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Governance challenges for sustainable food systems: The return of politics and territories

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Abstract:

Sustainability is a powerful global framework for implementing transformations in agricultural and food systems. The complexity of the challenges involved leads to giving more importance to questions related to governance. The two recent globalization crises have accelerated this evolution. Experiments in the local governance of systems, carried out on the scale of cities and regions, contribute to reconfiguring the trajectories of these systems. The experiments confirm the positive effects of multi-scalar and multi-stakeholder governance that is inclusive, participatory, and collaborative, while rooted in territories and societies. This literature review revisits the relationships between sustainability, governance, and food systems to encourage moving away from a theoretical and prescriptive position.

Keywords:

Food systems, food governance, sustainability, food politics, multi-stakeholder approach

Highlights:

- Governance is one of the keys to the sustainable transformations that must be implemented.
- Politics is a fundamental dimension of sustainability.
- The governance of transformations is functional at the level of local territories.
- Inclusive and deliberative governance is more sustainable, fair, and legitimate.

1. Introduction: between the singularity of contexts and the conflictuality of multiscalar governance

Over the past decade, the notion of “food systems” has increasingly been called upon, marking an important stage in understanding the interlinked challenges posed by resource production, transformation, and redistribution. To this end, it is essential to provide structuring conditions that promote positive processes and dynamics. Such an approach therefore constitutes an innovative framework for analysis and action that goes beyond achieving SDG 2 by 2030 [1].

At the same time, it has become increasingly clear that the dominant extractive and intensive production models [2, 3] are not viable environmentally (degradation), economically (precariousness), and socially (inequalities). This begs for promptly taking into consideration “sustainability,” from the local to the global, so that the necessary transitions and transformations are set into motion. Reclaiming this term and putting it to the test of local contexts does not come without questions or challenges. First, because sustainability is often insufficiently delineated (dimensions), with vague objectives and time scales. Secondly, because the instruments and tools to achieve it still often need to be invented, failing which the intended and expected effects for the territories and the actors will be cause for debate. There is therefore no single model that can be applied to the transition of agricultural and food systems towards sustainability. All decisions and actions aimed at implementation must be tested in context. This is the critical stance we adopt and recommend.

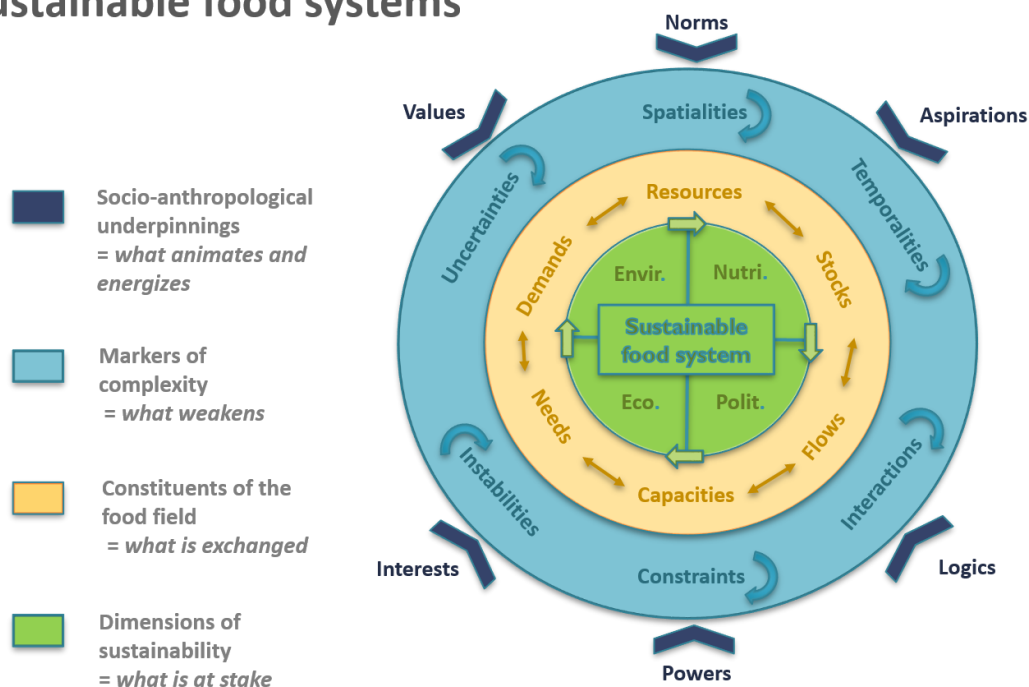
Putting sustainability on the agenda raises the question of the interlinked governance of resource risks and of the governmentality of societies. The 2007-2008 crisis led to reforms in the architecture of global governance. The recent globalization crises – one, marked by disruptions of supply chains and mobility linked to lockdown measures during the Covid 19 pandemic; the other, marked by the price inflation of agricultural inputs and commodities on the markets linked to the Russian war of aggression on the Ukrainian territory – have also contributed to bringing the stakes of territorialized and/or localized governance to the fore. They have had the effect of restoring a geographical basis to strategic actions (national agricultural and food empowerment policy, regional foodshed, local urban farming, etc.). However, not all territorial (and local) action is necessarily sustainable [4].

Governance appears as a key notion and lever to analyze sustainability and its link to systemic transformations [5]. It is multi-scalar, multi-actor, more deliberative and reflexive, less technocratic, horizontal (actors within a territory), and vertical (decision-making scales of action). However it is on the scale of small spaces (cities, departments, or regions) that it has been tested and put to the test, while standards of governance or sustainability are often prescribed by experts and international institutions, and large agribusinesses have discretionary power [6, 7]. Local experiments in governance are promising even if this means broadening the panel of local players, who are often themselves influenced by market logics and the relationships (powers, influences, arrangements) prevailing on an international scale [8]. The interweaving of scales means that there are potentially major points of tension between the circulation of standards, power relations and mobilizations in the territories.

