

Review

An Operational Approach to Agroecology-Based Local Agri-Food Systems

Daniel López-García ^{1,*}  and Manuel González de Molina ² ¹ Entretantos Foundation, 47014 Valladolid, Spain² Agroecosystems History Lab, University Pablo de Olavide, 41013 Seville, Spain; mgonnav@upo.es

* Correspondence: daniel@entretantos.org; Tel.: +34-665-847-138

Abstract: In recent years, the transition to sustainability at a food systems' scale has drawn major attention both from the scientific and political arenas. Agroecology has become central to such discussions, while impressive efforts have been made to conceptualize the agroecology scaling process. It has thus become necessary to apply the concept of agroecology transitions to the scale of food systems and in different "real-world" contexts. Scaling local agroecology experiences of production, distribution, and consumption, which are often disconnected and/or disorganized, also reveals emergent research gaps. A critical review was performed in order to establish a transdisciplinary dialogue between both political agroecology and the literature on sustainable food systems. The objective was to build insights into how to advance towards Agroecology-based Local Agri-food Systems (ALAS). Our review unveils emergent questions such as: how to overcome the metabolic rift related to segregated activities along the food chain, how to feed cities sustainably, and how they should relate to the surrounding territories, which social subjects should drive such transitions, and which governance arrangements would be needed. The paper argues in favor of the re-construction of food metabolisms, territorial flows, plural subjects and (bottom-up) governance assemblages, placing life at the center of the food system and going beyond the rural–urban divide.

Keywords: sustainable food systems; agroecological transitions; political agroecology; agroecology scaling



Citation: López-García, D.; González de Molina, M. An Operational Approach to Agroecology-Based Local Agri-Food Systems. *Sustainability* **2021**, *13*, 8443. <https://doi.org/10.3390/su13158443>

Academic Editor: David John Gibson

Received: 22 May 2021

Accepted: 20 July 2021

Published: 28 July 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Over the last decades, the discipline of agroecology has evolved to encompass a variety of approaches and has moved from being shaped as a science, a social movement, and a set of farming practices for agricultural sustainability, mainly at farm and farming system scales [1]. Agroecology has largely centered on agency and power issues within food systems, along with the development of political agroecology [2–4]. The conception of agroecological transitions has also shifted from an initial focus on local and on-farm scales to the scale of food systems, and from ecology and natural sciences towards a transdisciplinary approach, which includes the social sciences [5–7]. As a result, agroecology has been conceptualized as "the ecology of the (entire) food system" [4,8].

The 'agroecology scaling' debate has focused on the challenges posed by social and peasant movements to multiply agroecological experiences within a given territory—agroecology out-scaling. Agroecology has also addressed the challenges of developing territorialized, sustainable food systems by promoting legal and political frameworks favorable to agroecological transitions [9,10] and incorporating the emergent complexity of broader territorial scales [11]—agroecology up-scaling. The dialectics between both agroecology up-scaling and out-scaling has led to an expansion of the scientific debate on power, agency, subjects, methodologies, and devices. These elements have been recently articulated with the aim to build comprehensive and transdisciplinary views on agroecological transitions at a food system scale [12–14]. The complexity of such transitional processes

cannot be contained within binary (out/up-scaling) visions of alternative food networks and systems, nor to the role given to the state and public policies. It is rather a question of understanding how both dimensions of these transitions converge into processes that cut across different scales and spheres of bio-physical and social reality.

In this paper, we argue that Agroecology-based Local Agri-food Systems (hereinafter ALAS) are ideal instruments for the scaling of agroecology, since they allow the up-scaling and out-scaling dimensions of agroecology, the upstream and downstream perspectives of the food chain, as well as the multi-actor and multi-level perspectives to be organized, developing a complex and transdisciplinary—agroecological—approach to territorialized transition processes. In a previous article [15], we described the main elements that shape ALAS, as well as their design principles. In the present work, we attempt to identify the major keys to building a dynamic and operational approach to ALAS, capable of guiding agroecological transition processes at a food system scale.

To this end, we present a dialogue between the agroecological literature and the literature focused on sustainable food systems and alternative food networks. In these two latter fields, a significant number of empirical works have been published in recent decades. Among other elements, the aspects of multi-actor and multi-level governance have been largely addressed, together with new sorts of institutionalities capable of generating major transformations, and ways of coordinating small producers and final consumers (among others: [16,17]). These topics can be very useful if they are applied to the agroecological transition [7,14,18], despite a possible urban bias in these works [19], and despite difficulties in addressing inequities within the food chain, such as gender inequity [20–22]. The prominence of an urban focus in the literature on sustainable food systems contrasts with the deep peasant roots and the weight given to the agricultural sector in the literature on agroecological transitions [9,13,23]. This prevailing rural orientation explains why the agroecological literature has produced only a limited number of proposals on the convergence between rural and urban territories, which would allow the “metabolic rift” between the two spheres to be overcome, and thus there has been a weak analysis of strategies to make this possible [4,24,25]. In the following sections, we critically review both types of literature and, based on this dialogue between both approaches, we raise the key issues underlying the construction of ALAS.

2. Materials and Methods

To date, agroecology-based representations of food systems have not been fully developed, and a systematic review of the discussions brought by the emergent literature on such an issue is missing. Therefore, a critical review [26,27] was considered the optimal approach to discuss the coherence between the literatures on Sustainable Food Systems and Agroecology. The bibliographical review performed in the present work was conducted in two steps. First, a scientific literature review was conducted that focused on the transitions to sustainability at the level of food systems in order to identify key factors. The main results are summarized in Section 3. Based on the dialogue between the agroecological literature and the studies on sustainable food systems, we identified three topics that can be considered decisive for the construction of ALAS: (i) urban–rural linkages in an urbanized world, and how to address the challenges of the metabolic rift; (ii) territory, localized food systems, and Agroecology; and (iii) multi-actor (bottom-up) governance. These three topics were constructed inductively as categories that emerged from the grouping of the main gaps identified in the literature.

Based on these three topics, we performed a second review of studies relating to the following keywords: ecological assessment and metabolic rift, rural–urban linkages, localized food systems, agroecology-oriented food policies, and dialectics between food movements and the state. This second round included case studies linked to specific experiences and territories covering the food chain longitudinally, beyond the production stage. The abundant literature on quality labels was excluded from the review, given its limited relevance for our approach to agroecology [28], which we will discuss later. The

discussions based on the critical review revealed new gaps, this time regarding empirical studies on agroecology transitions on the food system scale and their role in the scaling of agroecology. The search was performed in international impact journals since they are more widely disseminated and have a greater influence on academia. Nevertheless, we also reviewed grey literature to address some issues which are emergent and have been not yet deeply addressed by scientific research. A total of 148 papers were analyzed over both review rounds.

3. Main Results: Research Gaps on Sustainability Transitions at a Food System Scale

This section presents the main results obtained in the first round of the critical review. We started by focusing on the most debated subjects in the literature on the agroecological transition relating to food systems. We then conducted the same exercise with the literature on Sustainable Food Systems (hereinafter, SFS), including the literature related to Alternative Food Networks (hereinafter, AFN) as a complementary approach to the latter, which is of interest in relation to our aim of bringing local agroecological experiences to food systems scale. Finally, we created a dialogue between both approaches in order to identify the major issues that need to be addressed to build ALAS. Such an operation revealed three main issues in relation to the development of the full potential of the comprehensive sustainability of Agroecology-based Local Agri-food Systems: (1) the twofold metabolic rift of food systems, whose activities are segregated between urban and rural settings, and productive and reproductive economies; (2) the need to focus on local socio-technical processes, and to articulate the different territorial levels of food systems, in order to address (multi-dimensional) sustainability in a nested structure of sub-systems; and (3) the theoretical and methodological challenges introduced by the plural (social) subject and the governance arrangements to be constructed in order to promote food systems' scale in relation to agroecological transitions.

This final list of key elements and structures can be found in Sections 4–6, in which we discuss the main findings of the identified research papers, as represented in Figure 1.

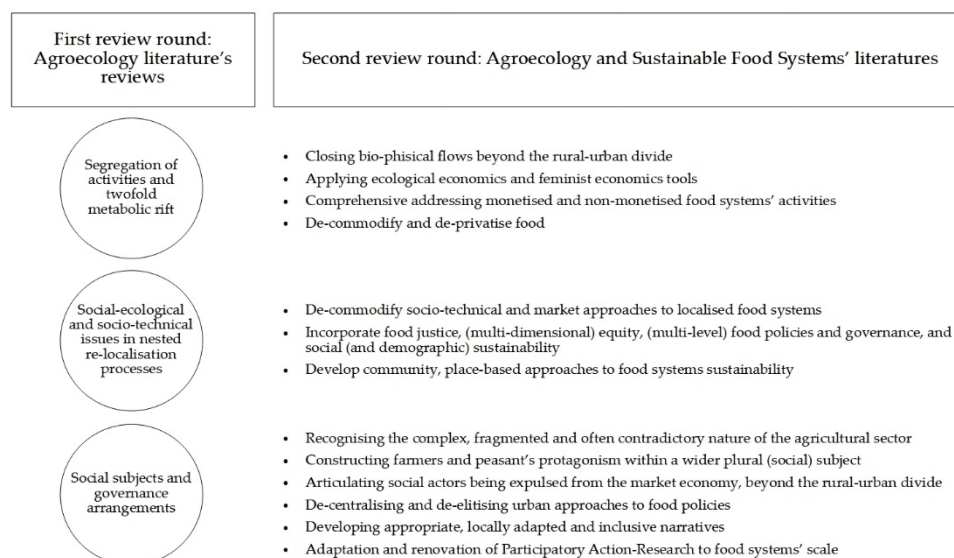


Figure 1. Research steps and the main findings at each step.

