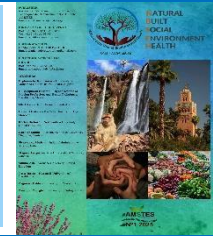




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BOOK REVIEW

Improving Standards and Certification in Agri-Food Supply Chains: Ensuring Safety, Sustainability and Social Responsibility, edited by *Louise Manning, Burleigh Dodds Science Publishing*, 2024, 400 pp., £160.00 (hardback), ISBN: 978-1-78676-748-6; eISBN: 978-1-78676-749-3.

From the very first pages, this collective work impresses with the rigour of its composition. A carefully structured table of contents guides the reader through the multiple dimensions of agro-environmental standards — from their institutional definitions to the assessment of their impact on the management of quality, safety, and traceability. The book also explores their practical implementation across diverse sectors such as regenerative agriculture, livestock farming, forestry, carbon markets, and Good Agricultural Practices (GAP) schemes. It will become an essential reference — helping policymakers, producers, and researchers navigate the shifting complexities of these standards.

The contributors are an outstanding team. They include leading experts from institutions (Codex Alimentarius, Rainforest Alliance, Sustainable Agriculture Network), as well as distinguished academics in economics, law, sustainable agriculture, and food governance. The title itself clearly aims to communicate to a broad audience that standards are not merely technical tools but are at the heart of interconnected global challenges such as climate change, biodiversity, social justice, and the sustainability of agricultural systems.

The first part explores the international foundations of standardization for food safety and quality, with an opening chapter devoted to the Codex Alimentarius (pp. 3–27), designed to equip readers with a better understanding of:

- Private initiatives that are based on or diverge from Codex standards (e.g. GFSI, BRC, IFS);
- National legal frameworks that incorporate or interpret these standards differently;
- The tensions between science, trade, sustainable development, and food sovereignty.

The Codex Alimentarius Commission (CAC) was formally established in 1963 by the FAO and WHO. At the time, no global body — not even ISO — existed to develop food safety and quality standards for coordinated international use [1]. In this context, Tom Heilandt and Amanda Hielm demonstrate that although Codex standards are legally voluntary and the Codex favours a consensus-based model of governance, it nevertheless allows, for example, for a vote to be taken when no compromise can be reached.

Through this introductory framework, the authors acknowledge voluntarism as a founding principle but also emphasize that voluntary application may, in practice, become a condition for market access — through gradual integration into economic and institutional mechanisms:

- Through incorporation into national legislation (e.g. HACCP);
- Through explicit reference in trade agreements and WTO arbitration (e.g. the sardine case between the EU and Peru);
- Through pressure from international donors or within public–private partnerships

The ambitious chapter by Louise Manning and Aleksandra Kowalska abruptly challenges conventional perceptions of agri-food governance, grounding its argument in tangible evidence (pp. 27–39). Where one might expect yet another typology of standards, the authors instead offer a systemic and dynamic reading of how such standards become institutionalized.

They demonstrate that the mechanisms intended to make agriculture “more sustainable” are no longer solely the domain of governments or environmental NGOs. Increasingly, they are shaped by climate diplomacy — through major international negotiations (COP, the UN, the EU) — as well as by the financial architecture structured around the demands of banks, investors, and insurers. Through a detailed analysis of European policies (CSRD, SFDR, Taxonomy Regulation), the chapter reveals how green finance (including inseting and offsetting mechanisms) is becoming one of the principal drivers of transformation in agricultural value chains.

Indeed, it is now also banks, investors, insurance mechanisms, and ESG rating systems that influence this landscape. As a result, the notion of the “voluntary” standard loses its innocence: it becomes enforceable, instrumentalized, and exclusionary. Originally conceived as a flexible, educational guide, it suddenly morphs into a condition for market access — a tool of selection, or even an invisible boundary between those who can keep pace with imposed sustainability standards and those who are excluded because they lack resources, technical capacity, or institutional recognition. The standard becomes a filter. What once fell under voluntary commitment shifts towards a logic of homogenization, where environmental ethics are translated into accounting obligations.

