

A 'net zero' equivalent target is needed to transform food systems

To the Editor — The UN Food Systems Summit in September generated broad acceptance of the urgency for food systems transformation to better nourish people in ways that do not undermine the environment¹. Yet, the international community of nations is failing to position food systems transformation at the heart of policy priorities, and COP26 provides the most recent evidence for this.

There seems to be a blind spot at the government level when it comes to the interaction between supply and demand within the food system and the deepening challenges of climate change that threaten the world's food security. Three billion people across the globe cannot afford a healthy diet², largely because we produce more grains than needed globally to meet calorie requirements, making calories cheap, but insufficient nutrient-rich foods such as fruits and vegetables, making nutrient-rich foods expensive³. Poor diets translate into significant drains on human health, productivity and nutrition. Furthermore, our food systems contribute around 35% of all greenhouse gases⁴, which drive climate change, and these emissions are growing⁵.

We are in a massive vicious cycle. The more we produce foods with large environmental footprints, the more the risks from environmental change undermine our ability to produce food for healthy diets. This will engender future food shortages, food insecurity and poor diets.

A systemic problem facing all nations

COP26 was the latest global gathering to pay insufficient attention to the key role of food systems in its agenda. It is perhaps unsurprising that the UN Framework Convention on Climate Change (UNFCCC) is failing to support effective food systems transformation because the focus has been on tackling the source of emissions rather than the market and consumer drivers for them. Thus, food is not the focus but rather the emissions from various forms of land use related to agriculture and forestry⁶. This continues to lead to a concentration on supply (agricultural outputs) rather than on modifying the drivers of demand (transforming diets to benefit people). Framing the issues as a supply-side problem diverts attention to the quantity rather than

the quality of food and leads to production emissions efficiency being sought at the expense of sustainability in all facets of the food system. This was reflected in many of the national commitments made at COP26 and at the recent UN Food Systems Summit, which reinforced the traditional supply-side focus on policies related to agricultural production. Relatively little attention is being given to the implications of such choices for climate change, or human health and well-being.

This is not to say that improving productivity and efficiency is unimportant⁷ — far from it. Hunger has been on the rise and there will be future food demands from a growing world population that is increasingly less poor. However, food systems transformation requires that attention be paid to how much is grown, what is grown, where it is grown and how it is grown, rather than seeing the job of agriculture as supplying whatever global markets can be made to demand.

Net-zero equivalent for food

Every country's food system is globally embedded in increasingly complex trade and market relationships⁸. Therefore, it is difficult to see how a country can transform its food systems without a collective approach. Equally, it is difficult to see how any single government can achieve the necessary change by itself. A global approach based on intergovernmental consensus would allow change that goes far beyond the actions of individual countries to transform their own food systems.

A global long-term target needs to be established for all countries to transform their food systems, that is, a long-term target analogous to the 'net zero' goals of the Paris Agreement. This goal would provide a focus around which to develop international consensus on the urgency and required timescale for systematic change. It would provide an aspirational goal for countries to endorse and commit to. When countries move to a common target, pathways become easier to plan and the interventions needed to move in a set direction become clearer, including, for example, repurposing subsidies, investments in new forms of agricultural research for non-staple crops, and pricing mechanisms for tackling environmental externalities.

A long-term net-zero equivalent target for the entire food system is needed, not just a net-zero equivalent for agriculture and land use. The largest share of food systems greenhouse gas emissions derives from food production (particularly, what is produced and how, such as livestock versus legumes output or intensive versus extensive production). But a significant and growing portion emanates from downstream food system activities, including food loss and waste, energy leakage from traditional refrigeration, and transportation⁹. Developing a low-carbon food system that is also nutrition positive requires shifting diets and incentivizing markets to produce different goods in different ways; this could allow space for less land- and resource-demanding production. Thus, a transformed food system could — and should — generate low emissions and be health and nature positive.

A net-zero equivalent global goal for food systems transformation would necessarily have to be backed by mechanisms that ensure progress is tracked and reported and that countries are on course for transformation (analogous to the Nationally Determined Contributions mechanism of the Paris Agreement). A food-focused equivalent to the Conference of the Parties (COP) would set targets and establish milestones, promote accountability and regularly assess progress, and would ideally be supported by appropriate public and private financial investments.




The private sector plays a pivotal role in today's food systems, and it must engage in their transformation⁹. However, it cannot be relied upon to deliver the necessary change by itself. That would be like asking the fossil fuel industry to drive global mitigation of climate change.

It is also crucial to win the support of the world's consumers by making better diets more accessible, affordable and desirable⁷. Everyone makes choices daily about what they eat — for some, it is in the context of an abundance of choice, while for others, it is whether they can afford to eat today or not, but everyone faces a choice. This is the key leverage point for achieving a net-zero equivalent goal for food.

A key opportunity

We must build on the momentum for change generated by the UN Food Systems Summit

and COP26, but we need to go much further. Policymakers and governments must take food systems transformation — modifying the demand side to address the supply-side challenges — seriously for it to be embedded in climate change actions rather than separated from them. As we approach the Africa Year for Nutrition, 2022 could become a landmark year if the vision for a net-zero equivalent long-term target for food systems transformation became a reality. This requires the world's leaders to stop seeing agriculture as an industrial commodity-producing sector and to instead acknowledge its fundamental role in ensuring human nourishment and well-being, with growth in consumption no longer prioritized over nourishing all people sustainably. □

Tim G. Benton ^{1,2} ✉, John Beddington², Sandy M. Thomas^{2,3}, Derek J. Flynn², Shenggen Fan ^{2,4} and Patrick Webb ^{2,5}

¹Royal Institute of International Affairs, Chatham House, London, UK. ²Global Panel on Agriculture and Food Systems for Nutrition, London, UK.

³Science Policy Research Unit, University of Sussex, Brighton, UK. ⁴China Agricultural University, Beijing, China. ⁵Friedman School of Nutrition Science and Policy, Tufts University, Boston, MA, USA.

✉e-mail: tbenton@chathamhouse.org

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Competing interests

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