3.1. Agroecological Approaches to Food Systems' Transitions

In recent years, agroecology literature has broadened its scope: studies have moved from focusing on farms to researching food systems, which clearly shows a transdisciplinary ambition. Most works focusing on food system scale are theoretical in nature, and empirical works are still few and far between. They focus on cases mostly located in the global south and in territories where peasants are forceful socio-political subjects and

where agricultural production is socially relevant [4,9]. Agroecology regards the building of AFN as an intermediate step in the construction of sustainable agri-food systems [6], or even as an instrument for scaling up agroecological experiences [7,29]. The latter are useful for the re-organization of relations between rural and urban territories [11,25,30]. Nevertheless, agroecology gives a notable role to the transitions to local solidarity and reciprocity networks, strong (peasant) organizations, and alliances between these organizations, territorialized networks, and other (potentially) extra-local actors [9,13].

Some authors have emphasized the importance of establishing plural subjects and the relationships between them, with a view to activating political and social pressure to obtain favorable regulatory frameworks and building strong coalitions and institutions to promote and sustain food regime change [11,18,31–33]. A growing number of agroecology studies emphasize the key role of bottom-up governance schemes and quality participatory processes for the development and stability of extensive agroecology transition processes [7,33]. Several authors highlight the strength of grassroots actors, especially the peasantry, in the face of instability and attempts by states to co-opt the transformative potential of agroecology [10,34,35].

A growing number of revisions raise the importance of developing inclusive narratives conducive to agroecological transitions that support the construction of such collective social subjects [9,36–38]. This is especially relevant during a global crisis, during which notable right-wing populisms can emerge across rural communities worldwide, and especially in the global north [39,40]. However, the application of some of the categories used in agroecology narratives, such as “peasantry” or “food sovereignty” may have limitations for the mobilization of certain rural or conventional agriculture profiles around transition processes, especially in the global north [41]. Some authors have pointed to the trend within agroecology narratives to under-theorize and idealize the community and other categories such as “small farmer” or “peasant”, which could restrict their scaling potential [42].

A growing number of studies within the literature consider the building of food systems adjusted to agroecology as a key instrument to foster more equal power relations and to build food sovereignty based on grassroots, social, and peasant movements [9]. Such food systems are also considered to be ideal instruments to promote food and nutrition security for broad and diverse populations [7]. Third, other authors have highlighted the potential of ALAS to produce narratives that could overcome the inequalities of race and social class through ‘reparation ecologies’ [25,38]. Finally, from a feminist perspective, ALAS are presented as a valid means to reverse the feminization of food poverty (and related health problems) and to allow the re-valuing of the role of women in different farming systems and in the agroecology movement itself [37,43,44]. “Feminist agroecology” puts forward the need to reconstruct the thought categories about food systems and place life at its center through an inter-disciplinary dialogue between different approaches such as feminist economics, decolonial thinking, and ecofeminism [21,22,45].

In short, in our view, the agroecological literature reviewed highlights the processes and coordination of new plural social subjects, the construction of bottom-up governance, and socio-economic equality and justice as key components of the transitions. These coordination processes interact with specific territories and are closely linked to the territories’ specificities [14,46]. As we have seen, however, the contributions in the literature on how to achieve sustainable food metabolisms are scarce, since agroecology proposals are assumed to be sustainable. Empirical studies on these issues are also few and far between. The works that do exist are often limited to particular processes in territories where peasants are structured around powerful organizations. Moreover, the need to foster practical alternatives adapted to different contexts to develop ALAS has also been advanced [4,9,42]. In this way, discussions on AFN and SFS can be useful to elaborate critical analyses of the ecological and socio-political performance of local agroecological experiences.

3.2. Sustainable Food Systems and Alternative Food Networks

As mentioned above, in contrast to the literature on agroecology at food systems scale, the literature on AFN is abundant and includes many empirical works. AFNs are defined as “newly emerging networks of producers, consumers, and other actors that embody alternatives to the more standardized industrial mode of food supply” [47]. Its “alternative” nature lies not only in the elimination of intermediaries but also in the type of relationships established between producers and consumers. This relationship is usually based on a political project that is shared through trust relations between the actors that make up the network [48,49], in order to seek social, ecological and economic sustainability [50] by redistributing power along the food value chain [49,51].

Nevertheless, a number of empirical studies have questioned the ethical and political dimensions of AFNs and denounce the existence of unfair power relations in the value chain, especially in the long chains linked to quality brands [52]. AFNs often leave major components of social sustainability in the background, such as the creation of a stable coordination between producers and consumers, the transparency and participation of both producers and consumers in pricing, adequate income for producers (especially small ones) and agricultural workers, the strengthening of local economies and their independence from extra-local actors, or the promotion of social justice [53–57]. The AFNs analyzed have also been criticized for establishing a strong bias of an economic, social, territorial and cultural nature, in access to quality food, and such biases ultimately converge with others, such as those of class, gender or race [58]. All this should be considered in the construction of ALAS.

The ecological sustainability potential of AFNs has also been called into question, as they could lead to inefficiencies in the local distribution of small product quantities or in global retail chains [59–62]. Several empirical works have also identified significant gaps in the reduction in the dependence on external inputs, using local and traditional plant varieties, or preserving traditional ecological knowledge. For some authors, a negative correlation can be established between the ecological sustainability of production and its economic sustainability, resulting in a process of conventionalization. The assumed ecological embeddedness of AFNs sometimes clashes with market dependence, which pushes towards conventional forms of agricultural systems [56,57,63].

Furthermore, the analysis of SFS has focused on the relationships between activities related to food and social and ecological well-being throughout society [64,65], thus expanding the scale and diversity of actors and processes with respect to AFNs. In this way, they have been linked to the concepts of community, territory and nutrition and food security [14,66]. The SFS literature has mostly focused on empirical assessments of specific (short) food supply channels in the global north, especially forms of direct selling, such as farmers markets or Community Supported Agriculture (see [32,67,68]). The limiting of the sorts of marketing included in SFS analyses obscures the realities of many producers—especially in rural areas or away from large consumption centers—who are forced to sell in distant or conventional markets [69]. Farmers who adopt sustainable approaches are often obliged to distribute their products through “hybrid food networks” that combine conventional and alternative channels and formats as a survival strategy [57,70].

The SFS approach also significantly lacks ecological sustainability assessment approaches in three major areas at least. First, in terms of its potential to generate ecologically sustainable food metabolisms from the inputs of the production process (upstream stages of the food chain) to final consumption (downstream stages). To overcome this gap, some authors have proposed an exploration of the potential of the ecological economy in order to adopt comprehensive perspectives using suitable instruments of analysis at greater scales than farms or ecosystems [71]. The second shortcoming relates to the difficulty of setting scales of analysis that go beyond specific alternative supply chains and possible urban-focused biases [19,72]. The relocation of food systems stretches beyond the boundaries of urban territories. Their analysis must thus overcome binary approaches to production and consumption spaces by challenging the category of the “local” [69,73]. In addition, they

must adopt a food system perspective to integrate a greater diversity of actors and territories [74,75]. To achieve this, it is necessary to delve further into the territorial perspective, considering territories as social, cultural, economic and biophysical units [19,25,46]. All these issues that arose from the review of the AFN and SFS literature are related to certain problems and gaps that were also identified in the agroecology literature mentioned above.

3.3. Three Major Gaps to Address

The initial critical review of agroecology and AFN and SFS literature helped to identify an emerging research agenda to build ALAS. The different approaches point to complementary gaps that can be filled by advancing a comprehensive proposal. Agroecology largely focuses on equality, social justice, the construction of collective organizations and subjects, and bottom-up governance, assuming sustainability on the food system scale. For its part, the literature on AFN and SFS points to a wide range of biophysical deficiencies. It highlights the need to reorganize rural and urban contexts, emphasizing the key role of territorialized approaches in the transitions. These three themes (1): twofold metabolic rift, rural–urban linkages and the re-composition of productive–reproductive activities; (2): re-localization and territorial coordination; and (3): social subjects and bottom-up, multi-actor governance processes) define a common ground where the literature on agroecology and the literature on AFN and SFS are complementary. In the following sections, we analyze each theme, deepening our critical review of both academic currents in order to find operational keys to the construction of ALAS.

4. Urban–Rural Linkages in an Urbanized World: Addressing the Challenges of the Metabolic Rift

From a biophysical perspective, the main challenge of the agroecological transition at the food system level is to close the metabolic rift generated by the segregation between production and consumption, as well as between productive and reproductive social spaces and activities. In the present section we argue that closing the biophysical cycles of food systems requires re-localization and reorganization, applying the tools developed by ecological economics to address holistic, multi-dimensional sustainability, incorporating the territorial segregation of the food systems' activities. In parallel, we propose the development of a holistic approach to address the interrelations of both monetized and non-monetized food activities (the latter carried out mostly by women) and its implications for social–ecological sustainability. This drives us to the need to de-commodify and de-privatize food systems to “put life at its center”, as proposed by feminist economists.

Indeed, as Marx warned and Metabolic Rift literature has pointed out, the development of capitalism has created a metabolic gap between nature and society [76,77], which has also generated a highly pronounced divide between urban and rural settings. In agriculture, this has led to the replacement of organic matter flows that originated from urban food consumption and waste with commercial inputs in order to close biophysical cycles in the spaces of production. Regarding food systems, this has resulted in an increasing gap between production and consumption, and the result has been the predominance of food that comes from afar through international trade [78,79]. This separation between urban and rural settings, which has taken the producer away from the consumer, has also brought about highly negative cultural and economic consequences through the devaluation, for example, of agricultural work. In fact, following the metabolic rupture, an unequal ecological exchange relationship has been institutionalized between rural and urban territories [80,81]. There has also been a rupture between productive and reproductive tasks in agriculture that has greatly exacerbated gender inequalities [21,44] and has accentuated the exploitation of women's reproductive work, making it invisible to most of society and the market [82]. Closing this twofold rift requires a restructuring of the relations between urban and rural settings from a comprehensive, territorial perspective, and in turn recomposing the relationships between the monetized (productive) and non-monetized (reproductive) phases of the economy. ALAS represents a suitable means to achieve this [83,84].

