

Pathways to designing a truly sustainable food system for Luxembourg: Take-home messages from crises¹

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Introduction

Moments of crisis, like the current pandemic, stress-test the resourcefulness of societies. The duration of the sanitary, and subsequent economic, crisis can be seen as a prefiguration of a potential ecological crisis to come in relation to climate change and biodiversity loss. Crises allow us to fundamentally rethink vulnerabilities and set up more robust post-growth practices, based on social justice, ecological regeneration and economic well-being. All this should be underpinned by good governance and stringent policy coherence. In times of upheaval, individual and collective food supplies become primary concerns. Worldwide malnutrition and hunger are still unsolved issues, and climate change will only strain global resources and distribution further. Therefore, a *holistic* focus on redesigning *truly sustainable* food systems is urgent – and even more so considering that food and agriculture account for up to 37% of global greenhouse-gas-emissions².

The disruptions caused by COVID-19 show again how artificial the sheer abundance of food we in Western Europe consider ‘normal’ is. It relies on complex, international logistics and long food supply chains with many intermediaries, extension of seasonality by imports, the production of highly transformed, cheap and unhealthy food, with negative outcomes for public health and ecology. It concentrates Europe’s intensive horticulture in

¹ This article is the lightly reworked, written form of my TEDx talk, delivered on 15th October 2020 at <http://tedxuniversityofluxembourg.com>, with the title “How to design a truly sustainable food system in the context of climate change?” (video accessible here: food.uni.lu). The analysis leading to this conference has been published in a longer and more academic format in September 2020 under the following title: “The resourcefulness of Luxembourg’s food system as put to the test by the Coronavirus lock-down”, in Georg Mein, Johannes Pause: *The Ends of Humanities – Volume 2: Self and Society in the Corona Crisis. Perspectives from the Humanities and Social Sciences*. Luxembourg, Melusina Press (2020) (full download here: <https://www.melusinapress.lu/read/the-resourcefulness-of-luxembourg-s-food-system-as-put-to-the-test-by-the-coronavirus-lock-down/section/54389330-5905-4593-9cab-de44d2819521>).

² IPCC (2019) 7.

Mediterranean countries, and contributes to impoverished soils, water scarcity and the precariousness of seasonal labour – thereby perpetuating global poverty³.

So, how resilient is Luxembourg's food system when international supply chains are disrupted? Which vulnerabilities transpire, even in the wealthiest food-secure countries, where, in normal times, there is enough food supply for the country's inhabitants?

Luxembourg is predominantly a grassland region, lending itself to cattle grazing. In terms of food self-supply, the country produces 114% of its beef needs, 99% of milk, 67% of pork, but only 35% of eggs, 3-5% of vegetables, 1.4% of chicken and < 1% of fruit⁴. In the transformation sector, the vast majority of goods are imported. The rapidity with which borders closed at the beginning of lockdown in March 2020, even inside the EU Schengen space, draws focus to national food systems' performances and the ambitious and ethical question of food sovereignty.

Recently, the concept of food sovereignty⁵ has gained substantial influence. It's about *maximising* the *diversity* of locally produced food and the *autonomy* from international imports, in a *democratic* context ensuring *equity* and *participation* of producers and citizens. After the first and second lockdowns (spring 2020 and winter 2021), we can report heightened public awareness for the limited intrinsic resilience that Luxembourg's food system has, coupled with promising initiatives of reclaiming *local* food sovereignty.

Holistic infographic to food systems

As indicated, a holistic approach is necessary to grasp the complex dynamics of both inertia and change in food systems.

Within the Sustainable Food Practices team at the University of Luxembourg, we consider the diverse actors and institutions of a given territory, involved in the production, processing, distribution and consumption of foodstuffs – and even more importantly in their governance.

This governance can take the form of classical legislative and planning action – but also be of a more cultural and social kind, such as pressure groups from civil society, critical analyses from research, food literacy from educational actors, or the media, etc.