As for levers for action (Part 4), at this stage, the tone of all the documents analyzed remains overall very prescriptive, with redundancies. However, the local level, with its wealth of concrete governance experiences combining local agriculture, short supply chains, circular economy and deliberative forums, promoting democracy, food sovereignty and food justice, offers credible prospects for transformation likely to inspire higher levels of decision-making.

To identify and select documents published between 2021 and 2022, we performed a search on Google Scholar and Researchgate based on titles. We focused on texts published in English, in referenced peer-reviewed journals, with the terms "food system governance," "food governance," and "sustainable food systems." No specific choice of scale has been made at this stage. The sustainability challenge arises on the scale of food systems as well as at the heart of their governance, since politics constitutes an essential field of action and achievement (as in the Sustainability Compass [9]). To this end, we have developed a conceptual framework (see Figure 1) incorporating the challenges of both sustainability and governance. Governance encompasses food environments (constituents), contexts (markers), and the way action is structured (underpinnings). The latter exert an ambivalent influence on the current governance of food systems: at times they guide and strengthen it, but at other times they weaken it through tensions and divergences. However, while most authors agree on the multi-dimensional nature of sustainability (to which we have added the political dimension), the way in which it is sought and implemented often remains unclear.

Governance challenges for sustainable food systems



Source : Pierre Janin

Nearly half of the articles (nb = 35) selected are based on empirical case studies in the global North as well as in the global South, due to similar challenges. This is the result of two considerations (and choices): with sustainability on the agenda, governance is more than ever part of specific contexts (resources and risks in territories); governance is always built with local players (representations, logics, interests, agentive power). The rest is divided between articles with a strong conceptual ambition or policy recommendations (nb = 19) and literature reviews (nb = 13). The international governance scale is practically ignored by all of them, because it remains highly hypothetical [10] even if it never ceases to influence the local environment (prescriptions, resources, powers).

Based on the extraction of content, this text revisits 1/ the relationships between sustainability (when it is put on the agenda) and the governance of risks, crises, and transformations. It then addresses 2/ food system governance to emphasize the associated challenges, its limits, and its ambivalences, given the variability of contexts. Lastly, it concludes with some 3/ key recommendations for the more sustainable governance of (sustainable) food systems.

2. Governance and sustainability: building a relationship at the heart of transformations and contexts

Many articles begin with the sad observation that the dominant agricultural and food systems are unsustainable: extractive [2], unequal [11], commodified, concentrated and globalized [12, 7, 13, 14, 15, 6, 16], at different levels [17]. While their short-term functionality has been established, their resilience remains highly uncertain [16]. At the local level, these systems have a strong negative ecological footprint, as they are highly dependent on imports, while providing processed, standardized, inadequate nutrition, and maintaining food inaccessibility [18]. Food decisions prioritize short-termism [13] and the economic dimension at the cost of others (environmental, social, and medical) [19]. Sustainability rarely meets food and nutrition security objectives [20]. Policies have often focused on improving the functionality of food chains for consumers/eaters to cover food needs [21]. The recent global crises have raised awareness about the unsustainability of the current systems [10, 22, 23, 24]. Nevertheless, some articles provide a less radical analysis: over a long transition, food systems have managed to make a quantitatively sufficient food intake economically and geographically accessible to a growing population, albeit without achieving sustainable food [13, 17].

Hence, there is a shared observation that sustainability cannot be achieved without transforming such systems, so that they may become “regenerative” [4] and “resilient” [25]. This implies a systemic, holistic, even metabolic approach [26] that takes into account all the scales, actors, and interrelationships between subsystems [1, 27, 28, 29, 30, 31]. The notion of nexus also allows connecting previously disjointed fields (water-food-energy [26, 32, 33, 34]; “biological-economic-socio-political systems correlated” [35]). Sustainability is not underpinned by a linear vision [15], but rather by a circular one of productive economies on the local and regional scales [36, “3Rs (reduce, reuse, recycle)”, 37], and aims to strengthen the synergetic dynamics between subsystems [11, 22, 31]. Better yet, the sustainability of a food system transcends that of other systems [1]. It also implies a certain degree of autonomy [38] and capacity. A long-term perspective is essential [18, 39, 40] to anticipate risks and crises, which is a condition of sustainability [31] in order to govern the “long-term processes of structural systemic change” [40]. Sustainability is also

subordinate to a vision of the desired future [41] and of the intended effects of the transformative actions led [31]. The emergence of more sustainable food systems corresponds to a structural transformation or reorganization [42, 43] and not to a mere adaptive reconfiguration [22, 44]. It must integrate all the dimensions of sustainability [37, 45, 46, 47] by adapting them to each component of the system. Sustainability goes beyond the mere integration of sectoral policies with a sustainable dimension. It involves changes in narratives, models, and imagination that must be invented and shared [2, 48]. Finally, no sustainable trajectory can materialize without the strong involvement of various actors, communities, and institutions [49]. The relationship between sustainability, systems, and governance is very strong, but remains “a complex and controversial task” [50], involving “a wider set of food system governance arrangements” [29]. It is a socio-ecological construction on the scale of a territory [51] but also fundamentally “a political process” [7], which is complex to carry out [12]. [27] considers sustainability as a constitutive political dimension of food and nutrition security.