As exposed above, although all agroecology and AFN and SFS approaches are supposed to be ecologically sustainable, such sustainability is rarely quantified, and when it is, it is performed in an often limited and unclear way [62,71,85]. The sustainability performance of agroecology farming practices at farm-scale has been widely demonstrated across its very different meanings [3,7]. However, while such sustainability is often invoked by agroecological scientists at the food system scale, it is rarely assessed using accurate methodologies, and the related critical literature is seldom incorporated [42]. This is despite advances in the development of new methodological proposals that calculate, for example, energy consumption, the carbon footprint or the impact of the food system on third countries. These new approaches use social metabolism, life cycle analysis or virtual land metabolic methodologies to compute the actual impact of the whole food system [86].

In recent decades, the use of energy and materials has significantly increased, especially in the downstream stages of the food chain. This rise in energy consumption has taken place mostly in urban environments and is the consequence of agri-food industrialization and globalization that are linked in turn to urbanization in the twentieth century [87]. The process has been more intense in the global north than in the south and largely explains why the SFS and AFN approaches have focused on the downstream stages of the food chain. However, they have also overlooked the upstream phases (prior to agricultural cropping) of the production cycle under consideration, taking into account factors such as water supply, climate regulation, organic matter cycling or the genetic erosion of traditional agricultural landraces.

Indeed, the literature on AFNs and SFS shows a certain urban bias and a perspective more typical of the global north, with a number of established approaches such as “urban food policies” and the “food-in-the-city” [19]. Conversely, an approach tending more towards agricultural production and rural territories continues to prevail in the agroecology literature [9,13]. As a result, the rift between the rural and urban worlds remains absent from both analyses. The world’s population is certainly becoming more urban, but most upstream processes unfold outside the city boundaries. Thus, addressing a (holistic) food system sustainability approach implies a strong focus on rural–urban interactions. The challenge for agroecology is therefore to close the metabolic rift between urban and rural territories, contemplating the food system as a whole with a physical and territorial basis that must be organized sustainably. The reconstruction of resilient food systems would require a spatial reorganization of human activities and settlements, overcoming urban–rural duality [25], as well as urban (multi-dimensional) hegemony.

The concept of City Region Food Systems (CRFS) has been advanced with the aim of closing this rift. It consists of a theoretical framework and an operational approach according to which food flows are comprehensively organized in the territory. This approach evaluates and develops policies and programs that cut across rural, urban and peri-urban spheres [75,88]. It presents a process that gives a voice to the various social actors involved, rendering different sectoral and territorial policies coherent. Some authors have suggested that CRFS would be an appropriate method to coordinate isolated agroecological production and consumption experiences in much broader, territorialized food system projects [74]. However, an agroecosystemic approach to City Region Food Systems would imply greater attention to food metabolic flows in both the upstream and downstream stages. In view of this, the closure of biogeochemical cycles that occur mostly on the landscape scale plays a central role [7,87]. From this perspective, the food production priority should be the local (rural) market, leaving surpluses for exports to large (urban) consumption centers, in a sort of nested ALAS structure. In turn, the return of organic waste from urban to rural environments should be considered.

In any case, it is also necessary to close the metabolic rift that exists between monetized (productive) and non-monetized (reproductive) activities of the food economy. A notable share of social processes related to food—from kitchen-garden farming to food-related care work—are outside the monetary sphere, and are therefore overlooked in most analyses [21,89]. These tasks are carried out by women and the exploitation of their work, made

invisible, is one of the pillars of past and present capitalism [90]. Special attention should be given to making visible and valorizing reproductive and non-monetized work—often confined to domestic spheres—in order to understand women’s role in food systems [44], and its parallels with the over-exploitation of natural resources in globalized food systems. While mainstream economic thinking defines the economy based on monetized, productive and paid work, feminist economics highlights the importance of non-monetized and reproductive work. The latter advances the fundamental role of non-monetized work in guaranteeing social and economic reproduction, thus providing the material conditions for the existence of productive work [91,92]. Feminist economists thus advocate—as do eco-feminists and feminist agroecologists—“putting life at the center” [22,93] of the economies. In this sense, closing this twofold metabolic rift implies de-commodifying and de-privatizing food systems [89].

5. Territory, Localized Food Systems and Agroecology

The previous section addressed the articulation between rural and urban territories and between productive and reproductive social processes. We have argued how the closure of the metabolic rift requires that social food metabolism be finely rooted, both socially and ecologically, in the territory [1,8,11,46]. However, the issue of providing food to a growing urbanized world in a localized, sustainable and just manner is of great complexity, and runs through various spatial scales. In the present section we discuss different theoretical tools that have been developed to improve the sustainability of food systems through their re-localization. By applying the multi-dimensional approach of agroecology, we argue for the need to articulate socio-technical and market approaches to local food systems with other approaches such as food justice, (multi-dimensional) equity, (multi-level) food policies and governance, and social (and demographic) sustainability. This drives us to propose community, place-based approaches to food systems sustainability, beyond the logics of commodification.

Re-localization requires the territorial reorganization of production, logistics and consumption. The theoretical and methodological implications of the integration of the territorial basis of transitions require the development of constructivist, empirical and transdisciplinary research that is capable of capturing such a complexity [14,94] and being flexible enough to adapt to different contexts [7]. In this section we discuss territorialized models of SFS, in order to shape the main elements that define how ALAS may operate at a local scale.

Based on rural development studies, a territorialized approach facilitates the spatial concentration of specific activities that generate comparative advantages through the processes of clustering, information exchange and convergence in the producing, processing and marketing activities. Such rural clustering would be favorable to the local population’s bigger interest in issues such as income, employment and the conservation of natural resources [95–97]. Networks of small holding companies that establish a range of inter-relationships and generate a great diversity of products based on cross-cooperation and the use of common resources—such as local landscapes and ecosystems—can generate, through “economies of scope” (as opposed to “economies of scale”), greater value-added uptake for the territory with reduced metabolic profiles [11,98].

Localized Agri-Food Systems (LAFS) are understood as localized networks of farms, firms, services to the production companies, and institutions (whether local or sectoral) who specialize in the production and marketing of food products linked to territorial identities [99]. The success of LAFS has been linked to the concept of “territorial governance”, as “the process of dynamic articulation of the set of practices and institutional devices existing between actors in close geographic proximity, intended to address a production -or consumption- related issue or to implement a territorial development project” ([100], p. 701, cited in [101]), through multi-level coordination processes between economic and social actors [102]. The role of institutions is key in the provision of regulatory frameworks,

cooperation and control of the quality of products, as well as the legitimacy they give to the actions of local actors [101].

LAFS can be rooted in the territory as “localized value chains” or can use territorial resources (territory-linked identity, work, or natural resources,) as inputs to generate greater added value in distant markets through quality labels [103]. However, the types of AFN linked to quality labels and oriented to distant markets, which Murdoch [51] called “vertical”, have been criticized for marginalizing small local productions with respect to big operators [59,104], and creating static notions of culture and tradition that hinder innovation and the co-evolution of the production process and the socio-ecological context [105]. Further criticism is related to the standardizing of differentiated local productions [106] or the imposing of access biases to such products based on social class, race, gender or territory [20].

The concept of “rural districts”, for its part, focuses on local value chains. It integrates the territory’s primary and secondary productions into a network of production, knowledge and work exchanges. Such a network is linked to ecological and social values and the orderly segmentation of the production chain in the territory, based on the specialization of the different local production units [107,108]. Supported by the coherence of a network of local actors, the ‘rural districts’ model aims to combine economies of scale—by concentrating resources of a different nature—and economies of scope—by diversifying the productions of the territory through the optimization of the existing productive resources [109].

This model was recently revised based on agroecology approaches around the empirical analysis of “bio-districts”, which incorporate sustainable (gastronomic) tourism activities and are linked to organic productions [110,111]. The bio-districts experience emphasizes territorial governance and a wide range of well-coordinated actors. Bottom-up approaches are called upon to achieve the goals of improving the local population’s quality of life in accordance with social and ecological sustainability. The process is reinforced by the increasing participation of urban and regional administrations within comprehensive frameworks of rural–urban coordination, through territorial food policies. However, the concept of bio-districts also presents weak sustainability approaches when one analyses the upstream stages. For example, they might allow for the uncritical equating of certified organic production with ecological sustainability, but they do not necessarily entail an analysis of key social sustainability factors in the territories, such as working conditions in the food chain, or the income received by small (organic) farmers.

Based on empirical research, bio-districts are advanced as an adequate means to multiply a territory’s number of agroecology experiences [111]. However, at the same time, the limited (political) influence of small local operators is acknowledged, as well as the need to broaden territorial governance schemes beyond the economic dimension. This requires incorporating agency and power relations to the (social-ecological) sustainability assessment of the local food system, as well as local actors’ access to political decision-making. A further political agroecology analysis could be useful to influence the up-scaling dimension, incorporating concepts such as “assemblages” [112], which we will return to later, and strengthening a social movement capable of generating political and institutional environments that favor agroecology [10,12].

