



## OPEN ACCESS

EDITED AND REVIEWED BY  
Jennifer Blesh,  
University of Michigan, United States

\*CORRESPONDENCE  
Cesare Zanasi  
✉ cesare.zanasi@unibo.it

RECEIVED 27 June 2024  
ACCEPTED 19 August 2024  
PUBLISHED 29 August 2024

CITATION  
Zanasi C, Stefanovic L and Strassner C (2024)  
Editorial: Biodistricts: a concrete example of  
sustainable food systems.  
*Front. Sustain. Food Syst.* 8:1455713.  
doi: 10.3389/fsufs.2024.1455713

COPYRIGHT  
© 2024 Zanasi, Stefanovic and Strassner. This  
is an open-access article distributed under the  
terms of the [Creative Commons Attribution  
License \(CC BY\)](#). The use, distribution or  
reproduction in other forums is permitted,  
provided the original author(s) and the  
copyright owner(s) are credited and that the  
original publication in this journal is cited, in  
accordance with accepted academic practice.  
No use, distribution or reproduction is  
permitted which does not comply with these  
terms.

# Editorial: Biodistricts: a concrete example of sustainable food systems

Cesare Zanasi<sup>1\*</sup>, Liliana Stefanovic<sup>2</sup> and Carola Strassner<sup>3</sup>

<sup>1</sup>University of Bologna, Bologna, Italy, <sup>2</sup>University of Kassel, Witzenhausen, Germany, <sup>3</sup>Münster University of Applied Sciences, Münster, Germany

## KEYWORDS

biodistricts, sustainable food systems, rural development, organic agriculture, territorial context

## Editorial on the Research Topic

### Biodistricts: a concrete example of sustainable food systems

Biodistricts are territories where farmers, citizens, public authorities and other local actors realize a formal agreement aimed at the sustainable management of local resources, based on the principles and model of organic farming and on the agroecological best practices, in order to boost the economic and socio-cultural development of their community. This Research Topic focuses on understanding the role of biodistricts in enhancing the sustainability of food systems and whether or how they represent a concrete example of sustainable food systems. Different examples from around the world, and different analytical approaches, have been provided by the studies included in this topic.

The development strategies in the territory of Valposchiavo region of the Swiss Alps are provided, using the theoretical concept of neo-endogenous development (Stotten and Froning). The study illustrates how remote mountain areas can enhance community wellbeing and tackle negative impacts of globalization by cultivating internal and external networks through renewed urban-rural linkages. In particular, the creation of a territorial brand and a regional development project contribute to the establishment of local and organic agro-food supply chains.

A case study on the Cilento Biodistrict in Southern Italy (Stefanovic and Agbolosoo-Mensah) provides a different example of how biodistricts contribute to sustainable food systems development. The role played by biodistricts in supporting the EU Organic Action Plan by increasing the technical, economic and social sustainability of the territory is described. The analysis showed territory and community related initiatives such as the *Community trade project* which contributed to “revitalizing rural territories and communities, which are currently threatened with rural exodus”.

The role of territorial contexts in shaping biodistrict development and structure is examined by describing the strategies and development paths adopted in Italy and France (Lamine et al.). The influence of different national legal frameworks is examined, focusing on the processes of institutionalization resulting from specific interplays between science, policy and experience. The more flexible and context-related approach of France is compared to the relatively more structured and regulated approach in Italy.” The results showed that the latter supported a broader impact on ecosystem services providing a “model of sustainable territorial development, integrating ecological, economic and institutional components”; while the former “focused on

*production/consumption reconnection and food social accessibility, within an encompassing agroecological framework”.*

The influence of different territorial/cultural contexts in defining biodistrict characteristics is also provided by a study on the traditional rural village of the Dong ethnic group in southwest China (Zi et al.). The complex management of their well-preserved traditional rural food system is described. This sophisticated sustainable model is the result of an interplay between people and natural resources over millennia. It can provide a relevant contribution to develop biodistricts in similar contexts in rural China, providing a tailored and sustainable management approach to local resources.

A study focused on the food waste behaviors of families in the Cilento biodistrict (Di Veroli et al.) explored the impact of the organic biodistrict on the attitudes toward food waste. The results showed a lower level of food waste when compared to national data; even more interesting: food waste management was not even perceived as a relevant descriptor of biodistrict sustainability since it might be taken for granted. This is shown/assumed to be the consequence of a strongly embedded culture of food waste avoidance minimization within this biodistrict.

The last two papers considered different approaches to monitoring characteristics and impact of biodistricts.

The first considers the relationship between agroecological and organic agriculture approaches in the development of a Local Agrifood System (LAFS) such as biodistricts (Sciurano et al.), a topic of paramount importance in Argentina. An organic and agroecological group of producers in the Argentinian Pampa Region have been analyzed to this end. The results show that the methods adopted supported the creation and management of LAFS by identifying the stage of development, the most relevant actions to support the LAFS upscaling and the procedures necessary to implement the development process.

A last study considered the assessment of the social impact of biodistricts (Packer and Zanasi) starting from a literature review on the approaches and indicators used to assess the factors influencing social sustainability in rural areas. The approaches emerged represent a suitable starting point for a social impact analysis of biodistricts. A more systematic understanding of how comprehensively they address the specific biodistrict context was lacking. To fill this gap a comparison between the indicators of social sustainability included in these approaches, and a set of indicators of social sustainability derived from the existing literature on the social dimension of biodistricts, was carried out. The results showed that a full set of indicators describing the social sustainability impact of biodistricts should result from a combination of the different existing approaches, where the FAO Sustainability Assessment of Food and Agriculture systems (SAFA) and plays a central role.

This topic contributes to understanding how biodistricts represent a complex system where the different dimensions involved in their structure and dynamics of development are strongly influenced by the territorial contexts. The natural environment, the public, private, and civil society institutions interact shaping a local culture and different paths to development. Despite their differences, the involvement of organic agriculture practices and principles, and their relationship with the sustainable development of territories, emerged as a common trait of biodistricts. The collected papers show the necessity of understanding the different biodistrict-specific features, dynamics and outcomes. This includes making the local stakeholders and communities aware of the biodistricts potential for development, while avoiding as much as possible the straitjacket of detailed regulations and thresholds.

## Author contributions

CZ: Writing – original draft, Writing – review & editing. LS: Writing – review & editing. CS: Writing – review & editing.

## Funding

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

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The author(s) declared that they were an editorial board member of *Frontiers*, at the time of submission. This had no impact on the peer review process and the final decision.

## Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.