Governance is at the heart of the transformation and securing of agricultural and food systems, and of food security [2, 42, 52]. Governance can be defined as the “mode of interaction among the public sector, private sector, civil society, and consumers to identify, implement, resource, and monitor solutions for achieving healthy, sustainable, resilient, just, and equitable food systems without leaving anyone behind” [1]. The agency of actors within the food system, along with their values, beliefs and needs, contributes (or not) to sustainability (see Figure 1). Governance is underpinned by a set of norms and regulations [53], logics, interests, and powers [49], and is visible in transactions and more or less negotiated arrangements [54]. The transformations that are to be carried out necessarily give rise to misunderstandings and resistance, as they aim to promote more inclusive, participatory, collaborative, and deliberative governance [50, 55], which may even be termed “transformative” [44]. The governance of sustainability must be global and not limited to a subsystem or issue (waste management, health safety, or marketing network [56, 57]). It starts from concrete situations, from the realities specific to each context, to take into account the resources, aspirations and agency of the players involved [6], and to move away from a purely prescriptive and programmatic agenda. The local scale seems best suited to such experiments, particularly in cities [30]. Lastly, sustainable governance must promote the self-transformative capacity of the system [41] and integrate the ethic of accountability [58].

3. Governing food systems: both a challenge and a solution

The current food system governance, which is favorable to the power of markets and companies [12, 28], has proved unable to regulate the systemic dysfunctions of globalization. It aims at short-term economic efficiency without considering long-term effects and interactions. This governance is based on standards and expert knowledge [12, 7], and driven by (technocratic) institutions, which are removed from local societies and even more from small producers [22, 59], while remaining consumercentric [21]. It is often arbitrary, instrumental, and made up of arrangements [60]. It also creates distortions for small producers in the adoption of technological innovations [2, 59], as it does not really take the local socio-cultural context into consideration [23, 27]. It also generates compartmentalization and confrontation between the key actors in the food system, which is detrimental to sustainable food security [12, 29]. Moreover, it is not very collaborative or democratic [52, 61] and is in need of deep rethinking [1].

This requires a critical analysis of the foundations, practices, and institutions of food system governance (“Shift towards critical governance of resilience trade-offs” [11]). Beyond that, it is the analysis of power dynamics that is at stake [7, 42], with a close examination of “conflicting goals, disconnects and tensions in food systems” [60]. Since the international and national governance levels have shown their limits, the focus should be on the regional level [18, 28, 41], or even the municipal one [62], with the figure of the “policy intrapreneur” [63]. On this scale, governance can resort to several types of actions (policies, narratives, innovations, networks, etc.) [4]. Such a form of governance is based on a “community needs-based approach” [14] that integrates socio-cultural and not just socio-technical aspects [23]. It relies on circular systems and economies [36], and incentives [37, 46]. Participatory System Guarantees (PGS) can support [64] the agroecological transition. Governance becomes “a social value of sustainability” [27].

Governing food systems is therefore a stake and an objective, but also a solution. This is one of the keys to implement sustainable transformations [27, 48, 64]. Yet there are many challenges: 1/ plural actors; 2) power asymmetry; 3) multi-dimensional policies; 4) varying contexts; and 5) knowledge sharing.

Collaborative/inclusive/representative/participatory governance involves improving the coordination of actors (vertically and horizontally) and sectors (production, processing, marketing, and consumption) [18, 21, 22, 40, 52, 55, 57, 58, 65]. It is even “metabolic” on the scale of an urban system, favoring approaches in terms of “urban political ecology” [51] and “networked relations” [48]. Collaborative governance is an effective medium to promote multi-sectoral coordination [34, 44, 56]. It aims to overcome “trade-off dilemmas in policy makers’ decision processes” [33], but remains difficult to achieve due to its hybrid nature [57], while requiring adaptation. Although such governance may “confront fundamental inequalities and redirect vested power relations” [40], it does not guarantee that sustainable societies will emerge [44].

Power asymmetry is a source of inequalities in the control and organization of food systems [1, 38, 43, 66]. It does not allow implementing policies that are favorable to sustainability. Multi-scalar and multi-actor governance “is crucial to balancing power, decision-making and access to information across the food system” [27] at the regional and local levels. It must allow a regulation “of networked governance struggles” [30]. Still, “food systems diplomacy has the potential to recalibrate global food governance to better and more equitably serve the four interconnected domains of sustainable food systems” [19].

The multi-dimensional nature of the objectives and fields of action within the food system is another obstacle to sustainable governance [20]. The difficulty to achieve coherence [30, 38] generates tensions between the sub-sectors of food policies [26, 40, 45], while creating inconsistency when it comes to monitoring [53] and evaluating [57] their implementation.

The territorialization of governance is central in the search for sustainability [62], but it is inconsistent due to the variability of contexts, constraints, resources, and systems of actors [4]. It needs to be built up gradually, through action-research programs and participatory workshops involving different professional communities, for example.

Lastly, the production of knowledge constitutes a final challenge: it can modify the “narratives, beliefs and values” [2] and take complex objects into account (of the water-energy-food type, or

WEF [32]). It also allows critiquing food governance processes as well as innovation/transformation sciences [7] for food security [47]. This work must be interdisciplinary [36, 63], in relation with the different dimensions of governance (individual, value chains, collective relations, and structures [54]). However, the increase in “private-led data governance” may create new bureaucracies [58]. All of these challenges therefore call for concrete proposals for more sustainable governance.

4. Key recommendations for the more sustainable governance of food systems.

The three types of articles in the corpus almost always provide recommendations. They highlight three ways to achieve (better) sustainability: 1/ political democracy, through transparent decision-making and the inclusion of all stakeholders, 2/ territorial rootedness and local experimentation of transformations, and 3/ the integration of the multiple sectors involved through applied governance models.

Basing the transformation of food systems on the market governance of technological innovations and philanthrocapitalism leads to the reproduction and amplification of certain inequalities and tensions [67]. On the other hand, food democracy (and justice) and the recognition of rights, as well as the search for negotiated compromises, guarantee a lasting transformation of food system governance and more tangible sovereignty, as long as they are carried out with local stakeholders [68]. They are based on the principles of accountability and non-discrimination, while the creation of coalitions and social mobilization are the very conditions of sustainability [12, 20, 50]. The participatory approach is crucial to improve the existing systems and institutions of governance or to counterbalance the power of market actors [12]. And it is the horizontality of governance that promotes sustainability [60], as seen with Food Councils [30, 52], which promote citizen participation and innovative governance [11]. Diluting the power of actors, in particular Big Food Actors [7], is also related to a bottom-up approach (e.g. community needs, down-up [14], and community-based [58]), allowing consumers to be taken into account [1]. The participation of all actors in the development of policies is a “new orthodoxy” [52], which is inscribed in the model of inclusiveness and is presented as a condition for transparent decision-making [2, 7, 15, 41, 42, 45, 21, 46, 58, 60]. This collaborative governance [55, 66] empowers the weakest actors [34, 40], as it leads to a community food agenda [49], redistributes power, and formulates local solutions [40].

