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RECEIVED 18 October 2023
ACCEPTED 23 October 2023
PUBLISHED 07 November 2023

CITATION
Di Fiore G, Carloni E and Siggia D (2023)
Editorial: Innovation dynamics for the transition
to sustainable food systems.
Front. Sustain. Food Syst. 7:1323880.
doi: 10.3389/fsufs.2023.1323880

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Editorial: Innovation dynamics for the transition to sustainable food systems

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KEYWORDS

sustainability, food system, innovation, governance, value chain

Editorial on the Research Topic

Innovation dynamics for the transition to sustainable food systems

Sustainability and innovation are two buzzwords in policy and academic discourses which are undoubtedly growing in their interplay and interconnections. Indeed, innovation has gradually emerged as a pivotal tool and policy component in the pursuit of sustainability goals (Herrero et al., 2020). At the same time, food systems are facing ever-growing challenges, given the increasing global population, escalating food demand, and intensifying competition for resources. The transition toward a more sustainable model of food production and consumption is a key challenge for shaping the future of the global food system, which requires tackling all phases of food chains and compelling the food chain actors to rethink their operating paradigms (den Boer et al., 2021). Such a paradigm shift concerns all sectors of the food value chain and requires the adoption of innovative solutions that are accessible, affordable, available, and inclusive (Rosenthal et al., 2021). Furthermore, given the complexity of the food system, innovative solutions should not be confined to productivity-centric approaches alone; but actors should rather explore and encompass in their activities the social, institutional, technological, and organizational dimensions, considering the wide-ranging environmental and societal challenges inherent in food systems (Herrero et al., 2021).

In our call for papers, we aimed at collecting interdisciplinary theoretical and empirical contributions that look at specific innovative dynamics at different stages of the value chain, holistic process-based contributions and their impact toward more sustainable food value chains, as well as contributions dealing with the implications of such innovations on policymaking.

This Research Topic provides insights on the implications of innovations in food systems and looks at how innovations are able to support and rethink food systems' activities in the transition toward sustainability. In particular, concerning innovative practices, technologies, ideas, and activities concerning the different phases of the food systems and of food value chains.

The five articles within this Research Topic present empirical contributions that analyze food systems through diverse multidisciplinary approaches and varied perspectives. These articles offer a comprehensive overview of the subject by delving into different levels and phases of the food supply chain, engaging with various stakeholders, and exploring a wide range of innovative strategies.

[Martin et al.](#) provide insights on the institutional food services (IFS) sector in France by looking at the micro-level dynamics of change and innovation, and identifying sustainable transition pathways. Through 29 interviews with head cooks in the IFS, the authors assessed four main transition pathways: pioneer, emancipated, sailors, and builders. The study highlighted how these different transition pathways in the IFS sector can contribute to a leverage effect that forces food suppliers to meet the IFS demand of sustainable food. [Stempfle et al.](#) analyze the olive oil supply chain by investigating a successful circular solution for tackling the problems of olive oil by-products which represent an example of innovation and adaptation at the firm level. The authors used the Circular Business Model Canvas that supports the Circular Economy approach at the micro-level. The case study presented shows the role of internal and external drivers, and highlights how tailoring existing solutions for innovation adoption is an opportunity to enhance circular thinking, for reducing olive oil production impact.

The Research Topic was also enriched by the work of [Tsiouni et al.](#) who carried out an analysis of the Greek goat industry at the macro level. Their analysis shows the impact of cost for animal feed, depreciation, and animal value in goat farming, thus focusing on the animal production phase of the supply chain. In order to support the Greek goat industry, the authors suggest the establishment of institutional frameworks and the creation of innovative distribution channels as measures to stimulate the competitiveness of the sectors. [Carriero de Souza et al.](#) combine a micro and macro-level approach to the analysis of alternative food networks. Micro by looking at farmers and farms in the Italian province of Trento, and macro by zooming out to understand supply chain relationships among farmers and institutions as well as supply chain practices. On the macro level, the authors analyze how the alternative food networks are linked with citizens' awareness and agroecological approach. In particular, this work highlights how these relationships can play a role in food security, access to healthy food, and consumption awareness thanks to the critical approach toward the food system.

When looking at the diversity of phases of the supply chain and of innovations taken into account, [da Silva Pugas et al.](#)'s contribution explores the Emergence of social innovations in Short Food Supply Chain (SFSC) initiatives for organic food provision in the Food Service in Brazil. Through a mix of qualitative methods (interviews, questionnaires, participant, and non-participant observations), this contribution provides insights into the mechanisms through which innovations fostered by farmers and rural actors, companies, and institutions can favor the emergence of new forms of collective action.

The works presented in this Research Topic are enhancing our understanding of how a transition toward more sustainable food systems requires the design of interventions based on a holistic view including supply chain actors' and firms' individual behavior

and initiative, policy intervention, and actors' cooperation. Furthermore, they provide insights into the variety of innovative patterns to be implemented in such a transition, from technological to organizational, institutional, and social ones. Although the five contributions analyze innovation through different lenses, all demonstrate that innovative actions' capacity to act as a leverage to sustainability is strictly linked with the social, economic, and political frameworks in which the innovation operates. To this end, academia needs to keep investigating the dynamics of innovation adoption in the food sector, in order to inform policymaking, guide the establishment of frameworks for action, and support food system stakeholders in understanding the social, economic, and political framework, and efficiently act within these frameworks.

Author contributions

GD: Writing—original draft, Writing—review & editing. EC: Writing—original draft, Writing—review & editing. DS: Writing—review & editing.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Acknowledgments

As topic editors, we are particularly thankful to the authors of the articles collected in this Research Topic and to the reviewers who with their precious support helped guarantee the high-quality of the contributions.

Conflict of interest

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