3 IPES Food (2020); IPES Food (2019); IPES Food (2016); Wallace (2016).

4 MAVDR (2019).

5 Pimbert (2009); Brem-Wilson (2015).

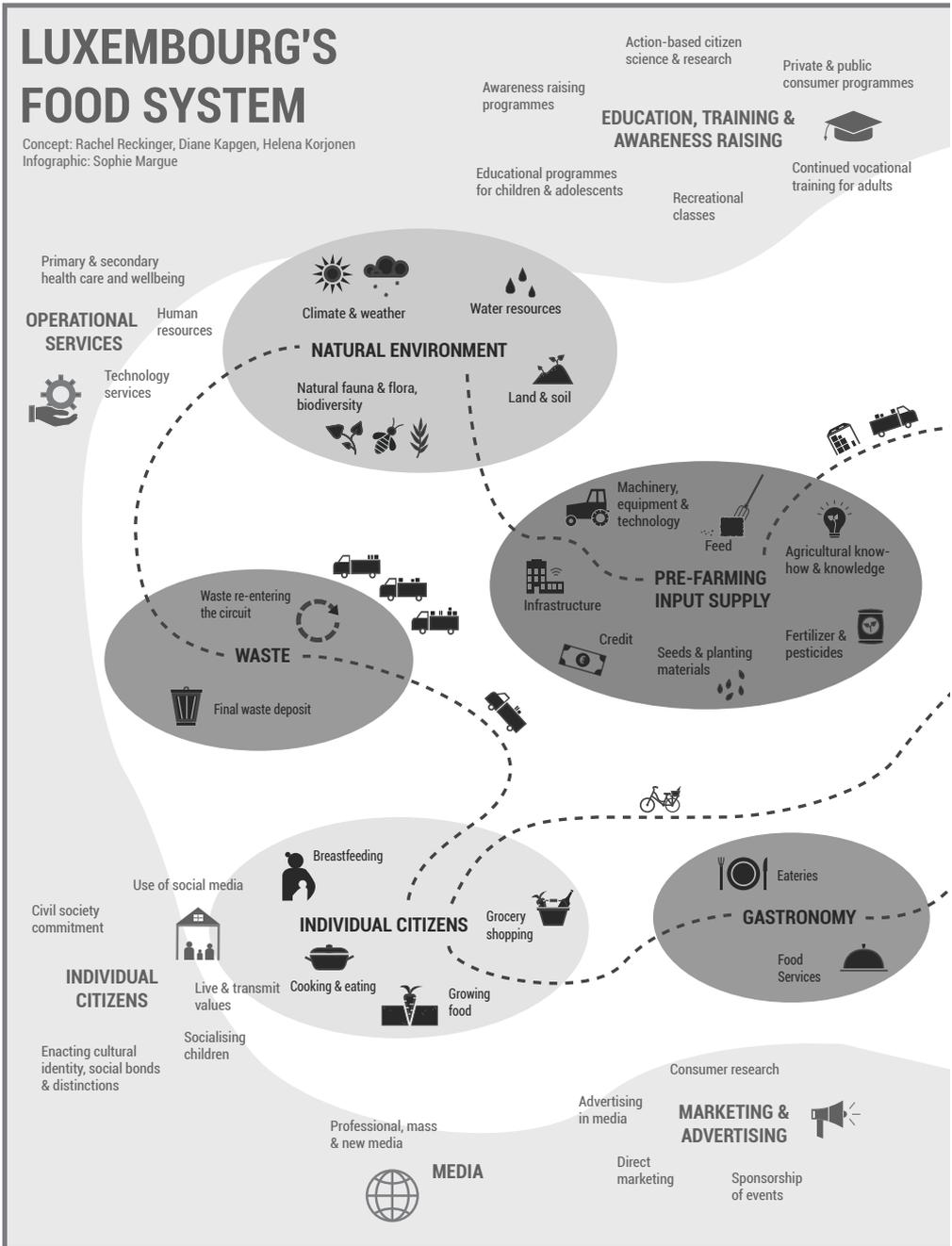
We focus our analysis on interrelations, tensions and negotiations, as well as on power imbalances in those networks – that are empirically qualified at the level of Luxembourg but can be transposed to larger contexts. Our simplified overview highlights the main actors in Luxembourg’s food system⁶ (see pages 174/175).

