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Content

THE IMPORTANCE OF THE LOCAL ECONOMY AND FACTORS FOR THE DEVELOPMENT OF LOCAL FOOD SYSTEMS

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Abstract: The aim of this article is to provide theoretical information on the importance of local economy and factors that influence the development of local food systems, to describe current trends towards decentralization of food production and to bring best practices in supporting local food production. Local food production is represented by local farmers, small and medium-sized enterprises that produce local food using local natural, financial, and human resources. The development of local entrepreneurship provides benefits not only for local people but also for cities, regions, and the state. Supporting local entrepreneurship is important for food self-sufficiency and resilience in an area, especially to ensure a functional food chain for its inhabitants. In the past decade, the preference for local food among consumers has increased rapidly, mainly due to the quality and safety of good local food, the freshness, and the immediate availability of the local production. Sustainability, in the form of reducing negative environmental impacts, also plays a key role in supporting the development of local production. The high importance of self-sufficiency in the food supply chains has appeared during the COVID-19 pandemic and continues in the energy crisis during the autumn / winter of 2022. Resilient and sustainable local food systems can ensure relevant food security for the states and long-term occupation for the inhabitants that work in local production/or local food systems. Used methodology is a narrative review, that is summarizing the functions and importance of the actors of the local food system and its development. The review is supported by the qualitative research using method of the structured expert interviews. The objective of the qualitative research was to identify motivations and barriers to local entrepreneurship and to identify key areas of support. The findings suggest that appropriate legislative support to create local food systems, reduce administrative burdens and educate consumers could bring a number of benefits to the region, such as social, economic and environmental benefits, as well as consumer benefits in the form of fresh and quality locally produced food.

Key words: Local Economy, Local Food System, Decentralization, Small and Medium-sized Enterprise, Sustainable Food Procurement

Jel Clasification: O10, P49, Q01, Q10, Q50

1 INTRODUCTION

The global situation around the world is changing due to many outer and inner factors. There is a limitation of natural resources, increasing prices of the energies simultaneously with the uncertainty of the future economic development of particular economies. Today's industrial agricultural food production is damaging the environment worldwide through soil erosion, high water consumption, eutrophication, species loss, biocides, and greenhouse gases.

Local food production has become the preferred form of food production in recent years, especially in small-scale agricultural production: eggs, meat, dairy products, vegetables, and fruit, which consumers buy directly from farmers. Its importance has increased during the COVID-19 pandemic due to restriction of the transport of goods and the limitation of cross-border trade, which has highlighted the interdependence of the different economies and future threats, especially in terms of national food self-sufficiency.

In terms of sustainable food production, the United Nations organization has highlighted the Sustainable Development Goal (SDG): Zero Hunger, which also aims to end hunger, achieve food security, and improve nutrition by 2030. In particular, the Sustainable Food Production Goal focuses on reducing dependence on food transport and diversifying food production. Globally, 815 million people are hungry or malnourished, and the vast majority of them live in developing countries, where almost 13% of the population is undernourished. As the world population is expected to increase to 9.6 billion by 2050, the demand for food will grow exponentially. At the same time, more than a third of all food produced for human consumption in the world is lost or wasted (Tomic, 2018).

The demand for a sustainable food system, which is aligned with the resources available, and the needs of the planet, is anchored in the Green Deal agreement. The strategy aims to make the food system sustainable to meet the needs of Europeans for healthy, equitable, and environmentally friendly food. ”The transition to sustainable food systems requires a collective approach involving public authorities at all levels of governance (including cities, rural and coastal communities), actors from the private sector across the food value chain, nongovernmental organizations, social partners, academics and citizens” (European Commision, 2020).

Apparently, the resilience of the local food system has started to be on the agenda of public authorities at the European and national level due to the COVID-19 pandemic during 2019-2022. Countries all over the world have had experience with the risk of global supply chains in

the many industries - health care, food, medical devices, etc. Based on the unpredictable situations (by the economic term “black swan”), many countries have started to reevaluate dependence on foreign sources, mainly for strategic industries. The importance of self-sufficiency in the energy and food industry has recently started to be on the agenda.

According to the study of food self-sufficiency assessment of the cities Bristol and Vienna, local food production should be supported by local policies. The authors declare that the resilience of food systems could be ensured in diverse regional food production by applying sustainable managements and by educating consumers to change their food habits and preference of local/regional food (Vicente-Vicente et al., 2021).

During the pandemic period, the importance and role of the agro-food industry has increased. Food security and food supply chain must be forced by governments and local authorities comparable to or even more than other endangered sectors, eg, air travel, automobile, construction or tourism industries. The expectations on the farmers, food suppliers (transporters, processing factory or food outlet workers) have risen despite lockdowns and working/mobility restrictions (Béné, 2020).

For all these reasons, the importance of local production for individual countries and their regions increased during the pandemic. Overall, the importance and position of relevance of the entire agri-food sector was highlighted, while also revealing soil and water issues that are being acutely addressed (drought and flooding, over-spraying with chemicals, soil fertility, so-called land reclamation). These and other problems of integrated global agriculture can be addressed by a decentralised approach to land management by individual owners/farmers. A functional system of small farmers can be seen in individual EU Member States, especially in Austria and Italy, where there is a long tradition of regional production.

The aim of the article is to clarify the meaning of local economy, to describe the terminology related to local food production, to provide a definition of local food systems and identify factors for their development, to give examples of best practice from the city of Vienna, which has introduced sustainable public procurement to purchase local/regional food.

2 METHODOLOGY

This article is designed as a narrative review of the literature on topics related to the decentralization of food systems, focusing on the current trend toward short supply chains, the functions and actors of the local food system and possible ways to support them.

A literature review is an objective, in-depth summary, and critical analysis of relevant available research and research literature on the topic under investigation (Cronin et al., 2008; Hart, 1999). It aims to keep the reader up-to-date with the literature on the topic and to form the basis for a further objective, such as a rationale for future research in the field. A good literature review gathers information on a topic from many sources and minimizes the personal opinions of the author.

A literature review is a useful start to the research process and can help refine the research question by identifying discrepancies in the compilation of all findings and observations. The purpose of a literature review is to inspire research innovations and ideas, while gathering knowledge allows for a deeper understanding of the topic under investigation (Cronin et al., 2008).

