

# Governance for sustainability in the agrifood chain: challenges and new direction<sup>1</sup>

IRENE CANFORA\*, VITO SANDRO LECCESE\*,  
DOMENICO CRISTALLO\*, DAMIANO PETRUZZELLA\*\*,  
BIAGIO DI TERLIZZI\*\*

Achieving sustainability in the agrifood supply chain, in environmental, economic and social dimension, demands more than a static framework of rules; it calls for governance understood as a dynamic set of processes, institutions, and stakeholders working in concert to reconcile environmental imperatives with economic viability and social equity. This concept extends beyond mere administrative mechanisms, touching on constitutional principles, private-sector codes of conduct, civil-society engagement, and transnational regulations.

Given the current context, marked by the breakdown of long-standing paradigms underpinning global food systems, it is essential to revise both the aims and the instruments of agrifood governance. This revision must address the issues highlighted in the 2030 Agenda – most notably, persistent food insecurity, escalating poverty (particularly in the Global South), and the ongoing climate emergency.

As the UN Secretary-General has warned, “Global food systems are broken and billions of people are paying the price”. In the context of climate justice, he further notes that “those least responsible for the crisis are the most affected: the poorest people; the most vulnerable countries; Indigenous Peoples; women and girls”, due to blocked supply chains, rising prices, and growing food insecurity. Ten years after the adoption of the SDGs for 2030, this stark reality shows the need to prioritise regions facing critical challenges and rapid population growth where “rebuilding” the relationships among the various actors along the supply chain (production, transformation, distribution, and consumption) remains essential to build more resilient and inclusive food systems. As these global urgencies increasingly reverberate in the European context, it is clear that agri-food governance mechanisms need to be rethought accordingly.

In light of these challenges, it becomes nec-

---

<sup>1</sup> This special issue is a part of the project: “Definition of an ethical legal model of sustainable food system relationships” in the framework of the project’s activities ONFOODS Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods (Next Generation EU) Funder: Project funded under the National Recovery and Resilience Plan (NRRP), Mission 4 Component 2 Investment 1.3 - Call for proposals No. 341 of 15 March 2022 of Italian Ministry of University and Research funded by the European Union – NextGenerationEU; Award Number: Project code PE00000003, Concession Decree No. 1550 of 11 October 2022 adopted by the Italian Ministry of University and Research, CUP D93C22000890001, Project title “ON Foods - Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods”.

\* Università degli Studi di Bari Aldo Moro, Italy.

\*\* CIHEAM Bari – Mediterranean Agronomic Institute of Bari, Italy.

essary to rethink the legal and economic tools needed to respond not only to agriculture's social and economic policy dimensions but also to the urgent climatic and environmental imperatives. While it remains crucial to "think globally," it is equally important to "act locally." Effective governance mechanisms should thus account for both global interdependencies and the distinct needs of individual territories, harnessing local food policies to promote sustainably oriented practices among private actors and public authorities alike.

This selection of papers, each from a different perspective, converge to illustrate how policy, law and technology can be aligned to shape a more resilient and ethically grounded agri-food system, by analysing key issues related to the "sustainable food system" defined as a comprehensive concept by the EU Commission. But they also show that governance is inherently relational, shaped by the interactions among diverse actors – governments, producers, labour organisations, and consumers – whose ability to forge alliances and manage conflicts determines the success of any sustainability policy. While the tension between ambition for transformative environmental measures and agrifood economics is a recurring theme, such tension should not be construed as irresolvable. Instead, the ideas captured here point to governance as an integrative paradigm, one that transcends the traditional divides of public/private or local/global in pursuit of effective sustainable outcomes.

Building on this, **Alan Matthews**, in *"Prospects for the European Green Deal in Agriculture and Food in the 2024-2029 Political Cycle"*, captures how shifting political and socioeconomic contexts influence the pursuit of sustainability targets, showing that competitiveness, farm income, and climate goals need not be mutually exclusive. Instead, new legislation and transition funds must align with expectations on both the producer and consumer sides, pointing toward an expanded form of governance wherein multiple interests coalesce around shared objectives.

Turning to environmental issues, **Esther Muñiz Espada**, in *"Legislative Balances Needed Between Environment and Agriculture"*, highlights a structural tension: the stricter the

environmental standards, the higher the potential risk to farmers' financial stability. Here, flexible but principled policy-making becomes paramount, with adaptive regulation co-produced by public agencies, private actors, and civil society to reconcile conservation and profitability.