The Local (territorial) Food Systems approaches examined focus, however, on monetized economic relations, and therefore overlook some relevant aspects of the socio-economic relationships unfolding outside the market. They do recognize the key role of social and cultural factors in generating symbolic and relational contexts that support the building of LAFS. However, they do not necessarily incorporate major components of the social reproduction dynamics of rural communities and the agri-food production fabric. Among others, the lack of public services in rural areas, difficulties for farm transfer and for new entrants into farming, and especially the oft-forgotten migrant labor force’s hard working and living conditions in the agricultural sector [113–116]. The absence of a gender approach in these analyses also leads to the invisibility of important processes whereby, for example, the social reproduction of rural communities is weakened due to

female emigration [117]. Finally, from the perspective of the feminist economy, inconsistencies regarding the social sustainability of food systems—including local ones—are revealed, as mentioned in the previous section, which require the re-conceptualization of the categories of work, production and local development [93]. All these elements should be addressed when building ALAS, along with processes of reconstruction of local economies through community, place-based approaches, and beyond the logics of markets and commodification [118,119].

6. A Plural Social Subject to Push for Multi-Actor, Bottom-Up Governance

Based upon the recognition of the complex, fragmented, and often contradictory nature of the agricultural sector, in the present section we discuss the challenges posed by the construction of social subjects and governance arrangements to boost agroecological transitions at food systems' scale. We stress the need to construct a plural subject that will bring together differentiated social actors, beyond the urban/rural divide, which are all being expelled from the market economy. De-centralizing and de-elitizing urban approaches to food policies and developing appropriate, locally adapted, and inclusive narratives for agroecological transitions might be core elements at this point. A major development and renovation of Participatory Action Research adapted to food systems' scale agroecological transitions is another core element to be addressed.

Territorial processes involve diverse actors at different scales and with wide-ranging and often conflicting interests, languages, and ways of doing things. Therefore, they require complex approaches, with a solid empirical and non-deterministic basis that allows creative and open-ended transition trajectories aligned with constructivist approaches to be understood [94,120]. The empirical basis constructed so far is limited and has often been restricted to situations in which social movements and agroecology farmers have a stronghold [9,121]. Such situations are rare in a global context of sturdy de-agrarianization [122], in which the agricultural social, collective subject is highly differentiated and thus becomes blurred [123]. For its part, the literature on food systems' transition to sustainability focuses on territorial processes in which alternative experiences are coordinated; however, such studies rarely discuss their interrelationships and the political and regulatory context of such articulations [10,14,124], which is key to agri-food system scaling [11,18,112].

Agroecology has emphasized the major role of the (small and medium size) farming sector and peasants in bottom-up approaches to progress towards food system sustainability [13,29,37]. The prominence of territorialized alliances with other social movements has been presented as opposed to state action, which tends towards the co-opting of agroecology [35,125,126]). While the need to promote policy and institutional frameworks conducive to agroecological transitions through extensive social coordination and bottom-up approaches is acknowledged [127], specific proposals or analyses of policies that would foster agroecology or would be unfavorable to the corporate food regime are few and far between [42]. The construction of ALAS thus allows the "politics of possibility" to be activated. The conceptualisation we bring here for ALAS acknowledge the risks of co-optation when cooperating with public administrations, and at the same time reject such a co-optation as being a necessary condition to relate with the state [118,119].

In recent years, urban food policies have been one of the main domains of experimentation and development of sustainable food policies [19]. Based on these policies, comprehensive approaches to food policies have been designed, bridging the concept of SFS and those of food and nutrition security, climate change, diets, or space planning [112,128,129]. Initiatives such as the Milan Urban Food Policy Pact (2015) are today fostering far-reaching policy agendas for sustainable and healthy eating in more than 200 cities around the world [130]. The development of empirical research and grey literature on urban food policies is wide-ranging and growing, although connections to the literature on agroecology are still incipient [89,131]. The so-called "urban agroecology" often focuses on agricultural production and/or food supply within cities [132], limiting its ability to analyze comprehensive food systems [25].

The dialectics between administrations and civil society have been at the heart of food policy discussions, from local to global scales, with a focus on agency and bottom-up political coordination [112,127]. Topics such as food sustainability and justice have generated notable social urban organization and mobilizations, which have been referred to as ‘governance-beyond-the-state’, not without controversy [19]. Cities are also developing novel forms of horizontal cooperation between local administrations (called ‘trans-local governance’) in which the support—and sometimes leadership—of grassroots organizations could be understood as “meta-governance” [133]. The emergence of urban agriculture and food and nutrition insecurity in the global north urban and metropolitan areas has been also highlighted to represent a new social movement [134].

Activist research in agroecology has recently emphasized the need to integrate food planning and space planning perspectives, and to develop an “agroecological urbanism” able to unveil how our ways of thinking and living are conditioned by the capitalist production of space [25]. Yet the urban coordination between food movements and marginalized and impoverished social groups, based on decolonial approaches and ‘repair agroecologies’ (among others, [30,38]) could be insufficient to incorporate many of the diverse rural realities existing both in the global North and South [135]. The messages of agroecology and food sovereignty are not penetrating rural communities where nested global crises are building up, and where far-right populist movements are rapidly expanding [136,137].

This greatly limits the scope of “agroecology scaling” and presents major theoretical and methodological challenges, given the divergence of languages and positions between agroecological movements and the conventional (small and medium size) agricultural sector. De-colonizing agroecology [25] might thus involve recognizing the diversity of rural realities and social situations in the food chain, both in the global South and North [5,23], as well as establishing bridges between all those actors—both rural and urban—expelled from access to decent living standards due to the corporate food regime [138]. Overcoming and reversing the metabolic rift means overcoming, in turn, the rift between conventional and alternative actors at the bottom of the food chain who are currently involved in a “war among the poor”.

Some problems are common to both conventional and agroecological farmers—from a local to a global scale: the degradation of traditional agricultural infrastructures and institutions, global trade agreements, climate change or price volatility and thus could constitute shared platforms of action that also include non-agricultural actors [31,139,140]. Hybrid actors, who adopt both conventional and alternative strategies whether sequentially and/or in a combined way, to achieve economic viability [57,96], present a great potential for the building of bridges and alliances between conventional profiles and other actors more closely linked to agroecology. After all, the economic and social feasibility of the arrangements made for stepping the agroecological transitions will play a decisive role in their expansion and long-term viability [6,112,141].

The dialogue between urban food policy and political agroecology approaches, and especially the analysis of their weaknesses, brings about the need to build a plural subject capable of promoting transitions at the food system level [19,33,138]. This social subject, in which peasants and new peasants already aligned with agroecology approaches (as main tractors of the transition) would be the key players, should be coordinated with conventional farmers (especially small and medium-sized ones), who make up the majority of the world’s agricultural sector. The outer circle, which is still included in this plural subject, would consist of non-agricultural actors, who need, in turn, new economic and territorial models beyond capitalism. On the one hand, there would be food and urban agroecology movements, mostly in the global North and increasingly in the global South, composed of grassroots groups, urban (community) farmers, NGOs and consumer networks motivated by radical transformations [25,31,38]. On the other hand, there would be social groups who are excluded by the corporate food regime and expelled from markets (such as small food retailers) or from adequate food, and without access to means of production [38,142,143].

Gender inequality is a major obstacle in such transitions, at least in three domains: in the interactions state–agroecological movements, within producer families, and in agroecology organizations themselves. Regarding the first two, unequal access to land ownership and technical support, and in the share of productive and reproductive tasks within farmers' families prevents women—who are often more open to agroecology than their male peers—from improving their living and production conditions, and thus agroecology out-scaling is prevented [21,44,144]. With respect to agroecological social organizations, women's subordinate status is hindering the development of theoretical approaches and (especially) repertoires of social and political action that incorporate the deeply transformative features of feminist economics and ecofeminism [22,42,89]. The convergence of agroecology with feminist and decolonial approaches would bring about, through intersectionality, a significant qualitative leap in political agroecology, whose empirical developments are still incipient [5,25,38,145].

The construction of territorial (place-based) relationalities, convergencies, and assemblages, around new, more inclusive narratives such as “food as commons” or “repair agroecologies”, could lead to the development of broader alliances for the transformation of food systems, adapting languages to the characteristics and conditions of the different actors that are being expelled from global markets [18,112,137,146,147]. Here is yet another field in which to develop empirical work, in order to identify drivers, levers, and transition paths adapted to the different ecologies of food actors engaged in systemic transformations in different territorial settings. The exploration of agroecology as an integrative populist movement, oriented towards liberating and repairing work and land, could be an interesting line of research in this regard [11,38].

The complexity of this plural and heterogeneous subject raises new questions about how to deal with it. Methodological approaches for constructing such a subject require complex, integrative devices that will enable the management of the divergent interests, symbolic environments, and velocities to step up the transition [13,37,120]. This is particularly the case in a scheme where small farmers are to be the protagonists and drivers of a broader space which incorporates urban and non-agricultural actors. Agroecology has generally been linked to Participatory Action-Research (PAR) as a means to generate knowledge and agency in communities experiencing these transitions [23,94,148]. However, empirical research on PAR applied to agroecology is still underdeveloped at extensive territorial scales.

7. Conclusions: An Agenda for Empirical Research on ALAS

To summarize, Agroecology-based Local Agri-food Systems (ALAS) are a useful instrument for scaling agroecology, since they allow the coordination of agroecology up-scaling and out-scaling, the upstream and downstream dimensions of the food chain, as well as the multi-actor and multi-level governance perspectives. They therefore enable the development of a complex and transdisciplinary approach to territorialized transition processes. In a previous article [15], we described their design principles. In this work, we sought to identify, based on previous scientific discussions, the main domains to be explored in order to deploy the social and ecological sustainability potential of agroecology. This implies overcoming the metabolic rift generated by the segregation of activities in rural and urban environments and productive and reproductive social processes, strengthening links with the territory, and building plural social subjects and co-governance processes that promote the building of ALAS.