Promoting a local approach – which is consistent with inclusiveness and operationality – is combined with taking multiple scales into consideration. Fostering the leadership of local authorities to promote local initiatives within local food systems is a condition of sustainability [51]. Taking local food systems into account in current governance reinforces their legitimacy for the success of democratic governance [11, 38]. Thus, local alternatives contribute to resilient food systems when it comes to climate change [23, 69]. The local scale also allows calling on local knowledge [27] to shift food systems towards health and environmental objectives [41, 45, 64]. The “local” may also correspond to the city-region (City Region Food System approach according to the FAO), a relevant level for the sustainable governance of food systems [27]. The supply hinterland is brought into the city, thus lending a regional perspective to the transformation of food systems [28] to synergize actors [4]. This process requires a better “urban-rural” connection to reduce dependence on distant supplies [11] in order to improve the livelihoods of the rural

poor [22]. While the local level seems less operational for the participatory approach, coordinating the different scales is a condition of sustainable governance [14, 26, 29, 41, 44, 48, 66]. Numerous urban experiments combining local agriculture, local supplies and short distribution channels are proving their worth, but they cannot, on their own, transform the trajectory of systems without strong citizen mobilization and political support. [70] argues that a "social metabolism" approach can recreate connectivity and fluidity between territories and nature-society relationships.

Multi-sectorality leads to favoring all forms of inclusion, in particular public-private partnerships, to secure the national food [24]. The inclusion of the private sector in the development of public policies is clearly mentioned [71], sometimes by promoting innovative non-state governance systems [58] or "food champions and policy entrepreneurs" [30]. Such an inclusion can be sought through multi-stakeholder platforms (MSPs) [29] to reinvent public policies related to food value chains [54], associating agriculture, trade, education, urban planning, and logistics [30]. At the same time, we must avoid reproducing the phenomenon of concentration of power observed on a global scale. The entrepreneurship model seems favorable to a dialogue between the different sectors [30, 63]. The water-energy-food nexus approach promotes such integrated policies [26, 32, 34, 66]. It leads to the development of specific sustainable governance instruments and methods tested at the local level. Multi-stakeholder platforms aim to strengthen individual and collective capacities [29]. The Urban Transformative Capacity Framework (UTCF) helps link socio-ecological and socio-technical systems [41]. The Integrated Agri-food System Initiative (IASI) allows a close examination of impasses, opportunities, and trajectories in specific contexts, according to a plurality of objectives [13]. Food Sensitive Planning and Urban Design (FSPUD) tackles the right to food on scales that have been neglected by policy makers [62]. Lastly, participatory system guarantees seek to promote local produce in connection with agroecology [45], which is presented as a way to transform food systems [12, 49, 64]. This objective also involves the development of evaluation and monitoring indicators to back the sustainability of models [60, 65, 66]. Such multi-sectoral tools necessarily rely on transdisciplinary approaches to give meaning to the "food system" approach [2, 33, 52]; they can favor hybrid models that combine environmental sustainability, equity, and healthy nutrition [4]. These approaches also involve research in the service of action [26] and knowledge sharing between researchers and food system actors [33, 72].

Conclusion

Food system governance has gained traction in sustainability sciences. Its role appears essential to manage resources, to adapt to risks (and/or to mitigate them), and to govern societies in complex, changing, and uncertain environments. It also plays a strategic role in organizing emergency responses (arbitrating between social groups and priorities, for example), creating frameworks to structure the transformations needed, and designing the future trajectories of the systems [5]. There is a clear need for regulation [73] in order to organize transformations, settle dilemmas [74], and arbitrate between groups of actors, on all scales. The sustainable governance of food systems is necessary adapted to each context, closely linking institutions, societies, spaces, and territories [48].

Functional, accountable, and legitimate governance must consider several essential dimensions: 1/ reflexivity to understand the complexity of the stakes and interactions between fields and

between context-specific phenomena; 2/ autonomy, adaptability and inventiveness to take weak signals into account and diversify the points of observation and analysis; 3/ responsiveness to respond promptly to multiple requests, in an efficient and legitimate manner, without sacrificing medium- and longer-term transformations; 4/ structuring conditions implemented to allow for a way out of situations of withdrawal, deadlock, protection, and political confrontation and inaction; and 5/ inclusivity to sidestep technocratic, routine, falsely consensual and integrative political processes and to promote the co-construction of innovative arrangements between actors in the system, and more specifically between academic, community practitioners and local authority players [72, 75].

The territorial angle of food governance highlights two existing tensions: the first, vertical, between the singularity of local contexts and the concentration of power of international players (transnational corporations, state governments or regional agro-exporting organizations); the second, horizontal, between local players for more sustainable food governance. They inevitably involve mobilization and struggle, but above all the collaborative and accepted definition of a transformative short- and medium-term agenda to overcome these tensions and make the overlapping scales of decision-making and governance work better.

These principles of action have already guided the territorialized food plans tested at the local and regional levels in the North and the South, with conclusive results when food becomes a political priority again [35]. They must still be put to the test on larger decision-making scales [9, 15] in order to make food a public good and a commons [76].

Declaration of Competing Interest

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

Submission declaration and verification

The work described has not been published previously, is not under consideration for publication elsewhere, has been approved by all authors and, if accepted, will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright holder.