The standard no longer supports; it disciplines — ranking, selecting, and penalizing. Louise Manning and Aleksandra Kowalska succeed in weaving together a range of often disparate concepts — public goods, externalities, hybrid governance, regulatory transitions — to construct a compelling vision in which sustainable agriculture is no longer merely an aspiration, but an expression of power. These two authors raise an unsettling question: *who truly governs the standards of tomorrow — public institutions or financial markets?*

Jo Treweek (pp. 163–193), appears to be entirely in agreement, and is a firm believer in the effectiveness of positive incentives to encourage actions that restore biodiversity. It is an ambitious — yet necessary — attempt to shift from an extractive to a regenerative agricultural model by using economic instruments. Treweek shows how mechanisms such as biodiversity credits or ecological compensation schemes can reward those who protect or restore nature. But she also reminds us that such schemes only work if they are supported by clear rules, reliable monitoring, and strong safeguards to prevent disguised greenwashing.

To demonstrate feasibility, Treweek cites the concrete example of the Wendling Beck Project in England, presenting it as a successful model. Four farmers (pp. 182–183; www.wendlingbeck.org) decided to transform over 800 hectares of arable land into nature-rich areas, allowing biodiversity to return — all while continuing to produce using regenerative methods. They work with NGOs, scientists, and their local community. Their project is supported by several funding streams: hybrid finance, multi-stakeholder collaboration, biodiversity credit sales, and community engagement. A true living laboratory, Wendling Beck embodies both the promises and the challenges of nature-based markets. It represents the hope of an agriculture reconciled with the living world.

Mathieu Lamolle and Gregory Sampson report that the origin of sustainability standards can be traced back to a cry of alarm raised by civil society (pp. 45–71), in the 1980s, denouncing the excesses of industrialization and its social and environmental consequences. It all began with this ethical challenge, voiced outside formal institutions: NGOs, citizen movements, and

journalists exposed the destructive practices of certain globalised value chains. Faced with this pressure — and recognizing these actors as legitimate stakeholders — businesses realized that they could no longer ignore such demands. Some responded to preserve their image or to meet the growing expectations of environmentally and ethically conscious consumers. Others took the lead to position themselves positively. This led to the emergence of:

- Internal codes of conduct within companies,
- Independent labels (such as Fairtrade, Rainforest Alliance),
- Followed by sustainability standards recognized at national or international levels.

Lamolle and Sampson explain and outline a broad typology of standards which are not imposed by law, but voluntarily adopted by producers, businesses or distributors in order to meet ethical, environmental or commercial expectations. In addition, there are standards that are supervised or rendered mandatory by public authorities (states, the European Union, governmental agencies), often inspired by voluntary standards but institutionalized in certain sectors or as prerequisites for access to specific markets. For instance, organic or fair trade labels have often paved the way for legal norms.

The two experts from the International Trade Centre (ITC) also remind us that the term "sustainability" was not widely used before the 1970s. It emerged with persuasiveness through *The Limits to Growth* (1972), which warned of the overexploitation of resources, and the *Brundtland Report* (1987), which provided a definition still relevant today: sustainability as a balance between environment, economy, and equity.

Since 2000, companies have increasingly integrated these standards into their supply chains. Lamolle and Sampson cite numerous examples — Nespresso, Walmart, Mars — well-known brands that have adopted standards to guide their supply chain practices. And this has extended well beyond coffee or cocoa: today, standards exist for soy, palm oil, sugar, as well as sectors like fisheries, tourism, and even cosmetics. These standards have become so diverse — in terms of sectors, products, and types of criteria — that the ITC has developed a database (*Standards Map*) to help governments, companies and even small-scale producers to navigate them. It allows users to compare more than 300 standards across over 80 sectors.

But not everyone benefits equally from these developments. Small-scale producers, in particular, often face difficulties in complying with the rules set by certification schemes: certification costs are high, procedures are complex, and market access remains limited. Therefore, some labels such as Fairtrade or Bonsucro have decided to adapt their requirements or offer more accessible versions. They aim to include more small producers by recognizing their realities: tailored training, support for collective organization, guaranteed minimum prices, etc.

Lamolle and Sampson also emphasize the crucial role played by consumers in the dynamics of standards. Many want to buy sustainable products but are unsure which labels to trust. Price is also a barrier: when a certified product is more expensive, not everyone can afford it. Platforms such as *Siegelklarheit* in Germany or *Labelinfo.ch* in Switzerland help bring clarity. They assess the reliability of labels and explain what each logo actually represents. Some labels are rigorous and credible, but others create confusion or overstate their claims — i.e., greenwashing: giving the impression that a product is environment-friendly when it is not. Hence the importance, for both consumers and companies, of relying on serious and recognized standards.

Anne Tallontire's analysis invites us to reflect on the very foundations of sustainability standards in agri-food supply chains. She addresses three essential questions, almost like a

guiding thread: Who sets the rules? What are they intended to regulate? And what is their real purpose? (pp. 103–123).

