POSITION PAPER

Local sustainable diets as a driver of the transition to agroecological food systems

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In this paper, we propose the promotion of local sustainable diets as a process that can facilitate the transition of current industrialised food systems to agroecological food systems. First, we describe the problem, which can be synthesised by the following question: how to enhance the synergies between local diets, sustainable diets, and agroecology that we argue are the key drivers of the transition to agroecological food systems. To build our argument, we first provide a theoretical discussion regarding the concepts of sustainable diets, local diets, agroecology practice, agroecology transition, and sustainable food systems. This discussion allows us for the identification of joint and complementary characteristics. We then provide possible solutions based on existing global experiences, which we believe to drive the development of local and sustainable diets, agroecology, and food systems and taken together can aid the transition to agroecological food systems.

1 Description of the problem

As defined by the FAO (2012), sustainable diets are characterised by the following five dimensions: i) protection and respect of biodiversity and ecosystems, ii) cultural acceptance, iii) accessibility, economic fairness, and affordability, iv) nutrition, safety, and health and v) optimisation of natural and human resources. Sustainable diets have low environmental impacts and guarantee food and nutrition security and health for both the present and future generations. A sustainable diet is related to the concept of sustainable food systems. A sustainable food system is the sum of the elements, activities, and actors that are interrelated around the production, transformation, distribution, and consumption of food, in a way that delivers food security and nutrition but does not jeopardise social, economic, or environmental sustainability (FAO, 2018). But are sustainable diets inextricably linked to sustainable food systems? What are the cause and effect relationships between sustainable diets and sustainable food systems, and are they reciprocal? Diet has a direct impact on consumers' food choices and determine which foods are transformed, produced, and thus distributed throughout the food supply for consumer purchase. But this is a two-way process as food production shapes food product transformation and distribution, subsequently affecting the food supply and hence what consumers can choose from to be part of their diet (Meybeck and Gitz, 2017). Therefore, a sustainable diet will, ideally, enhance a sustainable food system through consumer choices as production and distribution will have an incentive to adapt and supply sustainable foods. However, consumers can only implement a sustainable diet if the food production and distribution provide them with both economically and physically accessible sustainable food options.

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There is no universal concept of local diet as there are myriad definitions and understandings of the term 'local'. In general, a local diet is one that is based on locally produced and sourced foods (Hunter et al., 2020). However, there is no single agreed-upon idea of what the distance should be between the farmer and the consumer for considering food as locally grown; some argue 10, 50, or up to 100 miles, others a day's drive, or within state borders (Whitney and Rolfes, 2019). In our opinion, local diets should be based on foods produced within the lowest distance possible between farmers and consumers. But are local diets always sustainable? Local food production might not coincide with a low environmental impact or, if it does, the outcome might not be enough to feed the entire population, for instance, in areas with severe climatic constraints. Therefore, we emphasise the concept of local sustainable diets. We argue that local diets also need to be sustainable and vice versa so that what is sustainable is also accessible.

Local sustainable diets will facilitate the agroecology transition (AET), which in turn will help maintain local sustainable diets by ensuring agroecological production. Specifically, agroecology is the science of sustainable agriculture, with a focus on the production system (Altieri, 1995). Agroecology as a type of agricultural practice recognises and uses the relation between socio-cultural characteristics and the food system as a powerful tool; thus, it requires a solid base of local knowledge. Bezner Kerr et al. (2019) specify that the practice of agroecology has relied on approaches to food production based on local knowledge, culture, and values. The AET is a process of systemic transformation to the ecologisation of agriculture and food (Bergez et al., 2019). Ultimately, the AET is a shift to a socio-technical system that is radically different from that used in current industrialised agro-food production. The AET is often addressed as a redesign at the farm level, but Ollivier and colleagues argue it should be understood more broadly; as an alignment of farmers' needs, ecosystem processes, and societal needs and demands (e.g. health impact or food price) (Ollivier et al., 2018). A true AET involves long-term changes in a range of elements and dimensions (e.g. technology, commercialisation, consumption) enacted by myriad actors and social groups (e.g. consumers, farmers, public institutions) (Köhler et al., 2019). Therefore, we propose that the development of local sustainable diets includes elements, which we will refer to as key drivers, with the potential to drive food systems through the long-term process of the AET. We recognise that it is difficult to make a modern industrialised food system completely agroecological, especially if we refer to a large geographic territory. However, we assert that the AET is a process with an inspiring goal, even though it is almost impossible to fully complete. The AET of food systems requires forces that underpin the proximity among actors in the food system, such as the close geographic relationships between farmers and consumers for food purchases necessary for the provision of local sustainable diets. Furthermore, we argue that local sustainable diets and the AET are not instantly concomitant but have key common elements that will, ideally, function in a synergic way.