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Credit authorship contribution statement

P. Janin (Conceptualization, Data investigation, Data analysis, Supervision, Writing – original draft, Writing – review & editing, Validation).

E.-J. Fofiri Nzossié (Data analysis, Writing – original draft Part 2, Validation).

S. Racaud (Writing – original draft Part 3, Writing – review & editing Part 3, Validation).

References and recommended reading

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest
- of outstanding interest

1. Fanzo J, Haddad L, Schneider KR, Béné C, Namukolo MC, Guarin A, Herforth AW, Herrero M, Sumaila UR, Aburto NJ *et al.*: **Viewpoint: Rigorous monitoring is necessary to guide food system transformation in the countdown to the 2030 global goals.** *Food Policy* 2021, **104**. <https://doi.org/10.1016/j.foodpol.2021.102163>.

2. Anderson, MD, Rivera-Ferre M: **Food system narratives to end hunger: extractive versus regenerative,** *Current Opinion in Environmental Sustainability* 2021, **49**: 18-25. <https://doi.org/10.1016/j.cosust.2020.12.002>.

3. Stein, AJ: **The sustainability of “local” food: a review for policy-makers,** *Review of Agricultural, Food and Environmental* 2022, **103**: 77–89. <https://doi.org/10.1007/s41130-021-00148-w>.

4. Doherty B, Bryant M, Denby K, Fazey I, Bridle S, Hawkes C, *et al.*: **Transformations to regenerative food systems—An outline of the FixOurFood project.** *Nutrition Bulletin* 2022, **47**: 106– 114. <https://doi.org/10.1111/nbu.12536>.

5. Slater S, Baker P, Lawrence M: **An analysis of the transformative potential of major food system report recommendations.** *Global Food Security* 2022, **32**. <https://doi.org/10.1016/j.gfs.2022.100610>.

6. Clapp J: **Concentration and crises: exploring the deep roots of vulnerability in the global industrial food system,** *The Journal of Peasant Studies*, **50**:1, 1-25. <https://doi.org/10.1080/03066150.2022.2129013>.

7. * Béné C: **Why the Great Food Transformation may not happen – A deep-dive into our food systems’ political economy, controversies and politics of evidence.** *World Development* 2022, **154**. <https://doi.org/10.1016/j.worlddev.2022.105881>.

This political economy panorama provides a framework to understand the (un)sustainability of the innovations implemented (almost always based on the search for profitability) within current food systems. Moreover, the dominant actors’ highly concentrated economic power leads to the depoliticization of food issues. In order to be successful, any transformation process will have to make the knowledge and representations of all the actors in the systems evolve.

8. Trauger A: *Geographies of Food and Power*. Routledge; 2022.

10. McKeon N: **Global Food Governance.** *Development* 2021, **64**:172–180. <https://doi.org/10.1057/s41301-021-00326-9>

9. Hebink A, Zurek M, Achterbosch T, Forkman B, Kuijsten A, Kuiper M, Nørrung B, van’t Veer P, Leip A: **A Sustainability Compass for policy navigation to sustainable food systems.** *Global Food Security* 2021, **29**. <https://doi.org/10.1016/j.gfs.2021.100546>.

11. Borrelli N, Mela A & Burgos Guerrero SF: **Dancing in the dark: how food governance can support resilience in Portland, Oregon**, *Food, Culture & Society* 2022. <https://doi.org/10.1080/15528014.2022.2045161>
12. * Baker P, Lacy-Nichols J, Williams O, Labonté R.: **The Political Economy of Healthy and Sustainable Food Systems: An Introduction to a Special Issue**. *International Journal of Health Policy and Management* 2021, Special Issue on Political Economy of Food Systems, **10**: 734-744. <https://doi.org/10.34172/ijhpm.2021.156>
- This article proposes a framework for the political analysis of the food system transformations that should be advocated. The notion of power, with its various scales, spaces, and forms, is central to it. The authors propose an innovative “multilevel conceptualization of food systems governance.”
13. Govaerts B, Negra C, Camacho Villa TC, Chavez Suarez X, Espinosa AD, Fonteyne S, *et al.*: **One CGIAR and the Integrated Agri-food Systems Initiative: From short-termism to transformation of the world’s food systems**. *PLoS ONE* 2021, **16**(6). <https://doi.org/10.1371/journal.pone.0252832>
14. Johnston C, Spring, A: **Grassroots and Global Governance: Can Global–Local Linkages Foster Food System Resilience for Small Northern Canadian Communities ?**. *Sustainability* 2021, **13**. <https://doi.org/10.3390/su13042415>.
15. Kugelberg S, Bartolini F, Kanter DR, Milford AB, Pira K, Sanz-Cobena A, Leip A: **Implications of a food system approach for policy agenda-setting design**. *Global Food Security* 2021, **28**. <https://doi.org/10.1016/j.gfs.2020.100451>.
16. Hendrickson MK: **Resilience in a concentrated and consolidated food system**. *Journal of Environmental Studies and Sciences* 2015, **5**:418–431. <https://doi.org/10.1007/s13412-015-0292-2>.
17. Ambikapathi R, Schneider KR, Davis B *et al.*: **Global food systems transitions have enabled affordable diets but had less favourable outcomes for nutrition, environmental health, inclusion and equity**. *Nat Food* 2022, **3** : 764–779. <https://doi.org/10.1038/s43016-022-00588-7>.
18. Thow AM, Ravuvu A, Iese V, Farmery A, Mauli S, Wilson D, Farrell P, Johnson E, Reeve E: **Regional Governance for Food System Transformations: Learning from the Pacific Island Region**. *Sustainability* 2022, **14**. <https://doi.org/10.3390/su141912700>.
19. Garg DH, Spiker ML, Clark JK. *et al.*: **Food systems governance should be preceded by food systems diplomacy**. *Nat Food* 2022, **3**: 667–670. <https://doi.org/10.1038/s43016-022-00595-8>
20. Jiren TS., Leventon J, Jager NW *et al.* : **Governance Challenges at the Interface of Food Security and Biodiversity Conservation: A Multi-Level Case Study from Ethiopia**. *Environmental Management* 2021, **67**: 717–730. <https://doi.org/10.1007/s00267-021-01432-7>.
21. Roy V, Srivastava SK: **The safety–quality dominant view of food chain integrity: Implications for consumer-centric food chain governance**. *International Journal of Management Reviews* 2022, **24**: 3– 24. <https://doi.org/10.1111/ijmr.12258>.
22. Davis B, Lipper L, & Winters P: **Do not transform food systems on the backs of the rural poor**. *Food Sec* 2022, **14**: 729–740 (). <https://doi.org/10.1007/s12571-021-01214-3>.
23. Kang H, Roggio AM, Luna-Reyes LF: **Governance of local food systems: Current research and future directions**, *Journal of Cleaner Production* 2022, **338**. <https://doi.org/10.1016/j.jclepro.2022.130626>.
24. Larsson OL and Sjöqvist S: **Managing National Food Security in the Global North: Is Collaborative Governance a Possible Route Forward?**. *Risks Hazards Crisis Public Policy* 2022, **13**:118– 143. <https://doi.org/10.1002/rhc3.12231>.