Behind these questions, Tallontire highlights risks: the exclusion of small producers, the imposition of excessively rigid norms, and, above all, the often limited impact when these certifications operate in isolation — like labels without substance, floating above unchanged realities. Tallontire calls for a change of direction. She advocates an integrated vision, in which standards are no longer isolated islands but tools fully connected to fair public policies, accessible funding, and genuine corporate engagement.

For her, sustainability must not be mere window dressing — it must become a promise fulfilled, translated into tangible action. This applies to every item in the food chains.

The book then takes us through a range of approaches. Every agro-environmental sector attempts in its own way to define what “sustainable agriculture” means — yet the paths taken, and the challenges faced, are far from uniform. There are both points of convergence (e.g., sustainability and traceability) and divergence (e.g., accessibility, harmonization, or methodological frameworks). We move from fragmented systems driven by private standards in the livestock sector, such as Caring Dairy or the Dairy Sustainability Framework (pp. 194–215), to more formalized frameworks where good agricultural practices (VietGAP, GFSI) are introduced as either voluntary or mandatory, depending on the context (pp. 215–238). As the pages unfold, we also encounter the modular and participatory model proposed by SAN’s Sustainable Agriculture Framework (pp. 238–259), which seeks a holistic transformation of agricultural landscapes.

Chapters 11 and 12 (pp. 259–300) offer advanced certification mechanisms: the 2021 Rainforest Alliance system (built on the “assess and address” principle) and forest-related standards such as FSC and PEFC. What matters is not the number of standards, but their ability to narrow the gap between smallholders and large-scale operators, to bring local communities into decision-making, and to secure decent working conditions, a protected environment, and an economic continuity that preserves both livelihoods and natural resources. Sustainability must be tested, assessed, and embedded in tools and practices. That is precisely why the editors chose to end the book with proof grounded in evidence.

The contributors to this section take us deep into a futuristic – yet already tangible – world of verification technologies: blockchain, artificial intelligence, connected devices, digital twins... A high-tech arsenal that makes supply chains not only more transparent, but also more reliable and more intelligent (pp. 309–326).

The authors also offer a practical toolbox for assessing, tracking, and securing agricultural practices in controlled environments, particularly in soilless systems, greenhouses, and vertical farms (pp. 337–359).

As with all other key indicators of sustainability, greenhouse gas emissions represent a crucial dimension when assessing the environmental impact of agri-food chains. Without reliable measurement, no reduction strategy can claim credibility or be certified – especially in the context of “low carbon” labels, “climate neutrality” commitments, or green finance schemes. Emissions quantification has become a necessary step for gaining access to such certifications, meeting new legal obligations (CSRD, EU taxonomy...), and maintaining a foothold in demanding markets.

Agriculture can no longer remain on the sidelines of international climate commitments. Farmers’ ability to measure their emissions now determines whether they can be part of national or global transition strategies. The final chapters confront this, drawing on sensors, satellite

data, and advanced modelling to refine measurements and support decarbonisation efforts (pp. 359–381).

Finally, the editor, Louise Manning, brings the book to a close with a chapter reminding us that measurement is not an end in itself. What is essential is continual improvement, building agri-food chains that are not only high-performing but also resilient, able to combine operational efficiency, social responsibility, and strategic adaptation to climate shocks (pp. 392–394).

This is an original and rigorous work, offering a reading experience of rare completeness, grounded in first-hand data and supported by robust, authoritative references. It succeeds in mapping, with both critical depth and coherence, the landscape of standards applied to agriculture, livestock and forestry — unveiling their foundations, internal tensions, governance mechanisms, and grey areas. It approaches global agri-food standardization, situated at the intersection of safety, environmental sustainability, and social responsibility.

Above all, it puts standards in context. not in isolation. It builds a situated, operational, and critical understanding of sustainability.

This volume offers an integrated and forward-looking picture of agri-food standards in a rapidly changing world. At once a reference manual for researchers and a strategic guide for practitioners, it moves beyond technical analysis to embrace the political, economic, and ethical dimensions of sustainable certification. It is a major contribution for anyone seeking to understand how standards shape — and can transform — our global food systems.

Reference

- [1] Fortin, N. D., 2023, Global governance of food safety: the role of the FAO, WHO, and Codex Alimentarius in regulatory harmonization. In Michael T. Roberts (Ed) *Research Handbook on International Food Law* (Cheltenham: Edward Elgar Publishing), pp. 227-242.

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