According the author Paré (Paré et al., 2015), literature review and a broader description of the topic are needed to identify and synthesize how the topic has evolved over time, what has been written about the topic/themes, to determine the scope, patterns, and current trends that occur, to gather empirical findings on the research question, to develop new frameworks and theories, and to describe existing solutions from practice. Best-practice examples can accelerate the process of implementing solutions in other territories, highlighting potential barriers and benefits of local production of the region/locality.

The semi-systematic/or narrative review approach is chosen because it summarises research that has been designed differently and investigated by different groups of researchers within different disciplines, which prevents a full systematic review process. A narrative review attempts to provide a synthesize to a given topic based on research, trends that take place over time (Snyder, 2019).

The literature review clarifies terminology related to the topic of the paper and is also complemented by structured expert interviews with two experts in the field of local business support. The expert interview is an exploratory and informative research method that aims to uncover knowledge and in-depth information about a given topic. The respondent is considered as a source of information about the facts (Lamnek, 2005; Monke, 2021). The expert interview is classified as a variant of the qualitative method of individual inquiry. Expert interviewing uses open-ended or partially evaluated questioning of experts in a given field or topic (Bortz & Döring, 2006; Monke, 2021).

The questions for the expert interview were defined as follows:

1. What is your professional activity?
2. How long have you been in your profession?
3. What are the advantages of local entrepreneurship?
4. What are the disadvantages of local entrepreneurship?
5. In your opinion, what problems do local entrepreneurs commonly face?
6. Do you agree with the bellow-mentioned statements regarding local entrepreneurship?
    6.1. Local entrepreneurship promotes the sustainability of the food system.
    6.2. Local entrepreneurship promotes regional self-sufficiency.
    6.3. Local entrepreneurship promotes regional resilience.
    6.4. Local entrepreneurship supports local community development.
    6.5. Local enterprise development is a prerequisite for national food security.
7. Do you agree that the current legislation supports local entrepreneurship activities and development?
8. Which legislative norms are useful for local entrepreneurs?
    8.1 Which legislative norms, on the contrary, make it difficult for local producers to do business?
9. In your opinion, what should be the role of the state in supporting local entrepreneurship?
    9.1 What should be the role of municipalities?
10. Are you directly affected by the EU support for local entrepreneurship?
    10.1 If yes, what kind of the EU support?
11. Are you aware of new strategies in the implementation of the EU Green Deal (e.g. "Farm to fork"...)?
12. Do you think that local entrepreneurship has a perspective for the future?
13. Has the situation in local business changed after the COVID-19 pandemic?
    13.1 If yes, how has the situation of local entrepreneurs changed after the COVID-19 pandemic?
14. In your opinion, is consumer education on buying local food sufficient?
15. How do you perceive the development of local business in your region?
16. What would help local business development in your region?
17. Is there anything else you would like to tell us about local business?

For the narrative review part, the main sources of information were electronic databases such as Science Direct, Web of Science, and Google Scholar. Among others, book publications,

research from various institutions, and e-mail and telephone communication (e.g., with representatives of the Community Supported Agriculture and specialist in the area of the local business).

3 LITERATURE REVIEW

3.1.Local Economy

In 1998, the authors Douthwaite and Diefenbacher published an important book "Beyond Globalisation - A Handbook of Local Economy" (Douthwaite & Diefenbacher, 1998), which highlighted the negative externalities of intensive agricultural production. The harmful effects threatened public health and the environment. In the spirit of local economic cycles, the authors pointed out two reasons why it was important to achieve as much independence as possible. The first reason is that local production from which we know where it comes from reduces the risk of low-quality food. Consumer food choices are influenced by the range of food available in retail stores and the quality of food offered in the store. The second reason is that the more dependent a region is on imports from outside, the more vulnerable it is. It is much less able to withstand global pressures, which will ultimately be reflected in food availability, quality, and prices. We see this not only in the poorest countries, but also in the most developed countries, such as the EU (Douthwaite & Diefenbacher, 1998; Valeška, 2016).

A few years later, the concept of economic localisation was revised by the British author Colin Hines. According to Hines, a local economy is characterised by "exploiting local resources, employing local people, and exploiting primarily local markets. A local business is defined by space, it can be a municipality, a region, a country, or several countries, depending on the goods or services involved". The development of local entrepreneurship begins with the arrival of the first settler societies and the focus of people on individual and family farming, crafts, and overproduction of products. In the case of agricultural products, the local circle will be much smaller than in the case of aircraft production. In general, local entrepreneurship is aimed at supporting the local economy and its development (Hines, 2000).

The local economy consists of three objects: *economy* (local farmers, local producers, traders, community-supported agriculture, regular and seasonal local markets), *the environment*, and *the community* (household) which are interconnected and interdependent (Figure 1). The local economy is characterised by the use of local resources (natural, capital, human) from the locality with a view to their sustainability and renewal. In addition to making

a profit, the local enterprise also takes into account social, cultural, and natural aspects in its activities. It is no longer just about maximising profit but, above all, about externalities: a healthy environment and satisfied customers and employees. Local businesses already often use recycled, reusable resources in accordance with the principles of the circular economy. The benefits of the local economy lie in community building, a personal approach (the basis of trust between market participants and employees), altruism, sustainability, and long-term entrepreneurship. It also offers the possibility of lifelong employment, thus creating some social security for entrepreneurs and their employees (reducing the risk of unemployment).

Figure 1: The connection between the environment, the economy and the community in the local economy

Source: own processed

There is a simple indicator called the “local multiplier” to measure the financial impact of the local economy. It allows a local authority, business, company, or non-profit organization to calculate the role they play in the local economy. On the basis of this calculation, it is possible to measure how much of the spending stays in the local economy and how much leaves it irretrievably. Based on the results, different actors can adjust their activities to make them more beneficial to the place and region where they live. The local multiplier tracks the circulation of money in a given place or region. The more times money "turns over," the more wealth it brings to all its residents. A resident's spending is someone else's income, their spending is, in turn, someone else's income, and so on. It is difficult to study the flow of money beyond the three "turns" - hence the local multiplier is abbreviated LM3. The idea of a multiplier was introduced

in the 1920s by the famous English economist John Maynard Keynes. Originally, the multiplier was used to study the national economy, e.g., the effect of government spending. The New Economics Foundation (NEF) in London adapted the multiplier so that it could be used to track the role of a small organization, business or community in the local economy. LM3 does not offer a precise value, but rather information about the money cycle, and was developed by the Trust for Economics and Society (Sacks, 2002).