25. van Wassenae L, Oosterkamp E, van Asseldonk M. *et al.* : **Food system resilience: ontology development and impossible trinitities.** *Agric & Food Secur* 2021, **10**(38). <https://doi.org/10.1186/s40066-021-00332-7>.
26. Tye MR, Wilhelmi OV, Pierce AL, Sharma S, Nichersu I, Wróblewski M, Goszczyński W, Wendel J, Laborgne P, Heyder M, Nichersu I : **The food water energy nexus in an urban context: Connecting theory and practice for nexus governance,** *Earth System Governance* 2022, **12**. <https://doi.org/10.1016/j.esg.2022.100143>.
27. del Valle MM, Shields K, Alvarado Vázquez MAS, Boza S: Food governance for better access to sustainable diets: A review. *Frontiers in Sustainable Food Systems* 2022, **6**. <https://doi.org/10.3389/fsufs.2022.784264>.
28. Dengerink J, Dirks F, Likoko E *et al.*: **One size doesn't fit all: regional differences in priorities for food system transformation.** *Food Sec.* 2021, **13**: 1455–1466. <https://doi.org/10.1007/s12571-021-01222-3>.
29. Herens MC, Pittore KH, Oosterveer PJM: **Transforming food systems: Multi-stakeholder platforms driven by consumer concerns and public demands.** *Global Food Security* 2022, **32**. <https://doi.org/10.1016/j.gfs.2021.100592>.
30. Minotti B, Cimini A, D'Amico G, Marino D, Mazzocchi G and Tarra S: **Food Policy Processes in the City of Rome: A Perspective on Policy Integration and Governance Innovation.** *Front. Sustain. Food Syst* 2022, **5**. <https://doi.org/10.3389/fsufs.2021.786799>.
31. ** Muiderman K, Zurek M, Vervoort J, Gupta A, Hasnain S, Driessen P: **The anticipatory governance of sustainability transformations: Hybrid approaches and dominant perspectives.** *Global Environmental Change* 2022, **73**. <https://doi.org/10.1016/j.gloenvcha.2021.102452>.
- A noteworthy feature of this article is that it gives temporalities a key place to conceive the future of emerging transformations or of those to be devised. These transformations are linked to different meanings and communities of research actors. Based on the Foresight4Food initiative, the authors construct two original graphs to represent the relationships between the anticipated future, the projected future, and implications for the present (figure 2), which can be used for the concrete governance of transitions.
32. Rule TA: **Positive-Sum Water-Energy-Food Nexus Governance.** *NYU Environmental Law Journal* 2022, **31**, <http://dx.doi.org/10.2139/ssrn.4077361>.
33. Sesan T, Sanfo S, Sikhwivhilu K *et al.* : **Mediating Knowledge Co-Production for Inclusive Governance and Delivery of Food, Water and Energy Services in African Cities.** *Urban Forum* 2022, **33**:281–307. <https://doi.org/10.1007/s12132-021-09440-w>.
34. Srigiri SR and Dombrowsky I: **Analysing the Water-Energy-Food Nexus From a Polycentric Governance Perspective: Conceptual and Methodological Framework.** *Front. Environ. Sci.* 2022, **10**. <https://doi.org/10.3389/fenvs.2022.725116>.
35. Medina-García C, Nagarajan S, Castillo-Vysokolan L, Béatse E and Van den Broeck P: **Innovative Multi-Actor Collaborations as Collective Actors and Institutionalized Spaces. The Case of Food Governance Transformation in Leuven (Belgium).** *Front. Sustain. Food Syst* 2022, **5**. <https://doi.org/10.3389/fsufs.2021.788934>.
36. Varella Miranda B, Monteiro GFA, Rodrigues VP: **Circular agri-food systems: A governance perspective for the analysis of sustainable agri-food value chains.** *Technological Forecasting and Social Change* 2021, **170**. <https://doi.org/10.1016/j.techfore.2021.120878>.

37. Poponi S, Arcese G, Mosconi EM, Pacchera F, Martucci O, Elmo GC: **Multi-Actor Governance for a Circular Economy in the Agri-Food Sector: Bio-Districts.** *Sustainability* 2021, **13**. <https://doi.org/10.3390/su13094718>.

38. Lu H & Carter A: **Emergent regional collaborative governance in rural local food systems development,** *Community Development* 2022. <https://doi.org/10.1080/15575330.2022.2135550>

39. Melchior IC, Newig J: **Governing Transitions towards Sustainable Agriculture—Taking Stock of an Emerging Field of Research.** *Sustainability* 2021, **13**, 528. <https://doi.org/10.3390/su13020528>.

