

Law and policy can support sustainable diets

Rebecca Williams ¹✉

The role of law and policy in encouraging a sustainable global diet is often underestimated. I argue that targeted laws and environmental policy are key to bring the agricultural sector on the path towards sustainability.

Global diets need to become more sustainable if we are to tackle the climate crisis. The livestock sector generates 14.5% of all human-induced greenhouse gas emissions according to the Food and Agriculture Organization of the United Nations, with beef and cattle milk production contributing 41% and 20% of the sector's emissions, respectively¹. At the same time, 40% of the world's population are projected to undergo the livestock revolution by 2050 as global incomes rise, leading to increased demand for livestock products². Structural shifts in our food systems and dietary patterns are needed to secure climate change mitigation and meet the Paris Agreement's goals³. Encouraging dietary change in society is often perceived to be embedded in social or cultural norms, and beyond the scope of the law. However, this perspective underestimates the historical role of law and policy in shaping the current global food system and national dietary choices. Here I argue that increased levels of legal and policy intervention (particularly in wealthy countries) can help address the future sustainability of the global diet.

Sticky legal norms

It is a common assumption that the law is neutral. However, the law is often influenced by industry interests, in addition to other cultural or socio-economic factors. This is no different for the body of agricultural and climate law that has developed historically. The most recent Conference of the Parties included, for instance, numerous delegates from large industrial meat and dairy corporations⁴. Our food system spans a complex range of legal regimes⁵ with various governing norms and rules. The international trade regime for example includes the World Trade Organisation rules and preferential trade agreements. The international climate regime is driven by the Paris Agreement signed in 2015⁶, while the biodiversity regime depends on the Convention on Biological Diversity from 1992⁷. Broader socio-economic legal regimes, such as the Food and Agricultural Organisation's work on food security, and public health concerns addressed by the World Health Organisation also contribute to influence the law around food systems. The assumption that food systems are merely driven by society or culture is an oversight given the extent of legal and policy provisions on food systems.

Market distortions and biases embedded in food systems are often rooted in pervasive agricultural ideologies and legal norms created in response to World War II. At that time, food insecurity was rife and unified global markets were needed⁸. As a result, in early international trade negotiations, agriculture was largely granted 'exceptional status' from broader trade liberalising agenda due to the need to protect quasi-public nature of food in society at the time⁹. This enabled protectionist approaches in large domestic agricultural economies, such as the United States or European Economic Community to continue to be expanded post-World War II to increase output, save foreign exchange, and to stabilise and increase farm income¹⁰. While the Agreement on Agriculture 1994 was created to reduce agricultural protectionism globally, still concerns are raised about the levels of support granted to farmers in these historically protectionist regions, particularly in emissions-intensive sectors like the livestock sector¹¹.

¹University of Glasgow, 8 Professor's Square, Glasgow, UK. ✉email: Rebecca.Williams@glasgow.ac.uk

This is because legal norms, such as those mentioned above, tend to be sticky in the sense that they are resistant to significant change or reform¹². In the case of agricultural norms, their legal embedding had the power to codify market distortions and inflexibilities in these agricultural legal systems. They have created a system focused on increasing production levels and supporting unprofitable domestic agricultural production in many global regions. Distortions such as these can be not only harmful to global markets and developing agricultural economies¹³, but also to environmental and climate goals¹⁴. As seen, despite efforts to unstuck these norms through iterations of reform¹⁵, an expansionist and protectionist approach in agricultural law and policy often persists, even if the global agricultural landscape today is very different from its historic context.

Legal options for a global sustainable diet

Options for legal reform and policy do exist to encourage a more sustainable diet do exist. I propose a two-layered approach towards this legal reform. The first layer of reform requires the active undoing of agricultural market distortions embedded in legal regimes globally. The second layer of reform (Fig. 1) requires the active introduction of stricter climate change mitigation requirements for producers and national livestock markets.