We therefore understand ALAS as assemblages [112] of alternative food networks, new and emerging types of institutionality, political measures, and appropriate bottom-up institutional governance, together with the symbolic revival of place-based cultural and historical identities. These assemblages are embedded in specific territories with the aim of maximizing social and ecological sustainability, supported by food and nutritional equality and security, the relocation of metabolic flows, and the improvement of the food system's ecological efficiency. To achieve this, agroecological experiences of production, distribution

and consumption must be coordinated among themselves and with other actors, linking rural and urban areas, forming a plural subject led by farmers and peasants committed to agroecology. The aim of this plural subject is to develop operative and place-based ways of de-commodify and de-privatize food systems. Its aim is to achieve economic viability, agency and access to decision-making spheres, the development of physical infrastructures, and symbolic contexts to allow ALAS to emerge as hegemonic food systems as the corporate food regime loses its legitimacy. Such a social subject is tasked with promoting these transitions, while redefining our underlying thought categories and building economic flows, beyond the dualities of urban–rural and productive–reproductive work.

In recent years, agroecology has broadened its focus, transitioning towards an “ecology of the entire food system”, and thus gaining a fertile transdisciplinary approach to conceptualize and develop ALAS. Nevertheless, most contributions published hitherto are theoretical in nature. Empirical studies are still incipient or limited to rural contexts in the global South, where agroecological movements are strong. In this article, we attempted to identify gaps in empirical agroecological research at the food system scale in an increasingly urban and de-agrarianized world, through a dialogue between the agroecological and the sustainable food systems literature. This critical review has revealed numerous lines of research yet to be developed in each of the three highlighted themes.

The challenge we present here is as big as the global (multi-dimensional) crisis we are currently experiencing. We believe there is no single way to address it, but a plurality of transition paths that share the principles and values of agroecology. This is a time for major transformations.

Author Contributions: Conceptualization, methodology, formal analysis, investigation, writing—review and editing, D.L.-G. and M.G.d.M.; writing—first draft and Figure 1 preparation, D.L.-G. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Third Sector grants of the Spanish Ministry for the Ecological Transition and the Demographic Challenge, call 2021. This work was also supported by the Spanish Ministry of Science, Innovation and Universities under Grant RTI2018-093970-B-C31; Junta de Andalucía [Andalusian Regional Government] under Grant UPO-1260167.

Informed Consent Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Wezel, A.; Bellon, S.; Doré, T.; Francis, C.; Vallod, D.; David, C. Agroecology as a science, a movement and a practice. A review. *Agron. Sustain. Dev.* **2009**, *29*, 503–515. [[CrossRef](#)]
2. González de Molina, M. Agroecology and politics. How to get sustainability? About the necessity for a political agroecology. *Agroecol. Sustain. Food Syst.* **2013**, *37*, 45–59.
3. Rosset, P.; Altieri, M.A. *Agroecología. Ciencia y Política*; Icaria: Barcelona, Spain, 2017.
4. Mason, R.E.; White, A.; Bucini, G.; Anderzén, J.; Méndez, V.E.; Merrill, S.C. The evolving landscape of agroecological research. *Agroecol. Sustain. Food Syst.* **2020**, *45*, 551–591. [[CrossRef](#)]
5. Gómez, L.F.; Ríos-Osorio, L.; Eschenhagen, M.L. Agroecology publications and coloniality of knowledge. *Agron. Sustain. Dev.* **2013**, *33*, 355–362. [[CrossRef](#)]
6. Gliessman, S.R. Transforming food systems with agroecology. *Agroecol. Sustain. Food Syst.* **2016**, *40*, 187–189. [[CrossRef](#)]
7. Wezel, A.; Herren, B.G.; Kerr, R.B.; Barrios, E.; Gonçalves, A.L.R.; Sinclair, F. Agroecological principles and elements and their implications for transitioning to sustainable food systems. A review. *Agron. Sustain. Dev.* **2020**, *40*. [[CrossRef](#)]
8. Francis, C.; Lieblein, G.; Gliessman, S.R.; Breland, T.A.; Creamer, N.; Harwood, R.; Salomonsson, L.; Helenius, J.; Rickerl, D.; Salvador, R.; et al. Agroecology: The Ecology of Food Systems. *J. Sustain. Agric.* **2003**, *22*, 99–118. [[CrossRef](#)]
9. Mier y Terán Giménez Cacho, M.; Giraldo, O.F.; Aldasoro, M.; Morales, H.; Ferguson, B.G.; Rosset, P.; Khadse, A.; Campos, C. Bringing agroecology to scale: Key drivers and emblematic cases. *Agroecol. Sustain. Food Syst.* **2018**, *42*, 637–665. [[CrossRef](#)]
10. Giraldo, O.F.; McCune, N. Can the state take agroecology to scale? Public policy experiences in agroecological territorialization from Latin America. *Agroecol. Sustain. Food Syst.* **2019**, *43*, 785–809. [[CrossRef](#)]
11. González de Molina, M.; Petersen, P.F.; Garrido Peña, F.; Caporal, F.R. *Political Agroecology: Advancing the Transition to Sustainable Food Systems*; Springer: Dordrecht, The Netherlands, 2019.

12. Ferguson, B.G.; Aldasoro Maya, M.; Giraldo, O.F.; Mier y Terán Giménez Cacho, M.; Morales, H.; Rosset, P. Special issue editorial: What do we mean by agroecological scaling? *Agroecol. Sustain. Food Syst.* **2019**, *43*, 722–723. [[CrossRef](#)]
13. Val, V.; Rosset, P.M.; Zamora Lomelí, C.; Giraldo, O.F.; Rocheleau, D. Agroecology and La Via Campesina I. The symbolic and material construction of agroecology through the dispositive of “peasant-to-peasant” processes. *Agroecol. Sustain. Food Syst.* **2019**, *43*, 872–894. [[CrossRef](#)]
14. Lamine, C.; Magda, D.; Amiot, M.J. Crossing Sociological, Ecological, and Nutritional Perspectives on Agrifood Systems Transitions: Towards a Transdisciplinary Territorial Approach. *Sustainability* **2019**, *11*, 1284. [[CrossRef](#)]
15. González de Molina, M.; López-García, D. Principles for designing Agroecology-based Local (territorial) Agri-food Systems: A critical revision. *Agroecol. Sustain. Food Syst.* **2021**, *45*, 1050–1082. [[CrossRef](#)]
16. Kneafsey, M.; Venn, L.; Schmutz, U.; Balázs, B.; Trenchard, L.; Eyden-Wood, T.; Bos, T.; Sutton, G.; Blackett, M. *Short Food Supply Chains and Local Food Systems in the EU. A State of Play of Their Socio-Economic Characteristics*; European Union: Luxembourg, 2013.
17. Blay-Palmer, A.; Sonnino, R.; Custot, J. A food politics of the possible? Growing sustainable food systems through networks of knowledge. *Agric. Hum. Values* **2016**, *33*, 27–43. [[CrossRef](#)]
18. Runhaar, H. Four critical conditions for agroecological transitions in Europe. *Int. J. Agric. Sustain.* **2021**, *19*, 227–233. [[CrossRef](#)]
19. Moragues-Faus, A.; Morgan, K.J. Reframing the Foodscape: The emergent world of urban food policies. *Environ. Plan. A* **2015**, *47*, 1558–1573. [[CrossRef](#)]
20. Goodman, D.; Dupuis, E.; Goodman, M. *Alternative Food Networks. Knowledge, Practice, and Politics*; Routledge: London, UK, 2012.
21. Federici, S. *Revolución en Punto Cero. Trabajo Doméstico, Revolución y Luchas Feministas*; Traficantes de Sueños: Madrid, Spain, 2013.
22. Zuluaga Sánchez, G.P.; Catacora-Vargas, G.; Siliprandi, E. (Eds.) *Agroecología en Femenino. Reflexiones a Partir de Nuestras Experiencias*; SOCLA: La Paz, Bolivia, 2018.
23. López-García, D.; Cuéllar-Padilla, M.; de Azevedo Olival, A.; Laranjeira, N.P.; Méndez, V.E.; Peredo y Parada, S.; Barbosa, C.A.; Barrera Salas, C.; Caswell, M.; Cohen, R.; et al. Building agroecology with people. Challenges of participatory methods to deepen on the agroecological transition in different contexts. *J. Rural Stud.* **2021**, *83*, 257–267. [[CrossRef](#)]
24. López-García, D.; González de Molina, M. Chapter 9: Co-Producing Agro-Food Policies for Urban environments: Towards Agroecology-based Local Agri-food Systems. In *Urban Agroecology, Interdisciplinary Research and Future Directions*; Egerer, M., Cohen, H., Eds.; CRC Press: Boca Raton, FL, USA, 2021; pp. 189–208.
25. Deh-Tor, C.M. Food as an urban question, and the foundations of a reproductive, agroecological, urbanism. In *Resourcing an Agroecological Urbanism. Political, Transformational and Territorial Dimensions*; Tornaghi, C., Dehaene, M., Eds.; Routledge: London, UK, 2021; pp. 12–33.
26. Hyett, N.; Kenny, A.; Dickson-Swift, V. Methodology or method? A critical review of qualitative case study reports. *Int. J. Qual. Stud. Health Well-Being* **2014**, *9*, 23606. [[CrossRef](#)]
27. Grant, M.J.; Booth, A. A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Inf. Libr. J.* **2009**, *26*, 91–108. [[CrossRef](#)]
28. González de Molina, M.; López, G.; Guzmán, G.I. Politizando el consumo alimentario: Estrategias para avanzar en la transición agroecológica. *Redes* **2017**, *22*. [[CrossRef](#)]
29. Parmentier, S. *Scaling-Up Agroecological Approaches: What, Why and How?* OXFAM: Brussels, Belgium, 2014.
30. Tomaso, F.; Priscilla, C.; Dagmar, D.; Jose L., V.-P.; Deirdre, W. Commons and commoning for a just agroecological transition. The importance of de-colonising and de-commodifying our food systems. In *Resourcing an Agroecological Urbanism. Political, Transformational and Territorial Dimensions*; Tornaghi, C., Dehaene, M., Eds.; Routledge: London, UK, 2021; pp. 60–84.
31. Holt-Giménez, E.; Shattuck, A. Food crises, food regimes and food movements: Rumbblings of reform or tides of transformation? *J. Peasant Stud.* **2011**, *38*, 109–144. [[CrossRef](#)] [[PubMed](#)]
32. Levidow, L.; Pimbert, M.; Vanloqueren, G. Agroecological research: Conforming—or transforming the dominant agro- food regime? *Agroecol. Sustain. Food Syst.* **2014**, *38*, 1127–1155. [[CrossRef](#)]
33. Méndez, V.E.; Caswell, M.; Gliessman, S.; Cohen, R. Integrating Agroecology and Participatory Action Research (PAR): Lessons from Central America. *Sustainability* **2017**, *9*, 705. [[CrossRef](#)]
34. Rivera-Ferre, M.G. The resignification process of Agroecology: Competing narratives from governments, civil society and intergovernmental organizations. *Agroecol. Sustain. Food Syst.* **2018**, *42*, 666–685. [[CrossRef](#)]
35. Ajates Gonzalez, R.; Thomas, J.; Chang, M. Translating Agroecology into Policy: The Case of France and the United Kingdom. *Sustainability* **2018**, *10*, 2930. [[CrossRef](#)]
36. Edelman, M.; Weis, T.; Baviskar, A.; Borrás, S.M., Jr.; Holt-Giménez, E.; Kandiyoti, D.; Wolford, W. Introduction: Critical perspectives on food sovereignty. *J. Peasant Stud.* **2014**, *41*, 911–931. [[CrossRef](#)]
37. Anderson, C.R.; Bruil, J.; Chappell, M.J.; Kiss, C.; Pimbert, M.P. From Transition to Domains of Transformation: Getting to Sustainable and Just Food Systems through Agroecology. *Sustainability* **2019**, *11*, 5272. [[CrossRef](#)]
38. Cadieux, K.V.; Carpenter, S.; Liebman, A.; Blumberg, R.; Upadhyay, B. Reparation Ecologies: Regimes of Repair in Populist Agroecology. *Ann. Am. Assoc. Geogr.* **2019**, *109*, 644–660. [[CrossRef](#)]
39. Scoones, I.; Edelman, M.; Borrás, S.M., Jr.; Hall, R.; Wolford, W.; White, B. Emancipatory rural politics: Confronting authoritarian populism. *J. Peasant Stud.* **2018**, *45*, 1–20. [[CrossRef](#)]
40. Mamonova, N.; Franquesa, J. ‘Actually existing’ right-wing populism in rural Europe: Insights from eastern Germany, Spain, the United Kingdom and Ukraine. *J. Peasant Stud.* **2020**, *47*, 1497–1525. [[CrossRef](#)]