3.2. Type of Enterprises and their Role and Opportunities in Local Economies

Within the most often forms of the small and medium-sized enterprises (SMEs) in local economies are local producers and traders, local farmers, that could do enterprise in a form of family business. The importance of local economies to support and create SMEs has been explored by the OECD. The cases of businesses in Italy and Spain show that local economies contribute to creating more entrepreneurial local economies that offer better job creation and employment opportunities, higher economic growth and adaptability to shocks and innovation, while meeting social needs (OECD, 2011). In the case of Italy, for example, the establishment of SMEs in local economies has been shown to have social benefits, as it compensates for the ageing of the Italian population and at the same time exploits the entrepreneurial potential of minorities and migrants. They also stimulate the creation of new value-added enterprises that further diversify the local economy (Potter et al., 2010).

Globally, SMEs play an important and predominant role in most economies, especially in developing countries. SMEs contribute significantly to job creation and global economic development. They account for around 90% of enterprises and more than 50% of employment worldwide. The World Trade Organization estimates that 600 million jobs will be needed by 2030 to absorb the growing global workforce, making SME development a top priority for many governments around the world. Access to business finance and legal administration have been identified as major barriers to SME growth (World Bank, 2022).

In the European Union, small and medium-sized enterprises are the driving force of the economy, a source of jobs and economic growth, and they also ensure social stability. SMEs have a huge innovation potential and business impact and are therefore essential to increase competitiveness and support high value-added enterprises in line with the high pressure for digitisation and automation of business processes in the European Union. In 2019, the vast majority (98.9%) of enterprises in the EU that are part of the nonfinancial corporate economy

were micro or small enterprises employing fewer than 50 people. Their economic weight was lower in terms of their contribution to employment or value added: micro and small enterprises employed just under half (48.4%) of the workforce of the EU's non-financial corporate economy, while contributing just over one-third (35.3%) of value added (Hossain 2013).

The COVID-19 pandemic has triggered and enforced a series of changes with unprecedented impact that SMEs need to respond to and adapt to their business. SMEs and start-ups should look for new ways of thinking and doing business using scientific knowledge, external technologies, innovative collaboration through the open data ecosystem and creative collaboration between all stakeholders (Saguy, 2022). SMEs had to start dealing with the unpredictable situation of the COVID-19 pandemic. Simms and authors (Simms et al., 2022) all have done in-depth research on SMEs operating in the food industry. One of the responses of the management was to understand the situation through "doing", such as effective experimentation through the process of learning by trial and error, increasing organizational flexibility and grafting the necessary resources (Simms et al., 2022).

The importance of SMEs has also increased in the Czech Republic. The strategic document of the Ministry of Industry and Trade entitled "Strategy for Supporting Small and Medium-Sized Enterprises in the Czech Republic for the Period 2021-2027" reflects areas related to capacity building to harness the potential of all types of SMEs, commitment to the transition to a sustainable economy, and digital transformation. Apparently, there is a need to minimise regulatory burdens, thus creating an attractive business environment for the creation, growth, and rapid development of SMEs, or a need to improve SMEs' access to finance and markets (Ministry of Industry and Trade of the Czech Republic, 2021).

Support for research and development is an important part of SMEs' innovation, based primarily on the need to maintain or increase competitiveness. A flexible organizational structure is important to improve innovation potential so that changes can be reacted to in a timely manner and appropriate measures taken. At the current time, developments in the field of information technology, the development of biotechnology and nontraditional technologies (e.g., artificial intelligence) are the main areas of concern (Škodova Parmová & Bednářová, 2020).

Small farmers who produce local and/or regional products are often in business with family members and therefore have the legal form of **family businesses.** Globally, family-managed farms represent almost 90% of the world's agriculture and contribute to rural development, environmental protection, and generational renewal. Despite their size, family farms manage

not only to provide local production, but also to contribute to the national and regional economy. Their advantages also include a close relationship with the countryside and nature. At the same time, family farms have a positive impact on the development of rural life, which is becoming increasingly depopulated as the population moves to larger towns. In the Czech Republic, the majority registered farmers farm on family farms, but only about 40 percent of the land is owned by them. The rest is in the hands of agrarian big business as a relic of socialist collectivisation and unfinished democratic transformation. The functioning of smaller farms in our country does not yet have legislative support, which is rather standard in neighbouring countries, but the current government has declared legislative support (Hosnedlová, 2022).

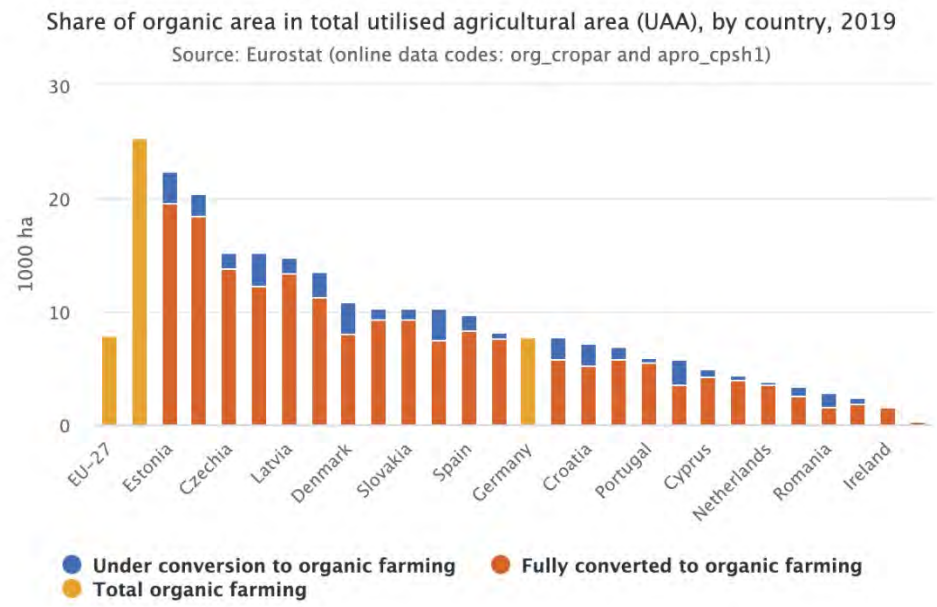
In the Czech Republic, family farms and private farming are represented by the The Association of Private Farming of the Czech Republic" (APF CR), which has more than 7,500 members across the country.APF CR summarizes and updates the catalogue of family farms across the Czech Republic on the web page https://www.asz.cz/prodej-ze-dvora/, and supports the family farms in the economic, social, and political area. Promoting family farming is the important part of the APF CR, every year is held the contest "Farma roku" (The farm of the Year) and also there is program for supporting diversity of the landscape called "Pestrá Krajina" (Association of Private Farming of the CR, n.d.).