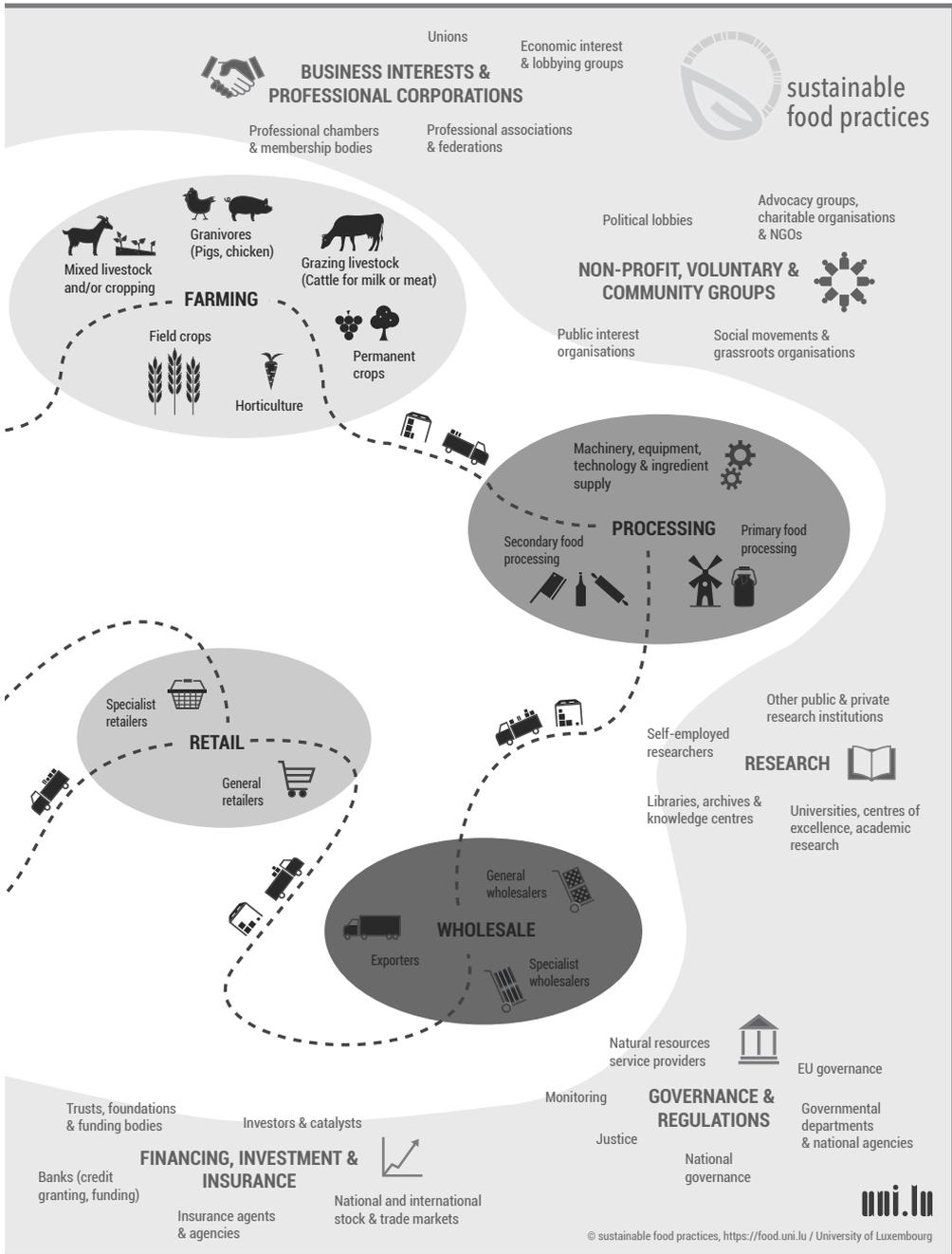
This holistic approach is needed because the common supply chain approach shows a linear view of extraction processes, explaining incompletely how food arrives on our plates. Instead, we depict a circular economy circuit, featuring pre-farm natural and man-made resources and interventions, as well as the principles of “reduce, reuse and recycle” at each sequential step of the circuit. This allows for deeper explanations of environmental and socio-cultural added-value.