The first layer of reform requires identification of current agricultural market distortions embedded in legal regimes—most often seen in historically protectionist agricultural sectors—and then concerted efforts to address these. To illustrate, in the European Union there have been active efforts to reduce problematic subsidies and support for domestic producers—though largely to avoid global trade-distorting impacts, rather than for environmental motivations¹⁶. The newest Common Agricultural Policy reforms in the European Union have further sought to address these concerns, though the path dependency of previous bias towards livestock production will require concerted efforts to overcome¹⁷. For example, problematic levels of support for resource-intensive types of agricultural production, such as beef, have persisted despite reform¹⁸. In particular, the European Commission has highlighted concerns following the first round of national strategic plans submissions under the new Common Agricultural Policy due to the lack of sufficient coverage of the livestock sector from Member States¹⁹. As a consequence, ongoing institutional review and feedback will be required at this level of reform to ensure the path dependency of the livestock sector is monitored and addressed in an continuous fashion.

The second layer of reform requires taking additional climate change requirements beyond undoing market distortions embedded in agri-climate regimes—whether this be due diligence for agricultural imports, imposing tougher climate requirements on farmers or even measures to shift consumption patterns.

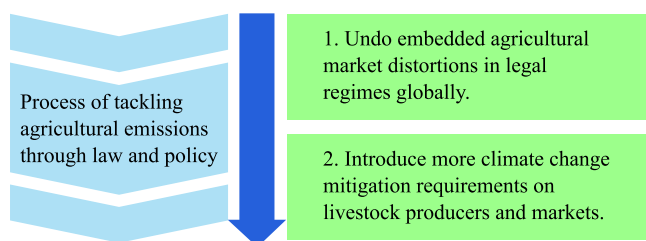


Fig. 1 Two-layered process of tackling agricultural emissions through law and policy. The two-layered processes policymakers can take to address the sustainability of their food systems. Firstly, the active undoing of embedded agricultural market distortions in legal regimes globally, followed by introducing more climate requirements on livestock producers and markets.

Again, I look critically to the European Union for an (albeit, at times, imperfect) example of potential reform in practice. The European Union has proposed a new regulation that requires on all traders placing forest and ecosystem risk commodities (such as soy for livestock feed), on the European Union market for the first time as well as financial institutions involved in the supply chain²⁰. This proposal has been criticised in some respects, such as its protection of land tenure rights, but generally is commended for the European Union's first steps towards avoiding being complicit in global deforestation²¹.

It is worth noting here the introduction of these two layers of reforms relies on the often reluctant will of current policy and decision-makers globally. An example of this reluctance can be seen in 27th Conference Of Parties agri-climate negotiations, where 'whole food systems' language was deleted from negotiating texts—assumed largely due to the implications this will have on wealthy countries approach to meat eating²². The European Union was one of few parties that was keen to introduce 'whole food systems' language into agri-climate negotiating texts, hence its inclusion in discussions of reform measures above.

Legal and policy options, such as the introduction of an environmentally motivated meat tax, are understandably politically controversial²³. The efficacy of a behavioural meat tax—often compared to other food taxes, such as a sugar tax—has been debated and considered, and concerns about the socio-economic fairness of their introduction have been noted²⁴. Softer legal and policy solutions are often deemed to be more politically feasible. In particular, leaning into the public health synergies of a sustainable diet with less red meat and more healthy plant-based dietary components is politically more convincing than solely climate-focused motivations. Analysis of public health policy devices, such as national food guidelines, suggests that many current national dietary recommendations globally do not meet adequate health or sustainability requirements²⁵. Education and awareness campaigns have also been found to have a role to play in countering common public health narratives surrounding meat and dairy consumption. For example, 'milk is needed for healthy bones' is an often-cited public health mantra that largely finds its roots in post- World War 2 promotion campaigns, despite recent scientific research suggesting that this need is often overstated in non-vulnerable populations²⁶. The role of public procurement rules and non-state actor-led initiatives can also not be underestimated in plugging the gaps left by policymaker inaction on food systems.

Nonetheless, legal and policy solutions need to be context-specific and have an awareness of other important socio-economic factors, such as hunger, inequality, and vulnerable populations. The legal solutions relating to dietary shifts discussed will only be appropriate in wealthier groups, where high consumption of highly processed foods and resource-intensive dietary components are leading to public health issues, such as rises in non-communicable and chronic diseases²⁷. By contrast, they will not be appropriate in poorer communities and regions, where the agricultural sector is often a lifeline for human well-being and measures to ensure food security are a priority²⁸.