Support for all kind of family businesses is at a supranational level through the European Commission, which recognises their importance and, therefore, identifies the main challenges facing family businesses and promotes an environment favourable to family businesses. From the EU perspective, family businesses are an important part of the economy, accounting for 85% of all private businesses in the EU, and represent a kind of stabiliser for a healthy economy. The main challenges identified by the Commission are the importance of preparing for business transfers, access to finance, tax issues, governance of family businesses, balancing family, ownership, gender, and business considerations, attracting and retaining a skilled workforce, and management training specific to family businesses. The EU encourages national governments to adopt tax and business laws that are business-friendly, and supports business education by sharing best practices between EU countries.

Within agricultural production, there is a strong emphasis on **organic farming**, which plays a key role in building and developing a sustainable food system in the EU, thanks to the advantage of producing high quality food with low environmental impact. A sustainable food system is at the heart of the European Green Deal. As part of the Green Deal Farm to Fork strategy, the European Commission has set a target of achieving at least 25% of EU agricultural

land in organic farming by 2030 and a significant increase in organic agriculture (Figure 2 shows the share of organic area in 2019). In addition, the European Commission plans to use the budget of the Organic Action Plan to invest in research and innovation in agriculture, forestry and rural areas. This is why the Organic Action Plan was created, which aims to stimulate consumer demand for and confidence in organic food, the process of transformation and building the organic food value chain, and best practices from organic farming farming (European Commision, n.d.).

Figure 2: Share of the organic area in the total utilised agricultural area (UAA), by European countries (2019).



Source: Organic farming action plan (European Commision, n.d.).

The Czech Republic is one of the 20 countries in the world with the highest share of organically managed land (8th in Europe) and one of the 15 countries with the highest share of organically managed land in total agricultural land (6th in Europe, 4th in the EU after Austria, Estonia and Sweden, just ahead of Italy and Latvia). Although the area under organic farming has increased again in the Czech Republic since 2016, the increase is the lowest among in the EU. The stagnation of the development of organic farming in the Czech Republic is confirmed by one of the lowest shares of land in the OF conversion period (less than 10%) (Ministry of the Agriculture of the Czech Republic, 2022).

Based on Organic Farming Yearbook 2020, there was registered 4655 organic farms as of December 2020 in the Czech Republic. There was farmed total area of 543,252 ha, which represents a 15.3% share of the total LPIS land area. LPIS is a geographic information system (GIS) that consists primarily of records of agricultural land use, that was defined by Act No. 252/1997 Coll. on Agriculture at the turn of 2003 and 2004. The system was launched on 21 March 2004 (Ministry of the Agriculture of the Czech Republic, 2022).

The year-on-year comparison (2020 vs 2019, Table 1) shows a stagnation in the development of the organic farming in 2020. The total area in the organic farming increased by only 0.4% (2 259 ha), the number of organic farms even slightly decreased by 0.5%. The slowdown in the development of organic agriculture is related to the expiration of 5-year obligations (2015 - 2019) and the suspension of receiving applications for inclusion in the field of organic farming (Ministry of the Agriculture of the Czech Republic, 2022).

Table 1: Development in agricultural acreage and number of farms under organic farming (1990-2020)

Year	Number of organic farms	Acreage of farmland under OF (ha)	Percentage of total agricultural land (%)	Year-on-year change in number of organic farms (%)	YOY change in total acreage of organic farmland (%)
1990	3	480	-	-	-
1995	181	14,982	0.35	-3.2	-5.3
2000	563	165,699	3.86	19.0	49.6
2005	829	254,982	5.98	-0.8	-3.2
2010	3,517	448,202	10.55	30.8	12.5
2015	4,115	494,661	11.74	5.9	0.1
2016	4,243	506,070	12.03	3.1	2.3
2017	4,399	520,032	12.37	3.7	2.8
2018	4,606	538,223	12.80	4.7	3.5
2019*	4,690	540,993	15.22	1.8	n.a.
2020	4,665	543,252	15.28	-0.5	0.4

Source: (Ministry of the Agriculture of the Czech Republic, 2022)

3.3. Local Food Systems

3.3.1. Local food production

In the last two decades, consumers have started to look more intensively for quality, healthy, safe, and tasty food that is environmentally friendly and supports the local community.

"Local" is the smallest unit used to explain the origin of food. The term local is linked not only to origin, but also to the fact that the relationship between the consumer and the food

producer is very often direct or mediated. The local origin of food is often defined by distance, but this can vary in more/less densely populated areas (Peters (Ed.), 2012).

Martinez states that while there is no consensus on a definition regarding the geographic distance between production and consumption, there is a recognized definition of "local" based on marketing measures such as farmers selling directly to consumers (Martinez, 2010).

According to the American author Camerlynck, the definition of “local food” takes into account three dimensions:

a) food miles: local food can be defined by the distance between the place where the food was grown and the place where it is sold or consumed. According to the definition adopted by the US Congress in the Food, Conservation and Energy Act of 2008, the total distance a product can be transported and still be considered a local or regional food is less than 400 miles in US from its place of the origin (approximately 644 km),
b) direct-to-consumer sales: direct purchase from farmers, at farmers' markets, or could include farm-to-school programs,
c) the organic dimension: a specific region, climate, soil type, watershed system, or species could be considered for organic production of local food (Camerlynck, 2016).

There is no single definition of local food in the 27 EU member states. The appropriate meaning is linked to the production, processing, marketing, and distribution by local producers. The meaning of “local food” depends on the territory and context in which it is used (Peters (Ed.), 2012).

The growing demand for local food creates new opportunities for farmers, especially medium-sized farmers, who produce the necessary amounts of local food to meet the needs of local consumers. Farmers serve local communities and create local food systems, which are one of the few remaining options for them because they do not have the financial resources to compete in the large market (Hendrickson, 2022).