This circuit is actively shaping, and being shaped by, a broader food system within which constant interactions and negotiations occur. The actors in the broader food system – represented here on the edges of the infographic – are not commonly thought of as key actors. Yet they are crucial in transforming structures and processes that shape the larger ecological, economic, sociocultural, and political context. For example, educational actors can provide comprehensive food literacy making consumers aware of healthy, ecological and socially just diets; economic and political actors can provide marketing opportunities, fair prices and guarantees for farmers’ more sustainable produce; civil society as well as political actors can advocate for higher standards of human rights, animal welfare and measures against biodiversity loss.

6 Reckinger, Kapgen & Korjonen (2020); <https://food.uni.lu/research/research-projects/visualising-foodscapes/>.

Figure 1: Synopsis of Luxembourg's food system



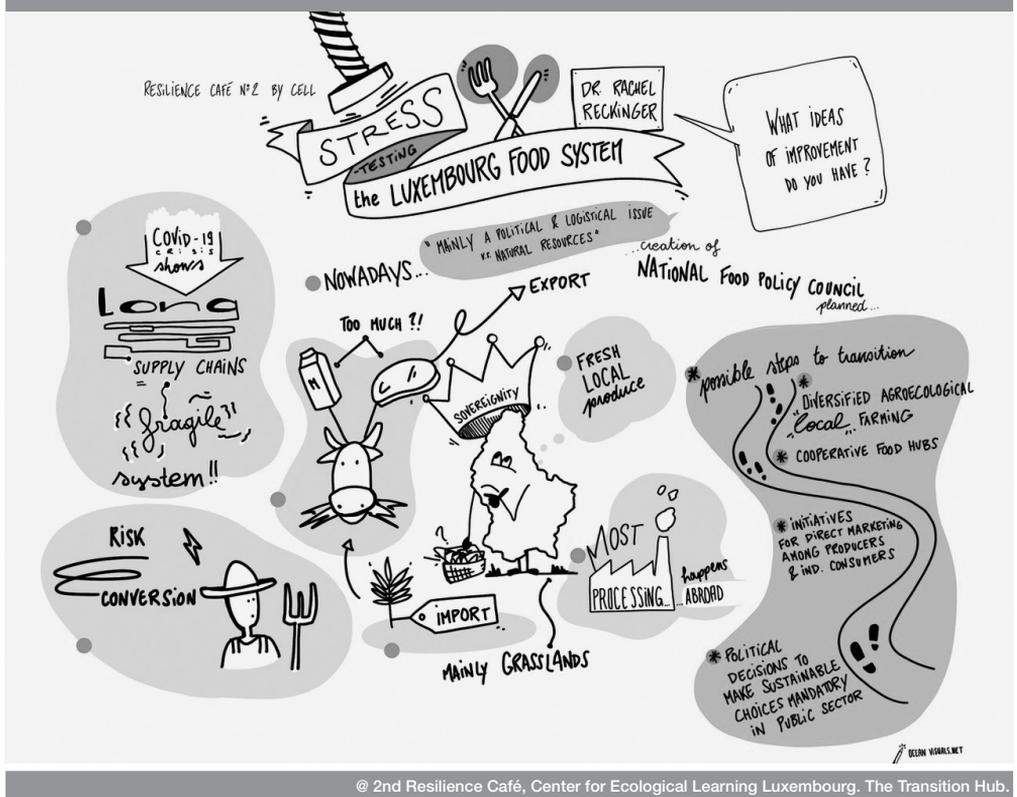


Innovative approaches towards food sovereignty

With such a systemic overview in mind, it is easier to grasp the multitude of innovative approaches towards more sustainable food systems as being interlinked and mutually dependent.