How can then local sustainable diets contribute to the long-term process for the AET of food systems? From the above, we conclude that the AET of food systems must include, among others, three key elements: 1) be participatory, 2) be consistent with socio-cultural aspects, and 3) value the locally available resources. The strong link between the actors in the food system and the spatial area in which they interact to help shape local sustainable diets has the potential to drive all three of these elements. However, in the current expansion of modern food systems that moves producers and consumers away from each other, how can we in practice both recover and maintain local sustainable diets? We believe that the practice of agroecology offers potential solutions for helping to create and maintain local sustainable diets in a population. What follows are some practical examples and recommendations (i.e. possible solutions) from the literature to illustrate how to enhance the commonalities and potential synergies between local sustainable diets and agroecology practice and thus drive the transition towards agroecological food systems.

2 Possible solutions

Worldwide, on a sub-national level, both political and programmatic strategies have been proposed by city governments, especially in the developed countries, to reshape the food supply according to proximity and sustainability criteria. According to Köhler et al. (2019), public policies must play a central role in sustainable transitions, such as the AET, considering that sustainability is a public good. The participation of cities in food governance facilitates the adaptation of the food system to local needs (Sonnino, 2016). The promotion of peri-urban agriculture and short food supply chains has the potential to provide the inputs for city-driven food systems based on local products. Through facilitating distribution from farms to nearby cities and providing farmers with a stable income source, farmers are more likely to be a part of city-driven food systems. One mechanism that facilitates city-driven food systems is through Community Supported Agriculture (CSA), which consists of consumers providing farmers with money upfront prior to the harvest in return for weekly or monthly allotments of agricultural products. The CSA mechanism was originated in Europe in the 60s and 70s to support biodynamic farms. Hvitsand (2016) suggests that the producers and consumers committed to CSA are often concerned with aspects in line with agroecology principles. After analysing 22 countries as cases, Volz et al. (2016) found that European CSA strongly incorporates agroecology practices. Taken together, CSA is a way to promote local sustainable diets by bringing farmers and consumers closer together. We suggest that this proximity may help drive the AET as consumers could have the opportunity to ask farmers for foods produced under certain conditions, such as through agroecology practices.

The promotion of Participatory Guarantee Systems (PGS) can complement CSA by guaranteeing consumers that the local foods they receive are agroecological, as well as enhancing the trust, networking, and knowledge exchange

between farmers and consumers. PGS are an alternative to the third-party certification for organic and agroecological farming. Third-party certification worldwide is a paid service in the hands of certification companies and responds to the organic farming standards of the destination market. In contrast, according to the IFOAM (2014), in PGS the stakeholders – farmers and consumers – together oversee organic and agroecological certification. There are more than 240 PGS initiatives operating in 67 countries that involve more than 310,000, mostly small-scale, farmers. However, only 11 countries worldwide recognise PGS certifications as a legal equivalent to third party certifications (Willer and Lernoud, 2019). The use of PGS helps to promote local sustainable diets by providing a greater amount of certification mechanisms, beyond that of 'certified organic', to signal to a consumer that the food product was produced under agroecological conditions. Therefore, the use of PGS helps to drive the AET in two main ways: 1) by incentivising farmers that they will receive recognition for their production practices in a way that is likely more feasible for them than formal third-party organic certification and 2) by teaching consumers that there are many ways of sustainable, agroecological food production that are not limited to being 100% certified organic, which include products that are often too expensive or hard to find for many consumers.