Local food production has the advantage of stimulating local small-scale production and creating a network of local farmers or SMEs, which has positive externalities such as reducing the ecological footprint, developing social capital and creating solidarity, trust and sustainable partnerships between farmers and consumers. Preferring local seasonal food could be an important first step towards sustainable food production. The greatest opportunity is in urban areas where food production is limited and should therefore come from a variety of sources (Tomic, 2018).

3.3.2. Local food system

„A food system is a complex process that includes the production of agricultural commodities, the buying and selling of food, and the processing of food. The processing of these goods, the distribution and marketing of value-added products, the preparation and consumption for the end user and the disposal of waste.“ Involving every consumer as a stakeholder, it operates at many geographic scales and affects and is affected by the economic, social and environmental health of all communities (Jensen, 2010; Pirog et al., 2001).

Local food systems provide local produce from local farmers or small businesses. LFS offers many positives for farmers, consumers, and communities and can help build healthy, resilient and equitable local communities. A definition of a local food system is "a collaborative network that integrates sustainable production, processing, distribution, consumption, and waste management to improve the environmental, economic and social health of an area" (Keniyo, 2022).

Local food systems (LFSs) have emerged based on the demand of local consumers and communities. However, there is still no fixed definition of “local food systems”, since researchers use different meanings for bottom-up networks - consumer and community-based (Community Wealth Organization, 2012).

Already in the early 1990s, several authors described the possibilities of developing alternative local food systems. The concept of the "foodshed” was developed by Getz (G. Feenstra, 1997; Getz, 1991). According to the researcher (Getz, 1991), a food area is a region that is defined by the supply structure. In this case, the focus is not only on the food supply in the area, but also includes the social and cultural elements of the community and their interconnection. Defining and reconciling all of these elements in a given location is essential to understanding the unique aspects of a community's food system and building a relationship between community members and the country's food system (Kloppenburg et al., 1996).

Defining by sociologist Thomas Lyson, bottom-up transformation that uses knowledge, information, and networks directly from communities and avoids institutions has been termed as "civic agriculture”. Civic farming is manifested through collaboration between local food producers, farmers' markets, consumers, ecocafés and alternative food stores (Tomic, 2018). The concept of a “civic agriculture”, as an alternative to conventional system, was described for the first time in the book “Civic Agriculture: Reconnecting Farm, Food, and Community” published by Lyson (Lyson, 2004). Civic agriculture describes the close relationship and links between local farmers, communities, and people that are closely linked to the social and

economic development of communities. "Civic agriculture refers to the establishment and growth of community farming and food activities that not only meet consumer demand for fresh, safe and locally produced food, but also create jobs, support businesses, and strengthen community identity. Civic agriculture links production and consumption activities within communities and offers consumers alternatives to commodities produced, processed, and sold by large agribusiness firms" (Lyson, 2004).

Another term for LFSs often used in many research papers is alternative food networks (AFNs) (Oñederra-Aramendi et al., 2023). AFNs are marked by "creating new alliances between producers and consumers and creating experimental spaces for the development of new food provision practices that are more in line with their values, norms, needs and desires, that are based on the reproduction and re-evaluation of local resources and that result in food that is different and of higher quality"(Roep & Wiskerke, 2012; Spilková & Perlín, 2013). AFNs include distribution channels such as farmers' markets (FM), farmers' shops, community supported agriculture, fair trade and subsistence farming, which emphasise many aspects of a sustainable and equitable food system, including local production, organic farming, social justice and citizen activism, animal welfare and rejection of genetically modified organisms (Syrovátková, 2016).

Currently, the definition of alternative food networks is not entirely coherent due to the increasing differentiation within non-traditional food markets. Local producers are looking for new distribution channels to ensure sales of their products and this is causing the boundaries between traditional and alternative distribution channels to become increasingly blurred. For example, some types of alternative agri-food products - such as organic or non-organic foods - are now available in mainstream retail outlets, while the attractiveness of the 'alternative' label to consumers has led to the proliferation of initiatives with unreliable characteristics. The basic idea is that consumption can drive change (from the bottom up), so people who eat locally and participate in supporting AFN producers can change the food market and the environment. AFNs can take many different forms; it can be about supporting interconnected, self-sustaining rural communities or more often it is about connecting rural producers with urban consumers (Barbera & Dagnes, 2016). AFN differs from conventional food systems in one main feature, namely the short supply chain. The main feature of AFN is proximity - spatial, economic and social. Thus, it is not only about geographical distance, but also about how physically close consumers and producers are, and the high degree of attention is paid to economic support for

local communities and the development of equitable and trusting relationships (Barbera & Dagnes, 2016; Kebir & Torre, 2013).

Feenstra (1997), an expert in sustainable agriculture research, defines local food system as tailored to local communities, adapting local food production and markets based on local environmental and public health priorities. The local food systems are rooted in specific places and aim to be economically viable for farmers and consumers, use environmentally friendly production and distribution practices, and foster social justice and democracy for all community members. The author discusses how LFS helps to create a harmonious relationship between the city and the countryside, connecting people from urban neighbourhoods with people from farms to create a functional regional community. This community provides enough food for people people, a sustainable agricultural system and security, a clean environment and a satisfying social and and cultural interactions related to food. Functional LFSs are characterized by a broad food economy vision that addresses both urban and rural concerns (G. Feenstra, 1997).

One of the main indicators of whether a food system is local is the use of a direct marketing tool; other indicators that measure the increasing prevalence of local food choices include the number of farm-to-school projects or local food cooperatives. LFSs are characterised by the participation of small farmers, heterogeneous products and often short supply chains (not necessarily) in which farmers also perform marketing functions, including storage, packaging, transport, distribution and advertising. Often these are small farms located in or near urban areas that supply their food (Martinez, 2010).

Several authors have identified several economic benefits that local farmers derive from local food systems . LFSs have the advantage of offering more opportunities for small and diversified producers. They are suitable for farmers who produce more diverse and differentiated products and value-added or processed on-farm, while allowing farmers more choice in the production and processing methods they use (Jensen, 2010; Martinez, 2010). “Farmers who learn entrepreneurial skills through regular participation in local and regional markets can also contribute to long-term rural development” (G. W. Feenstra et al., 2003; Jensen, 2010). Improving direct selling skills and acquiring marketing skills (pricing, communication campaigns) can foster an "atmosphere of entrepreneurship and risk-taking" in rural communities (Gale, 1997; Jensen, 2010).