In these approaches, social movements and coalitions of the willing among larger food actors play a key role in advocating transition pathways⁸. As a small country, Luxembourg is suited to shorter supply circuits and could adapt to changing circumstances – but only if food supply is steady and diverse.

Figure 2: Figure 2 CC BY-ND Caroline Schuler, 04.2020



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From a production angle, experts point to the need of diversified agroecological systems, reducing external input, optimizing biodiversity and stimulating interactions between different species, to build long-term fertility and secure livelihoods⁹.

8 Renting, Schermer & Rossi (2012).

9 Altieri et al. (2012); FAO (2016); Scoones (2015); UNCTAD (2013).

We need to invest in a larger (and skilled) workforce, seeing as farmers already work 60 hours per week on average¹⁰ and thus cannot easily take on additional tasks of diversification. Politics should provide incentives and political warranties for those farmers who are willing to innovate and experiment with diversification. Political warranties would also be helpful to increase the shift to organic production – aiming to bring Luxembourg’s current 4.6% organic agricultural surfaces up to the planned 20% by 2025¹¹.

Small producers, especially, experience fluctuation and cannot consistently guarantee supply. Here, cooperative-run platforms or food hubs can group them and function as a one-stop-shop for wholesalers. Also, larger companies can offer commercial partnerships to producers who agree to invest in missing products. These already emerging initiatives would further benefit from a market stretching across the Greater Region (consisting of Luxembourg and the limitrophe regions in Belgium, France and Germany) – and beyond.

Current research¹² shows that apart from fish, chicken and tomatoes, all reviewed product categories¹³ (among dairy, grain, potatoes, meat and vegetables) are already being produced in sufficient quantity to surpass the needs of the Greater Region’s out-of-home-catering sector. There is an opportunity here to serve these products in local canteens. Yet barriers still exist in logistic and political issues of supply management, market orientation, price policies and national legislative regulations.

State-run labelling schemes are another useful transition tool that certify various types of quality and can enhance food literacy and more sustainable purchases both in private households and in public procurement. The condition is that they are transparent about added value, are backed by laws that define clear criteria in a verifiable way, and make compliance mandatory, with proportionate incentives and sanctions¹⁴.

As high-quality, sustainable and affordable local food is made available and becomes the norm¹⁵, consumers will develop more sensitivity for local contingencies, ethics, organic food, seasonality, etc¹⁶. Consumers are increasingly becoming more active, committing to ‘prosumer projects’ such as community supported agriculture or other forms of alternative food networks¹⁷. This virtuous loop could be enhanced through mandatory Education for

10 SER (2016).

11 MAVDR (2020).

12 AROMA (2019).

13 In descending order: milk, wheat, potatoes, beef, onions, carrots, pork, apples, eggs, green beans, peas, salads, courgettes, pears, cucumber, strawberries.

14 Reckinger, Kapgen & Korjonen (2021).

15 Kopatz (2016); Reckinger (2020b).

16 Reckinger (2016); Reckinger & Régnier (2017).

17 Goodman, Dupuis & Goodman (2013); Lamine, Garçon & Brunori (2019).

Sustainable Development programs, that teach historical and current food imperialism in the Global North¹⁸.

All in all, transversal governmental action could act as a lever in transitions to sustainable food systems. One supra-national example is the Farm to Fork strategy, issued by the EU in 2020, as one of the strategies within its Green Deal program, aiming at making Europe climate neutral by 2050¹⁹. This strategy integrates a larger number of actors from the food system than the classical agrifood supply-chain – yet it does not have a strong focus on including vulnerable stakeholders nor on trade policies.