Here, distinctions between types of production, such as small-scale or sustenance (more often seen in least developed regions with higher food insecurity) versus commercial scale (more often seen in developed or rapidly developing regions that are wealthier) need to be made in legal strategies—though currently this is often not the case. While farmer support and agricultural tradition often act as roadblocks to the interventions needed to make structural shifts in food systems in all regions²⁹, the above reforms are needed to ensure agricultural producers and consumers in wealthier regions are leading the way with regards to livestock emissions mitigation and are not insulated from the

necessary structural changes required for climate sustainability³⁰. Funds and policies may be required to support farm diversification during any structural shifts in order to ensure a fair transition to a more sustainable livestock sector³¹. However, ultimately, those least threatened by risk of food insecurity should be leading the way with legal and policy interventions for the sector.

Key Takeaways

Overall, law and policy should not be ignored when considering the future sustainability of our food systems and global diet. A concerted effort is needed by policymakers to prioritise the introduction of context-specific food laws and policies, particularly in developed regions with less risk of food security. The legal systems that govern our agricultural markets need to be modernised to reflect current sustainability priorities. Diet is not solely the result of public choice and cultural norms, and steps can be taken by these policymakers to help encourage the necessary shifts in our food systems. Non-communicable disease and public health goals can be targeted in a mutually beneficial way with climate goals in wealthier groups with typically higher consumption of resource-intensive dietary components, such as beef. At the same time, vulnerable groups and farmer livelihoods can be protected where appropriate to ensure a fair transition to more sustainable food systems overall.

Some may argue that law and policy may be overreaching its competencies by seeking to influence dietary choices, but when law makers have historically played a significant role in shaping current agricultural markets and dietary trends, there is a responsibility to address these distortions and strive towards agreed international climate goals. Food security and vulnerable farmers are not harmed if emissions solutions are context-specific and tailored in the ways outlined. Given current science and recommendations on striving for healthy and sustainable diets, the only excuses for inaction from policymakers are political.

With the climate crisis looming, these steps must be taken within our agricultural systems to tackle the current and future contributions of the sector to global greenhouse gas emissions. Promising developments are beginning to emerge, but further action is required to tackle the taboo of addressing law and policy's role in the unsustainable nature of our current global food systems.

Received: 27 July 2023; Accepted: 2 October 2023;