The switch to diets based on local food production often results from periods of scarcity that prevent trade, especially in, but not limited to, developing countries. Cuba is a paradigmatic example in this sense. Due to food shortages during the Special Period, the Cuban government and the Cuban National Association of Small Farmers promoted the Farmer to Farmer Agroecology Movement (MACAC, for its acronym in Spanish), which was quite successful in increasing the share of agricultural production performed with agroecological methods (Blay-Palmer et al., 2020). The MACAC programme is still functioning based on the peer-to-peer transmission of knowledge. Farmers organise themselves in groups, each with an average of 750 members, which exchange ideas both within and between groups through meetings, workshops, visits, etc. The emergence of the MACAC programme as a means to strengthen local food systems is an example of how a shift out of necessity, in this case, due to a crisis in the national food supply, can drive opportunities to rethink and build more sustainable and resilient food systems, particularly through the practice of agroecology. This is an especially contingent scenario in 2020, as the usual functioning of local food distribution, with particular regard to the reduced or unstable availability of imported products, is disrupted by the global COVID-19 pandemic (Kanter and Boza, 2020). Therefore, programmes such as the MACAC can both help promote local sustainable diets as well as an AET through peer-to-peer collaboration in making existing agricultural production systems more agroecological. Peer-to-peer learning programmes can even be adapted to social distancing scenarios through the use of communication technologies, but it is important to assess the level of digital literacy amongst potential users prior to doing so.

Another example of how the promotion of local sustainable diets can help drive an AET is evident through public policies in Brazil. The Brazilian Federal Food Acquisition Program and the National School Meal Program together mandate that a percentage of their budgets be used to acquire food from family farmers. Under the purchase with simultaneous donation system – the most common mechanism for the Brazilian National Food Supply Company (Conab, for its acronym in Portuguese) to purchase products from family farmers for these programmes – it is the farmers themselves that deliver their products to schools located in their territory. Therefore, the school menus in Brazil are adapted to available local foods as the culinary preparations are required to include them. In addition, farmers receive an overpayment of 30% if their products are produced under agroecology practices. These policy examples from Brazil show that the public sector can use its purchasing power to enhance local sustainable food systems that also incentivise agroecological practices through local family farmers.

Another type of policy that can enhance the promotion of local sustainable diets based on agroecology at the national level is Food-Based Dietary Guidelines (FBDG). FBGD is a type of political document that specifies the nutritional principles for a population through a series of recommendations related to food, dietary patterns, and health. FBDG should consider the conditions of food supply, public health, and cultural preferences, among others. More than 90 countries worldwide have published their own FBDG, but only eight include sustainability (Herforth et al., 2019). The existing FBDG also rarely include recommendations on how or where foods should be produced. The 2014 Brazilian FBDG is an example of one that includes sustainability concepts as it recommends the consumption of natural or minimally processed foods, preferably organically or agroecologically produced, bought directly from the farmers themselves, if possible (Monteiro et al., 2015). FBDG similar to those established in Brazil, which consider how food production is practised and is context-sensitive, have the potential to orient national consumers towards local sustainable diets, ideally through recommendations of traditional and local foods. Thus, FBDG that include concepts around sustainability, including the importance of sustainable diets, have the potential to indirectly push policymakers and stakeholders to design-related public policies and programmes.

In addition to national policies and programmes, intergovernmental agencies also have a role to play in the promotion of local sustainable diets that together facilitate the transition towards global sustainable food systems. The FAO Draft Code for Sustainable Diets was developed between 2010 and 2012 by an expert working group in parallel to other existing food codes, such as the WHO International Code of Marketing Breast Milk Substitutes (Burlingame, 2019). The key ideas in the Draft Code for Sustainable Diets are: i) human health cannot be isolated from ecosystem health, ii) when ecosystems are capable of supporting sustainable diets, actions that promote other foods (e.g. ultra-processed foods and supplements) and related artificial sources of nutrients are inappropriate, and iii) every stakeholder has a role to play

(Burlingame, 2019). The Draft Code for Sustainable Diets is an excellent example of an initiative that has the potential to be a global standard; however, as of 2020, it has yet to be directly applied.

3 Conclusion

The trend in modern food systems is the ever-increasing distance between production and consumption. However, the scientific literature provides evidence that the concepts of local diets, as well as sustainable diets, share important dimensions with agroecological practices that have been incorporated into different programmes and policies worldwide. Local sustainable diets have characteristics that underpin, and thus, have the potential to facilitate the AET of modern food systems. We have presented several examples of public policies and community-level programmes that provide conditions for local sustainable diets with key elements that independently and together can drive the transition towards agroecological food systems. Although increasing in number, many actions that promote local sustainable diets are still barely put into practice or scaled up. Still, the Draft Code of Sustainable Diets offers a global approach to do so. To sum up, local sustainable diets provide essential drivers for the AET of modern food systems.

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