Moving from the broader regulatory context to specific policy implications, **Irene Canfora and Vito S. Leccese**, in *"The Social Conditionality: Its Implementation and Effects on Supply Chain Sustainability"*, underscores the centrality of social equity, fairness, and inclusion, suggesting that labor rights within the concept of "inclusive rural development" should be considered core pillars of agrifood governance. This resonates with the idea that sustainability, to be truly impactful, cannot be reduced to environmental metrics alone and must integrate labor and social considerations into each layer of the production process.

The focus then shifts to the role of geographical indications, highlighting how local governance mechanisms can harness cultural heritage for sustainable development. **Domenico Cristallo**, in *"Geographical Indications and Biodiversity: An Overview of Regulatory Challenges and Critical Perspectives"*, shows how local heritage can serve as a lever for both market differentiation and biodiversity conservation. Promoting sustainability in this sphere demands collective agreements among producers, oversight from public authorities, and active consumer engagement, all requiring flexible normative frameworks that evolve with changing social and environmental conditions.

Continuing this line of thought, **Valeria Paganizza**, in *"Where Competitiveness Meets Sustainability: Law, Policy, Implementation and the Environmental Challenge of Vineyards"*, delves into the tension between market competitiveness and environmental safeguards in vineyards, illustrating how existing policies may be insufficiently attuned to local realities and must evolve to integrate both profitability and ecological responsibility. Taken as a whole, these articles converge around governance as a multi-tiered, adaptive process rather than a static set of rules.

Having explored how institutional frameworks can reconcile environmental and social concerns with market competitiveness, the focus

now shifts – within the dimension of public governance – to the key role of livestock production, paving the way for examining livestock-related sustainability challenges.

Exploring these aspects, **Cecilia Pannacciulli**, in *“Agriculture Between Constitutional Dimension and One Health–One Health Approach”*, illustrates how, within the constitutional framework, a holistic perspective can address the concept of “one health.” Emphasizing the recent amendments to the Italian Constitution, which explicitly recognize the environment, biodiversity, and animals as constitutionally protected interests, the author shows how the interconnection between the health of people, animals, and ecosystems is embedded in constitutional law. By moving beyond fragmented, sector-specific regulations toward a truly holistic vision, governance is redefined as an integrated framework that strengthens the resilience of both human societies and natural ecosystems.

The subsequent contribution, **Roberto Talenti**, in *“Grounding a Legal Research Agenda on the EU Mitigation of Livestock Emissions – A Systematic Literature Review”*, addresses the pressing issue of climate change within the livestock production, illustrating the necessity for regulatory frameworks that balance environmental imperatives with socio-economic realities. The author highlights the need for an approach that can rein in greenhouse gas emissions while respecting socioeconomic realities. Top-down impositions of strict standards may undermine rural economies unless accompanied by supportive measures, pointing to the requirement for coordinated, multi-stakeholder instruments developed through dialogue and cooperation.

Finally, turning to technological innovation and its impact on the agri-food chain, **Cecilia Rasetto**, in *“The Use of Blockchain Technology in the Food Traceability System”*, evaluates

the potential of blockchain-based traceability solutions through a case study. The author examines the technological dimension of governance through blockchain-based traceability solutions, which can strengthen authenticity and sustainability if issues of data privacy, cybersecurity, and interoperability are well managed. This again underlines that technology’s potential is realized through consensus-driven rules and transparent oversight, rather than through isolated technical solutions.

Governance weaves together tools from law, economics, social theory and environmental science into polycentric decision-making. While the pathways to sustainability remain fraught with tensions – economic, social and environmental – this integrative lens provides a framework for mediating such complexities by embracing stakeholder participation, acknowledging diverse local conditions and respecting broader global constraints.

In this perspective, the contributions to this volume propose a model of governance that is attuned to the interplay between local tradition, global legal frameworks and emerging societal demands. In sum, the articles collectively demonstrate that the regulation of the agrifood chain is not a technical exercise, but a multi-layered, dialogical process designed to manage interdependencies among different actors and competing imperatives.

Drawing on an interdisciplinary legacy – one that has evolved over time – this issue underlines how multilevel cooperation, flexible regulatory approaches and a commitment to social and environmental imperatives can lay the foundations for a truly sustainable agri-food system.

At the same time, the analysis also highlights key challenges and critical issues that need to be addressed in order to achieve a sustainable agri-food system.