Published online: 13 October 2023

References

- Gerber, P. (ed). *Mitigation of Greenhouse Gas Emissions in Livestock Production: A Review of Technical Options for Non-CO₂ Emissions* (FAO, 2013).
- Cassidy, E. et al. Redefining agricultural yields: from tonnes to people nourished per hectare. *Environ. Res. Lett.* **8**, 094015 (2013).
- Wollenberg, E. et al. Reducing emissions from agriculture to meet the 2 °C target. *Glob. Change Biol.* **22**, 12 (2016).
- So, A. Power, Access & influence: which food organisations participated at COP27? *Food Research Collaboration Blog*. <https://foodresearch.org.uk/blogs/power-access-influence-which-food-organisations-participated-at-cop27/> (2022).
- Keohane, R. & Victor, D. The regime complex for climate change. *Perspect. Polit.* **9**, 1 (2011).
- Paris Agreement 2015, UN Doc. FCCC/CP/2015/10/Add.1, Decision 1/CP.21 (2015).
- Convention on Biological Diversity 1992, 1760 UNTS 79, 31 ILM 818 (1992).
- Pernet, C. A. & Forclaz, A. R. Revisiting the Food and Agriculture Organization (FAO): international histories of agriculture, nutrition, and development. *Int. Hist. Rev.* **41**, 2 (2018).
- Healy, S. et al. in *The Implications of the Uruguay Round Agreement on Agriculture for Developing Countries: A Training Manual* (eds. Healy, S. et al.) 1.1.3 (FAO, 1998).
- Hillman, J. S. Agricultural protection: an observation and warning. *Western J. Agr. Econ.* **74**, 3 (1978).
- Muller, A. & Bautze, L. *Agriculture and Deforestation: The EU Common Agricultural Policy, Soy, and Forest Destruction: Proposals for Reform*. <https://www.fern.org/fileadmin/uploads/fern/Documents/Fern%20CAP%20FULL%20REPORT%20FINAL.pdf> (Fern, 2017).
- Jordan, A. & Moore, B. *Durable by Design?: Policy Feedback in a Changing Climate* (Cambridge University Press, 2020).
- Stuart, E. & Riechert, T. *Green but Not Clean: Why a Comprehensive Review of Green Box Subsidies Is Necessary*. Action Aid, Caritas, CIDSE, Oxfam. <https://policy-practice.oxfam.org/resources/green-but-not-clean-why-a-comprehensive-review-of-green-box-subsidies-is-necess-129064> (2005).
- Balogh, J. M. & Jámbor, A. The environmental impacts of agricultural trade: a systematic literature review. *Sustainability*. **12**, 3 (2020).
- Cardwell, M. & Smith, F. Renegotiation of the WTO agreement on agriculture: accommodating the new big issues. *Int. Comp. Law Quarterly* **62**, 4 (2013).
- Jaroslav, P. et al. Executive summary: evaluation study of the impact of the CAP on climate change and greenhouse gas emissions. *Alliance Environment, Directorate-General for Agriculture and Rural Development (European Commission)* <https://op.europa.eu/en/publication-detail/-/publication/29eee93e-9ed0-11e9-9d01-01aa75ed71a1> (2019).
- European Commission. *Commission Staff Working Document: Analysis of Links between CAP Reform and Green Deal*. SWD(2020), Vol. 93 (2020).
- Halderman, M. & Nelson, M. *EU Policy-making: Reform of the CAP and EU Trade in Beef and Dairy with Developing Countries*. PPLPI Working Paper. Vol. 18 (2005).
- EU Commission. *Proposed CAP Strategic Plans and Commission Observations: Summary overview for 27 Member States*. https://agriculture.ec.europa.eu/system/files/2022-07/csp-overview-28-plans-overview-june-2022_en.pdf (European Commission, 2022).
- European Commission. *Proposal for a Regulation of the European Parliament and of the Council on the Making Available on the Union Market as Well as Export from the Union of Certain Commodities and Products Associated with Deforestation and Forest Degradation and Repealing Regulation (EU) No 995/2010, COM 706 (2021)*.
- Durán, G. M. & Scott, J. Regulating trade in forest-risk commodities: two cheers for the European union. *J. Environ. Law*. **eqac002**, 245–267 (2022).
- Chandrasekhar, S. & Dunne, D. COP27: key outcomes for food, forests, land and nature at the UN climate talks in Egypt. *Carbon Brief*. <https://www.carbonbrief.org/cop27-key-outcomes-for-food-forests-land-and-nature-at-the-un-climate-talks-in-egypt/> (2022).
- Marco Springmann and others. Health-motivated taxes on red and processed meat: a modelling study on optimal tax levels and associated health impact. *PLoS ONE* **13**, 11 (2018).
- FAIRR Initiative. *The Livestock Levy: are regulators considering meat taxes? FAIRR Policy White Paper* (2017).
- Springmann, M. et al. The healthiness and sustainability of national and global food based dietary guidelines: modelling study. *Br. Med. J.* **370**, m2322 (2020).
- Valenze, D. *Milk: A Local and Global History* (Yale University Press, 2011).
- Popkin, M. et al. Global nutrition transition and the pandemic of obesity in developing countries. *Nutr. Rev.* **70**, 1 (2020).
- Awokuse, T. & Xie, R. Does agriculture really matter for economic growth in developing countries? *Can. J. Agric. Econ.* **63**, 1 (2014).
- Clapp, J. The problem with growing corporate concentration and power in the global food system. *Nat. Food* **2**, 404–408 (2021).
- Williams, R. *Climate Change, Cattle and the International Legal Order Chapter 7* (Hart Publishing, 2024).
- Reckling, M. et al. Diversification for sustainable and resilient agricultural landscape systems. *Agron. Sustain. Dev.* **43**, 44 (2023).

Competing interests

The author declares no competing interests.

Additional information

Correspondence and requests for materials should be addressed to Rebecca Williams.

Reprints and permission information is available at <http://www.nature.com/reprints>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2023