What is the future for environmental sustainability labelling on food products?

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If each of us were to consider the food we had for lunch, we can probably estimate whether it was relatively healthy (e.g., did we go hungry, did it add to the variety of our diet, or consumption of five fruits and vegetables a day?). How easy is to make a similar judgement on whether our lunch contributed to a *sustainable* diet? For example, the carbon emissions associated with a simple sandwich can more than double, depending on the filling, where it is made, the packaging used and many more factors.[1] Drawing on the past experiences of nutrition labelling on food products, we consider whether sustainability labelling can provide a practical route to encourage sustainable food choices, sustainable market changes, and a move towards sustainable and healthy food systems.

Sustainability labelling on food products is most commonly associated with social and ecological certification schemes (e.g., USDA Organic Seal; Fairtrade mark; Friend of the Sea).[2] More recently, an increasing number of labels have emerged which estimate the impact of a product on one or more environmental factor e.g., carbon foot-printing as a marker of greenhouse gas emissions or climate change.[3] Research suggests there is a demand for these different types of sustainability labels; yet, it is uncertain if these labels will affect our everyday selections and purchases of food.[4]

Price, taste, brand, appearance, product familiarity and habits are still dominant reasons for our food choices; however, over 20 years' of research indicates nutrition labelling can drive healthy food choices and incentivise product reformulation.[5] In 2019, a meta-analysis investigated the impact of nutrition labels on food products and menus (including a variety of nutrient content labels, claims, logos, or indices, such as warning labels and traffic light labels). They concluded a small impact of labels, which can reduce total energy and total fat consumption, increase vegetable intake, and positively impact industry reformulation for sodium and trans fat content.[5] Further research is on-going regarding whether these impacts follow a social gradient and compound diet-related health inequalities (e.g., reformulated 'healthier' products are added to a range at a higher price point/available only in higher income countries; or numeracy skills are required to interpret health indicating labels).[6]

Food labelling has become part of the food system infrastructure, yet there are challenges with governing this sector. Voluntary recommendations and mandatory regulations are used to facilitate inter-/national trade (e.g., country of origin requirements by the FAO/WHO Codex Alimentarius food labelling standards), and signify quality assurance, safety and traceability standards (e.g., declaration of trans fatty acids content). Ensuring compliance with regulation requires considerable resources from those responsible for governing the food system. For example, the European Food Safety Authority (EFSA) has been harmonising and adapting food labelling regulation since 2006 to keep pace with a proliferation of food labels in the market. EFSA now require a portfolio of evidence from each manufacturer to authorise the use of a health or nutrient claim on their food product. This is to protect fair competition within the food industry and also to monitor the validity of claims to protect the public from being misled. Producing and reviewing these portfolios has taken considerable resources for both EFSA and the food industry. It is worthwhile to consider whether existing regulation and regulatory resources are sufficient to monitor sustainability claims if they were to become more widespread.

Trust and transparency in any labelling scheme is essential for it to be meaningful and motivate change in individuals or industries. We have seen confusion surrounding the use of the term 'organic' on food products. These products can be ascribed a 'health halo', yet there are limitations in the evidence indicating a superior nutrition quality of organic products and health benefits may be more associated with the social values attributed to organic production. The use of certification

schemes can encourage transparent standards; however, this is less clear with schemes (e.g., Fair Trade) which have been brought in-house: where products are self-certified rather than part of an 'independent' certification scheme. It is difficult to discern the sustainability of a product at point of purchase and maintaining the trust and transparency of different sustainability indices or metrics, across inconsistent product categories, will be paramount to ensuring accountability for food fraud or the use of exploitative marketing techniques.[7]

A major challenge with sustainability labelling of food products is the complexity of the sustainability concept itself, as well as the food system within which it operates. Sustainability is multi-faceted and sustainable food systems represent not only environmental factors (ecology), they are also sensitive to the health of the population today and in the future (nutrition, food security), and society as a whole (ethics and social welfare). Food systems themselves are also dynamic and complex: involving a multitude of changeable and inter-related activities, actors, and infrastructure from the production to the consumption, recycling and/or disposal of food. At every point there can be multiple environmental impacts, related to biodiversity, green house gas emissions (carbon dioxide, methane etc.), land, water or other resource use (e.g., nitrogen or phosphorous management). All these factors complicate the ability to create a metric or index that can trace a product as it journeys through the food system in order to assess its environmental, health or social impacts.

Creating food systems that provide healthy food to everyone today and in future generations without exploiting human or planetary resources is one of the greatest challenges of this century. The development and use of sustainability labelling has the potential to play a role in moving towards sustainable and healthy food systems and a sustainable future, as outlined in the aims of the United Nations Sustainable Development Goals. The reach of food labelling is considerable and could increase public awareness of how food is produced and consumed. Nutrient labelling remains a popular public health intervention, with mandatory nutrition labelling in at least 50 countries worldwide, with highly processed and packaged foods making an ever greater contribution to the global diet (e.g., in a sample of sixteen countries approximately 85 % of packaged food carried a nutrient label, health/nutrition claim, or a health/nutrition marketing claim).[8 9]

Past experiences of nutrition labelling provide a number of cautions to the rise in sustainability labelling. First, sustainability labelling is unlikely to be a panacea for behaviour change in consumers. Instead it can target small incremental changes at different levels and actors in the food system, within both individuals and organisations. Second, there is the potential for confusion with sustainability concepts, which can be exploited for commercial or political use, particularly where competing interests are present. The media and public attention on climate change and rise in sustainability labelling of food products provides an opportunity to develop food system analytics and sustainability metrics. Using these metrics, actors within the food system will be better equipped to communicate the nuances and evaluate the risks and trade-offs of system-wide interventions, and ultimately contribute to the evolution of sustainable and healthy food systems.

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