The Enthoven research study classifies the concept of a local food system into three areas: “geographical proximity (physical location, distance between food production and consumption), relational proximity (close relationship between actors within the food system)

and value proximity (place of origin, traceability, freshness, quality)" (Enthoven & Van den Broeck, 2021; Strid Eriksson et al., 2005). The authors explore that: "supply chains in LFSs are organized in different ways, with different types of sales arrangements between producers and buyers, different forms of interaction between consumers and producers, and different levels of consumer involvement" (Figure 3). According to authors, it is essential to distinguish between the terms local food system (LFS) and short food supply chain (SFSC), which are often incorrectly used interchangeably, as SFSCs may not be local, while LFSs may not include SFSCs. The growing trend in SFSCs can be captured in the form of direct-to-consumer (DTC) sales. Within DTC channels, this can be a one-time sale, such as at a farmers' market or farm store, or recurring sales in the form of food boxes or take-out arrangements within a community supported agriculture (CSA). According the research study, local food systems in which local food is produced, processed, and sold within a defined geographical area of approximately 20 to 100 km (Enthoven & Van den Broeck, 2021; Kneafsey et al., 2013).

Figure 3: Local food distribution channels

Local food distribution channels.

	Producer-buyer selling arrangement	Producer-consumer interaction	Consumer commitment
Direct-to-consumer SFSC			
Farmers' markets	Spot market; relational contract	Face-to-face	Low
On farm sales (pick-your-own, shop)	Spot market; relational contract	Face-to-face	Low
Food boxes (home delivery, pick-up point)	Relational contract; formal contract	Face-to-face; proximate	Low to high[a]
Community supported agriculture (CSA)	Formal contract	Face-to-face; proximate	High
Direct-to-retail SFSC			
Consumer-owned retail food cooperative	Relational contract; formal contract	Proximate	Low to high[b]
Local independent retailers	Relational contract; formal contract	Proximate	Low
Restaurants, caterers	Relational contract; formal contract	Proximate	Low
Institutions (schools, hospitals, prisons)	Formal contract	Proximate	Low
Conventional supply chains			
Supermarkets, large food retailers	Relational contract; formal contract	Proximate; spatially-extended	Low

[a] Some food box schemes require consumers to subscribe, others do not.
[b] Some consumer-owned retail cooperatives require consumers to subscribe or become a member of the cooperative, others do not.

Source: Local food systems: Reviewing two decades of research (Enthoven & Van den Broeck, 2021)

As defined by the Local Food Network of Northeast Indiana "the local food system refers to all activities related to the production, processing, distribution, access to food, consumption, and use of food waste in a region" (Figure 4) (Northeast Indiana Local Food Network, n.d.).

Figure 4: Circulation of the local food system

Source: Definition of local food system. Local food network (Northeast Indiana Local Food Network., n.d.)

The view of local food markets and systems that have developed in the EU varies. According to the EU Regulation 807/2014, the definition of local markets is specified in the legislation of each country (e.g., defined in the Rural Development Programme of the member state) (European Union, 2016).

In the academic literature, LFS are often referred to as "cycles of cooperation" where interpersonal skills (personal dialogue), gentlemanly agreement, trust and commitment to a full contract play a role. Thus, the community of members acts as a generator of LFS and oversees the adherence to promised collaborative practices and mutual commitments (Kang et al., 2022). In the case of cooperation between members of the LFS, there is a high interdependence between actors, with a wide trust effect, which manifests itself in compliance with the formulated requirements for suppliers, e.g. sustainable practices (Kang et al., 2022; K. Smith et al., 2019).

Top-down political support from legislators is important to create and maintain the right conditions for alternative and local actors in the LFS sector, as evidenced by the support for local producers in France and Italy. In France and Italy, alternative and local food systems also have a long tradition and tend to employ a higher proportion of family and local workers, which proved to be an important advantage during the COVID-19 pandemic when travel restrictions were introduced. In contrast, countries with predominantly non-local employment, such as

Austria and the UK, have had to develop initiatives to link the local unemployed, which have proved unsuccessful (Nemes et al., 2021).

3.3.3. Practical Examples of Local Food Systems in the Czech Republic

Local food systems are represented in the Czech Republic with different kinds of local food distribution channels, which enables to supply consumers with the freshest locally produced food. Based on the author's desk research, following channels are available:

A. Farm shops
B. Farmer's market
C. Community Supported Agriculture (CSA)
D. Farmer's boxes
E. Online marketplace
F. Mobile stalls (seasonal food e.g. apples, pears, cider)

A. Farm shops

In the Czech Republic, the boom of farmers' markets and farm shops began in 2010 in the biggest cities and within two years it spread to the whole country (Syrovátková, 2016). A combination of different kind of factors contributed to their establishnment. The incentive for their creation came from farmers who wanted to serve urban customers through a new distribution channel, as well as customer interest in being able to buy local, high quality and often organically grown local food (Syrovátková, 2016; Zagata, 2012). Farm shops are often seen as a means of farm diversification and could make a significant contribution to farm incomes, especially those in less favoured areas (McNally, 2001; Syrovátková, 2016).

A major success factor of farmers' shops and farmers' markets is the local origin of the produce and the quality of the food. Another advantage of the farm shops and farmer's market is the personal contact between buyer and seller that replaces the coldness and anonymity of conventional sales channels (Spilková & Perlín, 2013). After the boom of supermarkets since the 1990s with global foods and no personal contact, Czech consumers appreciated the local offer of goods in farm shops and the friendly personal contact they lacked. The development of farm shops has been driven by the not always favourable reputation of conventional food chains for the quality and freshness of their goods. Also, price competition between chains has caused retailers to sell lower quality food (e.g. meat, dairy products, etc.) (Spilková, 2016).

In the Czech Republic, farm shops predominantly sell products from farmers and nearby local/regional producers, often operating as a national network or only available in a specific region or locality. On a national level, local independent retailers are operating as a franshise. Network of retailers are available in the bigger cities across the country, for example - Náš Grunt, Sklizeno, Naše Farma. However, many of the local retailers are operating only in the specific location/city, for example, at the City of České Budějovice are founded “Náš Krajíc” and “U Dobráka”. Both retailers are selling the local/regional sortiment product portofolio (bakery, meat, dairy products, fruit and vegetables, sweets, honey, etc.).