41. Mamonova, N.; Franquesa, J. Populism, Neoliberalism and Agrarian Movements in Europe. Understanding Rural Support for Right-Wing Politics and Looking for Progressive Solutions. *Sociol. Rural.* **2019**, *60*, 710–731. [[CrossRef](#)]
42. Sanderson, A.; Ioris, A.A.R. Addressing the Knowledge Gaps in Agroecology and Identifying Guiding Principles for Transforming Conventional Agri-Food Systems. *Sustainability* **2017**, *9*, 330. [[CrossRef](#)]
43. Siliprandi, E. Mujeres y agroecología. Nuevos sujetos políticos en la agricultura familiar. *Investig. Fem.* **2010**, *1*, 125–137.
44. Bezner-Kerr, R.; Hickey, C.; Lupafya, E.; Dakishoni, L. Repairing rifts or reproducing inequalities? Agroecology, food sovereignty, and gender justice in Malawi. *J. Peasant Stud.* **2019**, *46*, 1499–1518. [[CrossRef](#)]
45. Trevilla Espinal, D.L.; Soto Pinto, M.L.; Morales, H.; Estrada-Lugo, E.I.J. Feminist agroecology: Analyzing power relationships in food systems. *Agroecol. Sustain. Food Syst.* **2021**, *45*, 1029–1049. [[CrossRef](#)]
46. Wezel, A.; Brives, H.; Casagrande, M.; Clément, C.; Dufour, A.; Vandenbroucke, P. Agroecology territories: Places for sustainable agricultural and food systems and biodiversity conservation. *Agroecol. Sustain. Food Syst.* **2016**, *40*, 132–144. [[CrossRef](#)]
47. Renting, H.; Marsden, T.K.; Banks, J. Understanding alternative food networks: Exploring the role of short food supply chains in rural development. *Environ. Plan. A* **2003**, *35*, 393–411. [[CrossRef](#)]
48. Barham, E. Towards a theory of values-based labeling. *Agric. Hum. Values* **2002**, *19*, 349–360. [[CrossRef](#)]
49. Holloway, L.; Cox, R.; Venn, L.; Kneafsey, M.; Dowler, E.; Tuomainen, H. Managing sustainable farmed landscape through ‘alternative’ food networks: A case study from Italy. *Geogr. J.* **2007**, *172*, 219–229. [[CrossRef](#)]
50. McCarthy, J. Rural geography: Alternative rural economies- the search for alterity in forests, fisheries, food, and fair trade. *Prog. Hum. Geogr.* **2006**, *30*, 803–811. [[CrossRef](#)]
51. Murdoch, J. Networks—A new paradigm of rural development? *J. Rural Stud.* **2000**, *16*, 407–419. [[CrossRef](#)]
52. Clarke, N.; Cloke, P.; Barnett, C.; Malpass, A. The spaces and ethics of organic food. *J. Rural Stud.* **2008**, *24*, 219–230. [[CrossRef](#)]
53. DeLind, L.; Bingen, J. Place and civic culture: Re-thinking the context for local agriculture. *J. Agric. Environ. Ethics* **2008**, *21*, 127–151. [[CrossRef](#)]
54. De Wit, J.; Verhoog, H. Organic values and the conventionalization of organic agriculture. *NJAS Wagening. J. Life Sci.* **2007**, *54*, 449–462. [[CrossRef](#)]
55. Padel, S.; Zander, K.; Gössinger, K. ‘Regional production’ and ‘Fairness’ in organic farming: Evidence from a CORE Organic project. In Proceedings of the 9th IFSA Symposium, Vienna, Austria, 4–7 July 2010; pp. 1793–1802.
56. Goldberger, J.R. Conventionalization, civic engagement, and the sustainability of organic agriculture. *J. Rural Stud.* **2011**, *27*, 288–296. [[CrossRef](#)]
57. Darnhofer, I. Contributing to a Transition to Sustainability of Agri-Food Systems: Potentials and Pitfalls for Organic Farming. In *Organic Farming, Prototype for Sustainable Agricultures*; Bellon, S., Penvern, Y., Eds.; Springer: Dordrecht, The Netherlands, 2014; pp. 439–452.
58. Goodman, D. *Place and Space in Alternative Food Networks: Connecting Production and Consumption*; Working Paper #21; Environment, Politics and Development Working Paper Series; Department of Geography, King’s College: London, UK, 2009.
59. Winter, M. Embeddedness, the new food economy and defensive localism. *J. Rural Stud.* **2003**, *19*, 23–32. [[CrossRef](#)]
60. Edwards-Jones, G.; i Canals, L.M.; Hounsome, N.; Truninger, M.; Koerber, G.; Hounsome, B.; Cross, P.; York, E.H.; Hospido, A.; Plassmann, K.; et al. Testing the assertion that ‘local food is best’: The challenges of an evidence-based approach. *Trends Food Sci. Technol.* **2008**, *19*, 265–274. [[CrossRef](#)]
61. Brunori, G.; Galli, F.; Barjolle, D.; Van Broekhuizen, R.; Colombo, L.; Giampietro, M.; Kirwan, J.; Lang, T.; Mathijs, E.; Maye, D.; et al. Are local food chains more sustainable than global food chains? Considerations for assessment. *Sustainability* **2016**, *8*, 449. [[CrossRef](#)]
62. Gomiero, T. Chapter 3. Biophysical Analysis of Agri-Food Systems: Scales, Energy Efficiency, Power and Metabolism of Society. In *Socio-Metabolic Perspectives on the Sustainability of Local Food Systems*; Frankova, E., Hass, W., Singh, S., Eds.; Springer: Cham, Switzerland, 2017; pp. 69–102.
63. Morris, C.; Kirwan, J. Ecological embeddedness: An interrogation and refinement of the concept within the context of alternative food networks in the UK. *J. Rural Stud.* **2011**, *27*, 322–330. [[CrossRef](#)]
64. Ericksen, P. Conceptualizing Food Systems for Global Environmental Change Research. *Glob. Environ. Chang.* **2008**, *18*, 234–245. [[CrossRef](#)]
65. Ingram, J. A food systems approach to researching food security and its interactions with global environmental change. *Food Secur.* **2011**, *3*, 417–431. [[CrossRef](#)]
66. Feenstra, G. Creating space for sustainable food systems: Lessons from the field. *Agric. Hum. Values* **2002**, *19*, 99–106. [[CrossRef](#)]
67. Hinrichs, C.C. Embeddedness and local food systems: Notes on two types of direct agricultural market. *J. Rural Stud.* **2000**, *16*, 295–303. [[CrossRef](#)]
68. Macias, T. Working Toward a Just, Equitable, and Local Food System: The Social Impact of Community-Based Agriculture. *Soc. Sci. Q.* **2008**, *89*, 1086–1101. [[CrossRef](#)]
69. Selfa, T.; Qazi, J. Place, taste, or face-to-face? Understanding producer–consumer networks in “local” food systems in Washington State. *Agric. Hum. Values* **2005**, *22*, 451–464. [[CrossRef](#)]
70. Ilbery, B.; Maye, D. Alternative (shorter) food supply chains and specialist livestock products in the Scottish-English borders. *Environ. Plan. A* **2005**, *37*, 823–844. [[CrossRef](#)]

