contributions to the literature. First, it contributes to the emerging research on LFSG. While many studies have focused on economic, socio-political, and food issues related to the implementation of these collaborative governance structures (Blay-Palmer et al., 2016; Koski et al., 2018), their challenges and key success factors have not, to our knowledge, been the subject of specific research. This article highlights the importance of governance issues associated with the institutional context and managerial practices underlying the functioning of LFSG.

Second, this research contributes to the literature on the fundamental role of food in promoting sustainable development (Caron et al., 2018). While much research has been devoted to this issue, most studies focus on the impact of different dietary habits—such as the consumption of certain animal proteins—on ecosystems (van Dooren et al., 2014; Weindl et al., 2020). While this type of research is very important, it tends to focus on individual behaviors rather than on the food systems that drive them. As a result, the specific role of LFSG and its contribution to promoting sustainability at the regional level has been largely overlooked in the literature.

Third, this study contributes to the literature on the promotion of the 17 SDGs through the implementation of various collaborative governance mechanisms (e.g., Meuleman & Niestroy, 2015; Vazquez-Brust et al., 2020; Waage et al., 2015). Most of these studies remain focused on a theoretical approach or on general issues related to the importance of taking stakeholders into account, the implementation of different regulatory mechanisms at the international or country level, or the role of international institutions. In fact, the way in which LFSG can contribute to the 17 SDGs has not, to our knowledge, been the subject of specific studies.

Fourth, this study highlights possible solutions for economic and political decision-makers who wish to promote sustainability initiatives adapted to regional specificities. Through its collaborative and community-based governance, LFSG can represent highly relevant structures

to fight food insecurity, improve the quality of life of populations, stimulate economic activities, and preserve ecosystems.

However, more research is needed to further explore how LFSG can contribute to sustainability in different settings. The present study focuses on Western countries and is not suited to examining regional specificities and their impacts on LFSG outcomes. Future research could analyze the role of cultural, institutional, socio-political, and economic differences on the mission and effectiveness of LFSG through in-depth case studies in several regions. Research in developing countries would be particularly interesting and would likely shed light on the prevalence of issues such as food insecurity and poverty alleviation. Interviews and participant observation in LFSG could also help to better understand the reasons underlying the very uneven contribution to the SDGs. While this study provides insights into this issue based on a literature review, it would be interesting to compare its main findings with primary data collected from stakeholders actively involved in LFSG and concerned with sustainability issues.

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Appendix A. Search strategy

Strategy	Question	Results
S1	TI("Food system*" OR "Food governance" OR "Food polic*" OR "Food strateg*" OR "Food initiative*" OR "Agrofood system*" OR "Agrofood governance" OR "Agrofood polic*" OR "Agrofood strateg*" OR "Agrofood initiative*" OR "Agro-food system*" OR "Agro-food governance" OR "Agro-food polic*" OR "Agro-food strateg*" OR "Agro-food initiative*" OR "Agrifood system*" OR "Agrifood governance" OR "Agrifood polic*" OR "Agrifood strateg*" OR "Agrifood initiative*" OR "Agri-food system*" OR "Agri-food governance" OR "Agri-food polic*" or "Agri-food strateg*" or "Agri-food initiative*") OR AB("Food system*" OR "Food governance" OR "Food polic*" OR "Food strateg*" OR "Food initiative*" OR "Agrofood system*" OR "Agrofood governance" OR "Agrofood polic*" OR "Agrofood strateg*" OR "Agrofood initiative*" OR "Agro-food system*" OR "Agro-food governance" OR "Agro-food polic*" OR "Agro-food strateg*" OR "Agro-food initiative*" OR "Agrifood system*" OR "Agrifood governance" OR "Agrifood Polic*" OR "Agrifood strateg*" OR "Agrifood initiative*" OR "Agri-food system*" OR "Agri-food governance" OR "Agri-food polic*" OR "Agri-food strateg*" OR "Agri-food initiative*")	1,410
S2	TI(territor* OR sustainab* OR municipal* OR local* OR communit* OR citizen* OR urban OR rural OR cities OR city OR region* OR provinc* OR canton* OR constituenc* OR council* OR county OR counties OR small scale* OR "coalition network*" or "intersectorial action*" OR multilevel OR multi-level)	155,614
S3	S1 AND S2	374
S4	S3 AND Language = English	349