The first network of farm retailers in the Czech Republic was built as a comprehensive concept called "Náš Grunt" (Figure 5). The first store was opened in 2010 in Prague, Vinohrady, soon followed by regional stores in other cities of the country. The main idea behind the establishment of the purely Czech company was to put quality home-grown food on the table of households, and to support local small and medium-sized farmers and producers (Náš Grunt, s.r.o., n.d.).

Figure 5: The farm shop “Náš Grunt”

Source: The profile of the company Náš Grunt (Náš Grunt, s.r.o., n.d.)

B. Farmer’s market

The main role of farmers' markets is that they enable the direct sale of agricultural products, value-added goods and handicrafts. They increase business opportunities for small farmers and entrepreneurs, family-owned businesses, and can encourage the creation of new businesses (G. Feenstra & Lewis, 1999). Farmers' markets benefit town residents who gain access to fresh,

local, and other agricultural products directly from local residents and create a connection for many to the agricultural products sold at the market, the regional rural landscape, and the economy. Social context is also an important benefit, linking producers and consumers and giving them a 'face' within a wider economy that is increasingly characterised by indirect and impersonal links (Alcantara, 1999; G. Feenstra & Lewis, 1999; G. W. Feenstra et al., 2003; Gale, 1997).

In 2011, the Ministry of Agriculture created the first Farmers' Code, which defines what farmers' markets are and what their objectives are. Farmers' markets are held on publicly announced dates, usually in the open air. According to the Code, farmers' markets are a form of sale of agricultural and food products to the public, the aim of which is to support small and medium-sized agricultural producers, breeders, growers, processors and food manufacturers; to supply the public with fresh agricultural products and foodstuffs, especially of Czech and regional origin; the creation of a new social space which, in addition to the sale of agricultural products and foodstuffs, will be used to sell food and food products which are agricultural goods, with the aim of bringing people together and bringing the agricultural season closer to urban dwellers, not least by revitalising selected urban areas and improving their atmosphere (Brašeňová, 2013; Ministry of the Agriculture of the Czech Republic, 2011).

The Ministry of Agriculture has supported the strengthening of the position of the farmers' market not only by issuing a Farmer’s code but also by a grant of EUR 400 000 in 2011. The financial injection supported the expansion of farmers' markets not only in Prague, but also in other major Czech cities (Spilková, 2016).

A comprehensive list of all farmer's markets in the country is not available, but the Association of Farmer's Markets has been established to group some of them. The aim of the association is to improve the quality of farmers' markets. The main vision communicate that farmers' markets should be a place where customers buy quality, fresh, original Czech food. Smaller, often familly business farms, breeders, growers and processors are mainly represented at the markets. One of the goal of the association is that farmers' markets should be a pleasant place to meet, having neighborly atmosphere, a time to talk with friends and meet new people with similar interests or similar values (Sedláček, n.d.)

C. Community Supported Agriculture

Community Supported Agriculture (CSA) is an alternative form to the conventional food production and distribution system. CSA has become a popular way for consumers to buy local and seasonal food directly from producers. Direct collaboration between producers and consumers benefits both parties, producers and consumers, and has positive externalities in terms of social and economic development of the community. The system operates on the basis of the consumer purchasing local produce from a particular farm or group of farms on a monthly basis. The consumer usually orders a box of local and seasonal produce, for example, vegetables, fruit, eggs, cheese, meat, etc (Tomic, 2018).

The trend towards local partnerships between communities and producers has been growing over the last ten years. CSA is defined as a direct form of partnership between agricultural producers and consumers. The contract is for seasonal local agricultural products in regular deliveries, usually once a week. The advantage is that the partnership model completely leaves out the third-party distributor of the products (wholesalers or retailers). According to the author, it is "a democratic system run by local people based on the principles of solidarity, economic localisation, and sustainability". The main benefit lies in self-sufficiency in obtaining quality raw materials for farmers and, on the other hand, in achieving a quality supply of local food for consumers (Valeška, 2016). Already authors Douthwaite and Diefenbacher (Douthwaite & Diefenbacher, 1998) appreciate the principle of self-sufficiency (independence from imports), which promotes the creation of added value in a given location. The second principle is high quality production, which promotes consumer health and is a generator of better co-existence and reciprocity between people and communities (Valeška, 2016).

Communities could benefit from local food systems if there exists necessary infrastructure, sufficient agricultural land, and technical expertise for local food producers. According to the author (Lyson, 2004) these new organizational forms have the potential to promote economic development, preserve product diversity and quality, and provide forums where producers can meet and strengthen bonds of local identity and solidarity (Lyson, 2004).

The added value of community purchasing is expressed in terms of the multiplier effect of financial flows in the locality. Another contribution is the increase in local production of very good quality, which promotes consumer health and, from a social point of view, is a source of better coexistence and reciprocity between people and communities (Valeška, 2016).

In the Czech Republic, the CSA model has developed dynamically in recent years in line with the same trend abroad. Clear and comprehensible benefits for both parties prevail, consumers know the origin of their food, and farmers have been able to plan the harvest quantities and minimise the financial and economic risks of their activities. This is also positive for small farmers, who have been able to penetrate the market more easily and eliminate high initial costs. CSA partnerships have been shown to have a positive impact on job creation in agricultural areas that are also closely related to local communities. The CSA model is built on three pillars: food sovereignty, solidarity farming, and environmentally friendly agriculture (*Community Supported Agriculture*, n.d.).