0. ** Tschersich J, Kok KPW : **Deepening democracy for the governance toward just transitions in agri-food systems,** *Environmental Innovation and Societal Transitions* 2022, **43** : 358-374. <https://doi.org/10.1016/j.eist.2022.04.012>.

This well-documented article pleads for the role of participatory democracy for the fair and equitable governance of transitions. Such governance reckons with overlooked groups and communities, their representations, and their narratives. It mobilizes four forms of justice (distributive, procedural, recognition, and restorative) and is built on the non-hierarchical recognition of knowledge, the end of economic materialism, and a reconnection to nature. Lastly, the article argues that any governance must be underpinned by a vision of the future and strategic choices.

41. ** Sarabia N, Peris J, Segura S: **Transition to agri-food sustainability, assessing accelerators and triggers for transformation: Case study in Valencia, Spain.** *Journal of Cleaner Production* 2021, **325**, <https://doi.org/10.1016/j.jclepro.2021.129228>.

The authors adopt a “multi-scalar, multi-level perspective” to consider agricultural and food transitions as constructed interaction processes: in terms of “niche,” “regime,” and “landscape.” Based on a case study of the city of Valencia (Spain), they identify ten key factors/triggers for successful transitions at the local level, formalized within the framework of the Urban Transformative Capacity Conceptual Framework Components, which has a truly heuristic scope and is applicable to other urban contexts.

42. Carriedo A, Walls H, Brown KA: **Acknowledge the Elephant in the Room: The Role of Power Dynamics in Transforming Food Systems;** Comment on “What Opportunities Exist for Making the Food Supply Nutrition Friendly? A Policy Space Analysis in Mexico””. *International Journal of Health Policy and Management* 2022, **11**, **12**: 3137-3140. <http://doi:10.34172/ijhpm.2022.7382>.

43. Leeuwis C, Boogaard BK & Atta-Krah K: **How food systems change (or not): governance implications for system transformation processes.** *Food Sec.* 2021, **13**:761–780. <https://doi.org/10.1007/s12571-021-01178-4>.

44. Visseren-Hamakers IJ, Razzaque J, McElwee P, Turnhout E, Kelemen E, Rusch GM, Fernández-Llamazares Á, Chan I, Lim M, Islar M, Gautam AP, Williams M, Mungatana E, Karim MdS, Muradian R, Gerber RL, Lui G, Liu J, Spangenberg JH, Zaleski D, **Transformative governance of biodiversity: insights for sustainable development,** *Current Opinion in Environmental Sustainability* 2021, **53**:20-28. <https://doi.org/10.1016/j.cosust.2021.06.002>.

45. Reeve E, Ravuvu A, Farmery A, Mauli S, Wilson D, Johnson E, Thow AM: **Strengthening Food Systems Governance to Achieve Multiple Objectives: A Comparative Instrumentation Analysis of Food Systems Policies in Vanuatu and the Solomon Islands.** *Sustainability* 2022, **14**. <https://doi.org/10.3390/su14106139>.

46. * Ruben R, Cavatassi R, Lipper L. *et al.*: **Towards food systems transformation—five paradigm shifts for healthy, inclusive and sustainable food systems.** *Food Sec.* 2021, **13**:1423–1430. <https://doi.org/10.1007/s12571-021-01221-4>.

This short text reviews some of the fundamental principles to organize, support, and achieve the governance of sustainable transformations in agricultural and food systems: an enlightening figure summarizes these key principles (Food system transformation pyramid).

47. Toumi L, el Amrani M, Ait El Mekki A, Harbouze R, & Fadlaoui A: **Perceptions of the links between governance and food security: Case study of the pulses sector in Morocco.** *New Medit* 2021, **20**(3). <https://doi.org/10.30682/nm2103e>.

48. Yap C: **New geographical directions for food systems governance research.** *Progress in Human Geography* 2023, **47**(1): 66–84. <https://doi.org/10.1177/03091325221133808>.

49. Sodano V, and Gorgitano MT: **Framing Political Issues in Food System Transformative Changes.** *Social Sciences* 2022, **11**(10): 459. <https://doi.org/10.3390/socsci11100459>.

50. * Huttunen S, Turunen A & Kaljonen M: **Participation for just governance of food-system transition.** *Sustainability: Science, Practice and Policy* 2022, **18**(1): 500-514. <https://doi.org/10.1080/15487733.2022.2088187>.

This article gives a central place to the notion of participation in relation with the growing demand for justice coming from non-dominant actors in food systems. In fact, participation is one of the keys to scaling up and implementing actions for sustainable transitions, as it contributes to establishing their acceptability and legitimacy.

51. Zerbian T, Adams M, Dooris M, Pool U: **The Role of Local Authorities in Shaping Local Food Systems.** *Sustainability* 2022, **14**. <https://doi.org/10.3390/su141912004>.

52. Canfield MC, Duncan J. & Claeys P: **Reconfiguring Food Systems Governance: The UNFSS and the Battle Over Authority and Legitimacy.** *Development* 2021, **64**: 181–191. <https://doi.org/10.1057/s41301-021-00312-1>.

53. Ngqangashe Y, Goldman S, Schram A, Friel S: **A narrative review of regulatory governance factors that shape food and nutrition policies.** *Nutr Rev.* 2022, **80**(2):200-214. <https://doi.org/10.1093/nutrit/nuab023>.

54. Guimarães AF., Malanski PD, Schiavi SMA, & Bouroullec MDM: **Governance in agrifood global value chain: the scientific field in the recent 15 years.** *Revista de Economia e Sociologia Rural* 2023, **61**(3). <https://doi.org/10.1590/1806-9479.2022.260595>.

