



Editorial: Beyond the Food Systems Framework: Food System Transitions Toward Sustainable Healthy Diets in Low and Middle-Income Countries

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Editorial on the Research Topic

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Food systems are failing to deliver sufficient, healthy and affordable food. Poor diets are a leading contributor to the global burden of disease while malnutrition is among the leading causes of death (Afshin et al., 2019). The high cost of healthy diets coupled with persistent high levels of income inequality put healthy diets out of reach for around three billion people throughout the world (FAO, 2021). The sustainability of how we produce, distribute and consume food is of increasing concern. Further, the COVID-19 pandemic has demonstrated crises can cause significant disruptions to food systems (Carducci et al., 2021). Reshaping how we produce and consume food ensuring human and planetary health is a key global challenge highlighted by recent and ongoing UN dialogues through the Food Systems Summit, Climate Change Conference (COP26) and forthcoming Biodiversity Conference (COP15).

Against this backdrop, this Research Topic hopes to contribute to reshaping food systems by providing a better understanding of how to operationalize a food systems approach and by building an evidence base of potential inclusive, cost-effective, and environmentally sustainable ways to catalyze transitions in food systems toward healthy diets in low and middle-income countries (LMICs).

The first paper in this Research Topic introduces the difficulties of bringing a food systems approach into practice. Based on interviews with food systems researchers, business and project managers and policy actors in Kenya and Vietnam, Hoey et al. conclude that there is a strong need for strategies that can improve the collection and accessibility of actionable, cross-sector data related to sustainable diets, and for mechanisms to overcome institutional barriers that limit collaboration.

Three other papers directly take on these challenges, especially with respect to availability and accessibility of information. Pacillo et al. focus on transforming existing data into useful metrics for informing policy. They introduce a monitoring

approach that combines open-source earth observations with national data sources to produce highly contextualized metrics for monitoring Food and Nutrition Security under Climate Evolution (FANSCE). Regular monitoring of the relevant metrics will help policymakers to design appropriate policies to increase food system sustainability. Marshall et al. introduce a new food systems typology for conceptualizing and analyzing national food systems that facilitates between country learning. Policymakers can use this typology to identify countries with similar food systems facing common drivers. Successful policies and programs in such countries have a greater chance of being successful in their own context than policies and programs in countries with different food systems. Finally, Nguyen et al. document an inclusive priority setting process for food systems research. Following such a process could not only make future research more policy-relevant, but also facilitate uptake of research results by policymakers. The priority setting process also provides a unique opportunity to enable dialogue between diverse groups of participants and uncover the bargaining relationships between the different stakeholders.

Four of the papers in this Research Topic illustrate different ways of applying a food system approach in empirical research. A mixed-methods study of food system trends in West Papua province, Indonesia, by Nurhasan et al. shows that the ongoing dietary transition weakens the power of the indigenous community over their food system, as the proportion of traditional foods in diets is decreasing in favor of foods produced outside Papua. The authors argue that elements of the traditional system should be supported to safeguard the diversity of foods, while working with communities to maintain the characteristics that benefit their nutrition and health, support their cultural identity, promote the resilience of food systems and the sustainability of food sources in their surrounding environment, especially the forests. Szejda et al. use a food system approach to identify a potentially beneficial food system innovation for LMICs: plant-based and cultivated meat. Meat consumption, projected to increase substantially in LMICs, is associated with problems with public health, the environment, and animal wellbeing. They find that promotion of plant-based and cultivated meat could deflect this trend in South Africa, as a demographically representative group of survey participants expressed high interest in these alternative protein sources. Mekonnen et al. examine the cost and affordability of healthy diets in Nigeria and then use a food system approach to make policy recommendations. They recommend a number of interventions targeting different aspects of the food system, such as efforts to boost food production, maintaining

a sound macroeconomic policy environment, and innovations in supply chains to decrease costs and bring down post-harvest losses. In acknowledgment of trade-offs between different food system outcomes, they stress that such interventions should not compromise environmental sustainability. Chaudhry et al. study four dimensions of the external food environment (availability, price, vendor and product properties, and marketing) in the urban food system of the National Capital region of India. They conclude that the food environment is unhealthy and advocate for regulations that limit the availability and affordability of ultra-processed foods and improve the availability and affordability of fruits and vegetables.

In conclusion, the contribution of the studies in this Research Topic is two-fold. First, they uncover the main problems with applying a food systems approach in practice, such as limited availability and accessibility of data and institutional inhibitions for collaborations, and provide tools that can aid overcoming some of these challenges. Second, they illustrate how a food systems approach can enrich empirical research by providing a relevant analytical framework for the derivation of research questions and policy implications. Synergies and trade-offs with environmental sustainability are discussed in three of the four studies on applications of the food systems approach. One study explicitly addresses the linkages between diets and the surrounding natural resources, another explores more environmentally sustainable protein options, and a third advises against environmentally unsustainable food systems interventions. Synergies and trade-offs of food system and diet related outcomes with inclusiveness vis-a-vis women, youth or marginalized population groups received less attention, although two studies implicitly address inclusiveness for poorer segments of the population by looking into affordability of healthy food options.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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