A more profound transformative view is put forward in the proposition for a Common Food Policy, prioritising public participation and experimentation at EU, national, and local levels²⁰. It aims at systemically enhanced coherence, ethics and aligned objectives among all food-related policies, instead of focussing on individual sectoral policies. It is currently being advocated for by 400 experts in farming, food entrepreneurship, civil society, academia and policymaking.

Dialogic food democracy for food sovereignty

In short, robust food systems are, optimally, food sovereign ones underpinned by systemic ethics²¹, meaning that actors are dedicated to sustainable change in their values and daily lives. In order to put into practice the ideal of food sovereignty, one needs food democracy structures²². This does not mean simply that elected politicians should be in the service of the public interest relating to food, but that specific bodies should be established, in which various stakeholders of the territorial food system co-create a diagnosis, guidelines and actions for transformation²³.

Food sovereignty needs collaborative governance, which includes the engagement of stakeholders in a more transformative and dialogic structure, based on common problem solving, consensus, trust and the recognition of power and resource asymmetries. This goes beyond mere multi-stakeholderism, where participants only have a consultative role²⁴.

18 Brand & Wissen (2017).

19 European Commission (2020).

20 IPES Food (2019).

21 Bui, Costa & De Schutter (2019).

22 Carlson & Chappell (2015).

23 *Idem*.

24 Andrée et al. (2019); Reckinger & Schneider (2020).

Such bodies complement representative democratic structures with dialogic ones²⁵. They include minority views and thus facilitate the emergence of systemic food ethics. Among them, in particular, Food Policy Councils²⁶ are innovative and efficient tools for multi-scale governance and innovation, chiefly because they connect governmental action, business initiatives and grassroots innovations, as the three main pathways for reform²⁷. However, those three domains cannot individually bring about change: they require coordination, regular co-operation and equity – which Food Policy Councils are able to provide.

Luxembourg is currently founding a nationwide Food Policy Council. Hopefully, this multi-stakeholder platform will aim for collaborative governance. This would truly allow for independent co-operation as equal partners from the following three sectors: 1. Policy and administration; 2. Research and civil society; 3. Production, transformation, gastronomy and trade. Additionally, a participant observant yet critical academic monitoring should assess the processes and impacts²⁸. The potential for Food Policy Councils to develop new approaches and enhance existing ones is both unprecedented and timely. Here, social learning accelerates and can result in the mushrooming of many small initiatives with sociocultural and economic exemplary value²⁹.

In a nutshell

Due to its small size and unique multi-cultural population, Luxembourg is a favourable site for experimentation. It can build multi-stakeholder-led effective food policies; shorten sustainable supply circuits in a cooperative way; and encourage innovation, diversification and collective learning. Luxembourg can use its political and economic international weight to push best practices for food sovereignty forward.

In order to achieve that, there needs to be a collective understanding that transformative action is not only needed at the level of food supply circuits, but in the transition of the entire system of actors that revolve around food.

For this, we need collaborative governance-models, based on equity and ethical values. It is not enough to focus on national agricultural policies or the European Common Agricultural Policy, but rather on coherent food policy alignment.

25 Callon, Lascoume & Barthe (2009).

26 Schiff (2008); Thurn, Oertel & Pohl (2018); IPES Food (2020); Carlson & Chappell (2015).

27 De Schutter (2017).

28 Reckinger & Schneider (2020; 2019).

29 Reckinger (2018).

Above all, a resourceful territorial food system needs to be tackled with its contradictions and complex interrelations, including both the actors from the supply circuit that feed it, and the ones from the broader food system that influence it. It also needs to be tackled with its governance structures – representative and dialogic ones – that co-create ethics in food democracy structures, in order to achieve food sovereignty. Only a holistic focus on food systems and their sovereignty struggles will lead to truly sustainable transitions-for-communities, to curb the effects of climate change.

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