55. Sundqvist-Andberg H, Åkerman M: **Collaborative governance as a means of navigating the uncertainties of sustainability transformations: The case of Finnish food packaging,** *Ecological Economics* 2022, **197**. <https://doi.org/10.1016/j.ecolecon.2022.107455>.

56. Phulkard S, Ngqangashe Y, Collin J *et al.*: **Moving from silos to synergies: strengthening governance of food marketing policy in Thailand.** *Global Health* 2022, **18**(29). <https://doi.org/10.1186/s12992-022-00825-5>

57. Szulecka J and Strøm-Andersen N: **Norway's Food Waste Reduction Governance: From Industry Self-Regulation to Governmental Regulation?.** *Scand. Political Stud.* 2022, **45**: 86-109. <https://doi.org/10.1111/1467-9477.12219>.

58. Strube J, Glenna L, Hatanaka M, Konefal J, Conner D: **How data-driven, privately ordered sustainability governance shapes US food supply chains: The case of field to market**, *Journal of Rural Studies* 2021, **86**: 684-693, <https://doi.org/10.1016/j.jrurstud.2021.05.028>.
59. Kruk SRL, Kloppenburg S, Toonen HM, Bush SR: **Digitalizing environmental governance for smallholder participation in food system**. *Earth System Governance* 2021, **10**. <https://doi.org/10.1016/j.esg.2021.100125>.
0. * Chen Q, Knickel K, Tesfai M, Sumelius J, Turinawe A, Isoto RE, Medyna G: **A Framework for Assessing Food System Governance in Six Urban and Peri-Urban Regions in Sub-saharan Africa**. *Frontiers in Sustainable Food Systems* 2021, **5**. <http://doi:10.3389/fsufs.2021.763352>.
- The main contributions of this article concern typologies (of governance and agri-food value chains). The notions of "food chain governance" and "arrangements" are presented and stabilized as keys to local governance in action. Its main interest is that it takes concrete projects as starting points.
61. Anser MK, Osabohien R, Olonade O, Karakara AA, Olalekan IB, Ashraf J, Igbinoba A : **Impact of ICT Adoption and Governance Interaction on Food Security in West Africa**. *Sustainability* 2021, **13**(10). <https://doi.org/10.3390/su13105570>.
62. Haysom G: **Integrating Food Sensitive Planning and Urban Design into Urban Governance Actions**. *Urban Forum* 2021, **32**: 289–310. <https://doi.org/10.1007/s12132-021-09417-9>.
63. Emas R & Jones JC: **Setting the table for policy intrapreneurship: public administrator perspectives on local food system governance**, *Policy Design and Practice* 2022, **5**(2): 245-259. <https://doi.org/10.1080/25741292.2021.1978691>
64. Roggio AM, Evans JR: **Will Participatory Guarantee Systems Happen Here? The Case for Innovative Food Systems Governance in the Developed World**. *Sustainability* 2022, **14**. <https://doi.org/10.3390/su14031720>.
65. Kushitor SB, Drimie S, Davids R *et al.*: The **complex challenge of governing food systems: The case of South African food policy**. *Food Sec.* 2022, **14**:883–896. <https://doi.org/10.1007/s12571-022-01258-z>.
66. Jones-Crank JL, White DD, Aggarwal R & Melnick R: **An Assessment Framework for Integrated Food-Energy-Water Nexus Governance: Application to the Cases of Phoenix and Cape Town**, *Society & Natural Resources* 2022. <https://doi.org/10.1080/08941920.2022.2063463>.
67. Canfield M: **The ideology of innovation: philanthropy and racial capitalism in global food governance**, *The Journal of Peasant Studies*, **50**(6):2381-2405. <https://doi.org/10.1080/03066150.2022.2099739>.
68. Dekeyser K, Korsten L, Fioramonti L: **Food Sovereignty: Shifting Debates on Democratic Food Governance**, *Food Security* 2018, **10**:223-233. <https://doi.org/10.1007/s12571-017-0763-2>.
69. Vidal Merino M, Gajjar SP, Subedi A, Polgar A and Van Den Hoof C: **Resilient Governance Regimes That Support Urban Agriculture in Sub-Saharan Cities: Learning From Local Challenges**. *Front. Sustain. Food Syst.* 2021, **5**. <https://doi.org/10.3389/fsufs.2021.692167>.
70. García-Sempere A, Hidalgo M, Morales H, Ferguson BG, Nazar-Beutelspacher A & Rosset P: **Urban transition toward food sovereignty**, *Globalizations* 2018, **15**(3): 390-406, <https://doi.org/10.1080/14747731.2018.1424285>
71. Phungwayo T, Kushitor SB & Koornhof L: **Governance of food and nutrition security in Eswatini: an analysis of government policies and reports**. *Agric & Food Secur* 2021, **10**(45). <https://doi.org/10.1186/s40066-021-00307-8>.

72. Levkoe CZ, Blay-Palmer A, Knezevic I, Szanto D, Addy NA: **Modularity in intersectoral research/action collaborations for food systems transformation: Lessons from the FLEdGE community engaged network.** *Canadian Food Studies* 8(2): 18-47. <https://doi.org/10.15353/cfs-rcea.v8i2.431>.
73. Northcott T, Lawrence M, Parker C *et al.*: **Ecological regulation for healthy and sustainable food systems: responding to the global rise of ultra-processed foods.** *Agric Hum Values* 2023. <https://doi.org/10.1007/s10460-022-10412-4>.
74. Janin P, Acloque D, El Nour S : **Dilemmes agricoles et alimentaires en temps de crise,** *Canadian Journal of Development Studies / Revue canadienne d'études du développement* 2023, **44**(3): 335-373, <https://doi.org/10.1080/02255189.2023.2223914>.
75. Carceller-Sauras E, Theesfeld I: **The Food-as-a-Commons Discourse: Analyzing the Journey to Policy Impact.** *International Journal of the Commons* 2021, **15**(1): 368–380. <https://doi.org/10.5334/ijc.1100>.