71. Tello, E.; González de Molina, M. Methodological Challenges and General Criteria for Assessing and Designing Local Sustainable Agri-Food Systems: A Socio-Ecological Approach at Landscape Level. In *Socio-Metabolic Perspectives on the Sustainability of Local Food Systems*; Frankova, E., Hass, W., Singh, S., Eds.; Springer International: Cham, Switzerland, 2017; pp. 27–68.
72. Moragues-Faus, A.; Carroll, B. Reshaping urban political ecologies: An analysis of policy trajectories to deliver food security. *Food Secur.* **2018**, *10*, 1337–1351. [[CrossRef](#)]
73. Marsden, T.; Morley, A. (Eds.) *Sustainable Food Systems. Building a New Paradigm*; Routledge: London, UK.
74. Vaarst, M.; Getz-Escudero, A.; Chappell, M.J.; Brinkley, C.; Nijbroek, R.; Arraes, N.A.M.; Andreasen, L.; Gattinger, A.; Fonseca De Almeida, G.; Bossio, D.; et al. Exploring the concept of agroecological food systems in a city-region context. *Agroecol. Sustain. Food Syst.* **2017**, *42*, 686–711. [[CrossRef](#)]
75. Blay-Pamer, A.; Santini, G.; Dubbeling, M.; Renting, H.; Taguchi, M.; Giordano, T. Validating the City Region Food System Approach: Enacting Inclusive, Transformational City Region Food Systems. *Sustainability* **2018**, *10*, 1680. [[CrossRef](#)]
76. Foster, J.B. Marx's theory of metabolic rift: Classical foundations for environmental sociology. *Am. J. Sociol.* **1999**, *105*, 366–405. [[CrossRef](#)]
77. Foster, J.B. *Marx's Ecology: Materialism and Nature*; Monthly Review Press: New York, NY, USA, 2000.
78. Moore, J.W. Environmental crises and the metabolic rift in world-historical perspective. *Organ. Environ.* **2000**, *13*, 123–157. [[CrossRef](#)]
79. Moore, J.W. Capitalism in the Web of Life. In *Ecology and the Accumulation of Capital*; Verso: London, UK, 2015.
80. Hornborg, A. Zero-sum world challenges in conceptualizing environmental load displacement and ecologically unequal exchange in the world-system. *Int. J. Comp. Sociol.* **2009**, *50*, 237–262. [[CrossRef](#)]
81. Jorgenson, A.K.; Austin, K.; Dick, C. Ecologically unequal exchange and the resource consumption/environmental degradation paradox. *Int. J. Comp. Sociol.* **2009**, *50*, 263–284. [[CrossRef](#)]
82. Patel, R.; Moore, J.W. *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature and the Future of the Planet*; University of California Press: Oakland, CA, USA, 2018.
83. Wittman, H. Reworking the metabolic rift: La Vía Campesina, agrarian citizenship, and food sovereignty. *J. Peasant Stud.* **2009**, *36*, 805–826. [[CrossRef](#)]
84. Schneider, M.; McMichael, P. Deepening, and Repairing, the Metabolic Rift. *J. Peasant Stud.* **2010**, *37*, 461–484. [[CrossRef](#)] [[PubMed](#)]
85. Born, B.; Purcell, M. Avoiding the Local Trap: Scale and Food Systems in Planning Research. *J. Plan. Educ. Res.* **2006**, *26*, 195–207. [[CrossRef](#)]
86. González de Molina, M.; Toledo, V. *The Social Metabolism: A Socioecological Theory of Historical Change*; Springer: Berlin, Germany, 2014.
87. Infante-Amate, J.; Aguilera, E.; Palmeri, F.; Guzmán, G.I.; Soto, D.; García-Ruiz, R.; González de Molina, M. Land embodied in Spain's biomass trade and consumption (1900–2008): Historical changes, drivers and impacts. *Land Use Policy* **2018**, *78*, 493–502. [[CrossRef](#)]
88. Jennings, S.; Cottee, J.; Curtis, T.; Miller, S. Food in an Urbanised World. The Role of City Region Food Systems in Resilience and Sustainable Development. FAO & International Sustainability Unit. 2015. Available online: <http://www.fao.org/fileadmin/templates/agphome/documents/horticulture/crfs/foodurbanized.pdf> (accessed on 30 June 2019).
89. DiMasso, M.; López-García, D.; Clemente Longás, J.; García-García, V. Taking food out of the private sphere? Addressing gender relations in urban food policy. *Agroecol. Sustain. Food Syst.* **2021**. [[CrossRef](#)]
90. Federici, S. *Re-Enchanting the World: Feminism and the Politics of the Commons*; PM Press: Los Angeles, CA, USA, 2019.
91. Mies, M. Patriarchy and Accumulation on a World Scale. In *Women in the International Division of Labor*; Zed Books: London, UK, 1986.
92. Picchio, A. *Social Reproduction. The Political Economy of the Labour Market*; Cambridge University Press: Cambridge, UK, 1992.
93. Pérez Orozco, A. Subversión feminista de la economía. In *Aportes Para un Debate Sobre el Conflicto Capital-Vida*; Traficantes de Sueños: Madrid, Spain, 2014.
94. Ollivier, G.; Magda, D.; Mazé, A.; Plumecocq, G.; Lamine, C. Agroecological transitions: What can sustainability transition frameworks teach us? An ontological and empirical analysis. *Ecol. Soc.* **2018**, *23*, 5. [[CrossRef](#)]
95. Knickel, K.; Renting, H. Methodological and Conceptual Issues in the Study of Multifunctionality and Rural Development. *Sociol. Rural.* **2000**, *40*, 512–528. [[CrossRef](#)]
96. Maye, D.; Ilbery, B. Regional Economies of Local Food Production: Tracing Food Chain Links Between 'Specialist' Producers and Intermediaries in the Scottish-English Borders. *Eur. Urban Reg. Stud.* **2006**, *13*, 337–354. [[CrossRef](#)]
97. Ventura, F.; Brunori, G.; Milone, P.; Berti, G. The Rural Web: A Synthesis. In *Unfolding Webs, The Dynamics of Regional Rural Development*; van der Ploeg, J.D., Marsden, T., Eds.; Royal Van Gorcum: Assen, The Netherlands, 2008; pp. 149–174.
98. de Roest, K.; Ferrari, P.; Knickel, K. Specialization and economies of scale or diversification and economies of scope? Assessing different agricultural development pathways. *J. Rural Stud.* **2018**, *59*, 222–231. [[CrossRef](#)]
99. Sanz-Cañada, J.; Muchnik, J. Geographies of origin and proximity: Approaches to local agro-food systems. *Cult. Hist.* **2016**, *5*, e002. [[CrossRef](#)]
100. Gilly, J.P.; Wallet, F. Enchevêtrement des espaces de régulation et gouvernance territoriale. Les processus d'innovation institutionnelle dans la politique des Pays en France. *Rev. D'économie Régionale Urbaine* **2005**, *5*, 699–722. [[CrossRef](#)]

101. Torres-Salcido, G.; Sanz-Cañada, J. Territorial Governance. A Comparative Research of Local Agro-Food Systems in Mexico. *Agriculture* **2018**, *8*, 18. [CrossRef]
102. Torre, A.; Traversac, J. (Eds.) *Territorial Governance. In Local Development, Rural Areas and Agrofood Systems*; Springer: New York, NY, USA, 2011.
103. Arfini, F.; Antonioli, F.; Donati, M.; Gorton, M.; Mancini, M.C.; Tocco, B.; Veneziani, M. Conceptual Framework. In *Sustainability of European Food Quality Schemes: Multi-Performance, Structure, and Governance of PDO, PGI, and Organic Agri-Food Systems*; Arfini, F., Bellassen, V., Eds.; Springer International Publishing: Cham, Switzerland, 2019; pp. 3–21.
104. Goodman, D. Rural Europe redux? Reflections on alternative agro-food networks and paradigm change. *Sociol. Rural.* **2004**, *44*, 3–16. [CrossRef]
105. Bowen, S.; De Master, K. New rural livelihoods or museums of production? Quality food initiatives in practice. *J. Rural Stud.* **2011**, *27*, 73–82. [CrossRef]
106. López Moreno, I. Labelling the Origin of Food Products: Towards Sustainable Territorial Development? Ph.D. Thesis, Wageningen University, Wageningen, The Netherlands, 2014.
107. Favia, F. Possibilità e limiti dello sviluppo locale. Una nota troppo lunga e semiseria sui distretti industriali marshalliani. *La Quest. Agrar.* **1992**, *45*, 172–185.
108. Berti, G. *Il “Distretto Rurale”*; Laboratorio Economia Locale, Quaderno 97; Università Cattolica del Sacro Cuore: Piacenza, Italy, 2005.
109. Becattini, G. “Distrettualità” fra industria e agricoltura. *La Quest. Agrar.* **2000**, *2*, 9–24.
110. Triantafyllidis, A. Local Governance through Organic Farming. The Bio-District of the Vara Valley, a Private/Public Partnership to Assure Vitality to a Rural Area. 2014. Available online: <https://orgprints.org/26262/7/26262.pdf> (accessed on 15 March 2021).
111. Guareschi, M.; Maccari, M.; Sciurano, J.P.; Arfini, F.; Pronti, A. A Methodological Approach to Upscale Toward an Agroecology System in EU-LAFSs: The Case of the Parma Bio-District. *Sustainability* **2020**, *12*, 5398. [CrossRef]
112. Marsden, T.; Hebinck, P.; Mathijs, E. Re-building food systems: Embedding assemblages, infrastructures and reflexive governance for food systems transformations in Europe. *Food Secur.* **2018**, *10*, 1301–1309. [CrossRef]
113. Rye, J.F.; Andrzejewska, J. The structural disempowerment of Eastern European migrant farm workers in Norwegian agriculture. *J. Rural Stud.* **2010**, *26*, 41–51. [CrossRef]
114. Ingram, J.; Kirwan, J. Matching new entrants and retiring farmers through farm joint ventures: Insights from the Fresh Start Initiative in Cornwall, UK. *Land Use Policy* **2011**, *28*, 917–927. [CrossRef]
115. Bertolozzi-Caredio, D.; Bardaji, I.; Coopmans, I.; Soriano, B.; Garrido, A. Key steps and dynamics of family farm succession in marginal extensive livestock farming. *J. Rural Stud.* **2020**, *76*, 131–141. [CrossRef]
116. Sampedro, R.; Camarero, L. Foreign Immigration to Rural Spain: An Exploration of the Precarious Rural Cosmopolitanism in the Post-Crisis Scenario. In *Crisis and Post-Crisis in Rural Territories*; Döner, F., Figueiredo, E., Rivera, M., Eds.; Springer: Cham, Switzerland, 2020. [CrossRef]
117. Camarero, L.A. (Ed.) *La Población Rural de España. De los Desequilibrios a la Sostenibilidad Social*; Obra Social de La Caixa: Barcelona, Spain, 2009.
118. Gutiérrez-Aguilar, R. *Horizontes Comunitario-Populares*; Traficantes de Sueños: Madrid, Spain, 2017.
119. Gibson-Graham, J.K. *Una Política Postcapitalista*; Siglo del Hombre: Bogotá, Colombia, 2011.
120. Magda, D.; Girard, N.; Angeon, V.; Cholez, C.; Raulet-Croset, N.; Sabbadin, R.; Salliou, N.; Barnaud, C.; Monteil, C.; Peyrard, N. A Plurality of Viewpoints Regarding the Uncertainties of the Agroecological Transition. In *Agroecological Transitions: From Theory to Practice in Local Participatory Design*; Bergez, J.E., Audouin, E., Therond, O., Eds.; Springer: Cham, Switzerland, 2019; pp. 99–120.
121. Rosset, P.M.; Machín Sosa, B.; Roque Jaime, A.B.; Ávila Lozano, D.R. The Campesino-to-Campesino agroecology movement of ANAP in Cuba: Social process methodology in the construction of sustainable peasant agriculture and food sovereignty. *J. Peasant Stud.* **2011**, *38*, 161–191. [CrossRef]
122. Graeub, B.E.; Chappell, M.J.; Wittmand, H.; Ledermann, S.; Bezner Kerr, R.; Gemmill-Herren, B. The State of Family Farms in the World. *World Dev.* **2016**, *87*, 1–15. [CrossRef]
123. Bernstein, H. *The Class Dynamics of Agrarian Change*; Fernwood: Halifax, NS, Canada, 2010.
124. Bui, S.; Cardona, A.; Lamine, C.; Cerf, M. Sustainability transitions: Insights on processes of niche-regime interaction and regime reconfiguration in agri-food systems. *J. Rural Stud.* **2016**, *48*, 92–103. [CrossRef]
125. Giraldo, O.F.; Rosset, P.M. Agroecology as a territory in dispute: Between institutionality and social movements. *J. Peasant Stud.* **2017**, *45*, 545–564. [CrossRef]
126. Rosset, P.M.; Pinheiro Barbosa, L.; Val, V.; McCune, N. Pensamiento Latinoamericano Agroecológico: The emergence of a critical Latin American agroecology? *Agroecol. Sustain. Food Syst.* **2021**, *45*, 42–64. [CrossRef]
127. Duncan, J.; Claeys, P. Politicizing food security governance through participation: Opportunities and opposition. *Food Secur.* **2018**, *10*, 1411–1424. [CrossRef] [PubMed]
128. Bricas, N. Urbanization Issues Affecting Food System Sustainability. In *Designing Urban Food Policies. Urban Agriculture*; Brand, C., Bricas, N., Conare, D., Daviron, B., Debru, J., Michel, L., Soulard, C.-T., Eds.; Springer: Cham, Switzerland, 2019. [CrossRef]
129. Calori, A.; Magarini, A. *Food and the Cities. Food Policies for Sustainable Cities*; Edizioni Ambiente: Milan, Italy, 2015.
130. DeCunto, A.; Tegoni, C.; Sonnino, R.; Michel, C. *Food in Cities: Study on Innovation for a Sustainable and Healthy Production, Delivery and Consumption of Food in Cities*; Eurocities/Cardiff University/Comune di Milano: Brussels, Belgium, 2017.

131. López-García, D.; García-García, V.; Sampedro-Ortega, Y.; Pomar-León, A.; Tendero-Acin, G.; Sastre-Morató, A.; Correro-Humanes, A. Exploring the contradictions of scaling: Action plans for agroecological transition in metropolitan environments. *Agroecol. Sustain. Food Syst.* **2020**, *44*, 467–489. [[CrossRef](#)]
132. Egerer, M.; Cohen, H. (Eds.) *Urban. Agroecology, Interdisciplinary Research and Future Directions*; CRC Press: Boca Raton, FL, USA, 2021.
133. Moragues-Faus, A.; Sonnino, R. Re-assembling sustainable food cities: An exploration of translocal governance and its multiple agencies. *Urban Stud.* **2018**, *56*, 778–794. [[CrossRef](#)]
134. Morgan, K. Nourishing the city: The rise of the urban food question in the Global North. *Urban Stud.* **2015**, *52*, 1379–1394. [[CrossRef](#)]
135. Bernstein, H. Political economy of agrarian change: Some key concepts and questions. *RUDN* **2017**, *17*, 7–18. [[CrossRef](#)]
136. Mamonova, N.; Franquesa, J. Right-Wing Populism in Rural Europe. Introduction to the Special Issue. *Sociol. Rural.* **2019**, *60*, 702–709. [[CrossRef](#)]
137. Ploeg, J.D. Farmers' upheaval, climate crisis and populism. *J. Peasant Stud.* **2020**, *47*, 589–605. [[CrossRef](#)]
138. López-García, D. Who is the subject of agroecological transitions? Local Agroecological Dynamization and the plural subject of food systems transformation. *Landbauforsch J. Sustain. Org. Agric. Syst.* **2020**, *70*, 36–42. [[CrossRef](#)]
139. Guzmán Casado, G.I.; López García, D.; Román Bermejo, L.; Alonso Mielgo, A.M. Participatory Action-Research in Agroecology: Building organic food networks in Spain. *J. Sustain. Agric.* **2013**, *37*. [[CrossRef](#)]
140. Menconi, M.E.; Grohmann, D.; Mancinelli, C. European farmers and participatory rural appraisal: A systematic literature review on experiences to optimize rural development. *Land Use Policy* **2017**, *60*, 1–11. [[CrossRef](#)]
141. van der Ploeg, J.D.; Barjolle, D.; Bruil, J.; Brunori, G.; Costa Madureira, L.M.; Dessein, J.; Drag, Z.; Fink-Kessler, A.; Gasselin, P.; Gonzalez de Molina, M.; et al. The economic potential of agroecology: Empirical evidence from Europe. *J. Rural Stud.* **2019**, *71*, 46–61. [[CrossRef](#)]
142. Galli, F.; Hebinck, A.; Carroll, B. Addressing food poverty in systems: Governance of food assistance in three European countries. *Food Secur.* **2018**, *10*, 1353–1370. [[CrossRef](#)]
143. Moragues-Faus, A.; Marceau, A. Measuring Progress in Sustainable Food Cities: An Indicators Toolbox for Action. *Sustainability* **2019**, *11*, 45. [[CrossRef](#)]
144. Mestmacher, J.; Braun, A. Women, agroecology and the state: New perspectives on scaling-up agroecology based on a field research in Chile. *Agroecol. Sustain. Food Syst.* **2020**, *45*, 981–1006. [[CrossRef](#)]
145. Álvarez-Vispo, I.; Begiristain-Zubillaga, M. Feminismo para los sistemas alimentarios y la agroecología. *RIESISE* **2019**, *2*. [[CrossRef](#)]
146. Sonnino, R.; Marsden, T.; Moragues-Faus, A. Relationalities and convergences in food security narratives: Towards a place-based approach. *Trans. Inst. Br. Geogr.* **2016**, *41*, 477–489. [[CrossRef](#)]
147. Vivero-Pol, J.L.; Ferrando, T.; DeSchutter, O.; Mattei, U. (Eds.) *Routledge Handbook of Food as a Commons*; Routledge: London, UK, 2019.
148. Méndez, V.E.; Bacon, C.M.; Cohen, R.; Gliessman, S.R. *Agroecology: A Transdisciplinary, Participatory and Action-Oriented Approach*; CRC Press: Boca Raton, FL, USA, 2016.