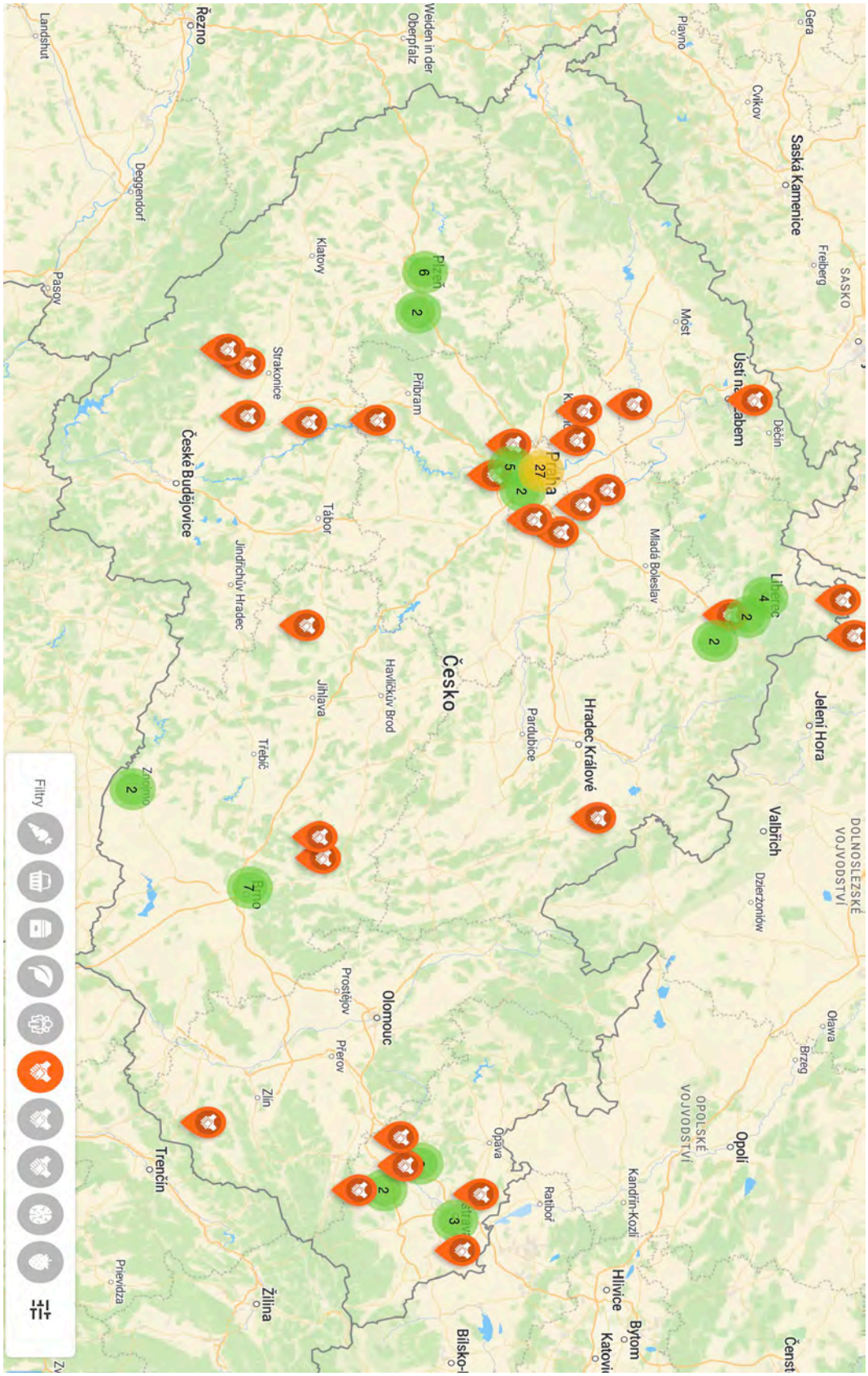
In January 2023, the number of functional CSA was 93 according to Farmer's Directory. Based on Table 2 and Figure 6 below, the highest density of the CSA network is in Prague, followed by the Brno and Moravia region. Twenty-eight CSAs actively operate in the capital city, 10 in Brno to the capital city. The CSA association estimates that these communities support about 5,000 consumers and 300 farmers collaborate with CSA communities across the Czech Republic (Š. Krčílková, personal communication, 2023).

Table 2: List of the CSAs in the Czech Republic (updated: January 2023)

Number	Subject	Number	Subject	Number	Subject	Number	Subject
1	Farma Lukava s.r.o., Jindřichovice p.Š.	31	KPZ Hradčanská, Obec křesťanů	61	KPZ Ekozahrada Raková - odběrné místo Plzeň-Újezd	91	KPZ Naturela
2	KPZ Farma Lukava - Frýdlant	32	KPZ Hybernská	62	KPZ Ekozahrada Raková - odběrné místo Šiftofka	92	KPZ Slunečnice Rožnov
3	KPZ Statek u Macháčků - Zdravínko	33	KPZ Toulcův dvůr	63	KPZ Ekozahrada Raková - Odběrné místo Prokopova	93	ZEMĚ KOMNĚ
4	KPZ Farma Lukava,s.r.o.	34	KPZ Krymská	64	KPZ Ekozahrada Raková - Odběrné místo Tržnice DEPO		
5	KPZ Statek u Macháčků - JO-BIO	35	KPZ Smetanka	65	KPZ Ekozahrada Raková - Odběrné místo Vejprnice		
6	KPZ Statek u Macháčků - Zdravíčko	36	Malostranská KPZ	66	KPZ Dobro-družný statek		
7	KPZ Statek u Macháčků - Optimum wines	37	KPZ Bořislavka	67	KPZ Brno-Sever_Živá farma		
8	KPZ Statek u Macháčků - VEGIT POINT	38	Jíme dobře Říčany	68	KPZ Kohoutovice (Brno-západ)		
9	KPZ Statek u Macháčků - Kavárna Avantýra	39	KPZ Břevnov	69	KPZ - Dobro-družný statek		
10	KPZ Semilsko	40	KPZ Mezi domy	70	KPZ Oriša Farm Tři ocásci		
11	KPZ ZAZEMÍ bezobalový obchod Špetka	41	KPZ Petřiny	71	KPZ Holubí		
12	Špajz - bezobalový obchod a kavárna	42	KomPot	72	KPZ Údolní		
13	KPZ zahrady Černilkovice	43	Hájovna	73	KPZ Atlas		
14	KPZ Zlonín	44	KPZ Řepy	74	KPZ Oriša Farm NOsáček		
15	Komunitní zahrada Pastvina	45	KPZ Akademie léčivé výživy	75	KPZ Oriša Farm La Casa Verde		
16	KPZ Úvaly	46	KPZ Třináctka	76	KPZ Bílovec		
17	KPZ Klecany	47	KPZka Modřany	77	KPZ Oriša Farm Vyškov		
18	Potravinová komunita Praha 8	48	VyVáženo - KPZ vejce a KPZ zelenina	78	KPZ Poruba		
19	KPZ Bohnice	49	Kosí zob	79	Komunitní hospodářství rodiny Šelongových		
20	Komunitní zahrada Kuchyňka	50	KPZ Zbraslav	80	Komunitní zahrada Blahutovice		
21	KPZ Spojovací	51	Prostor s duší	81	KPZ Napole		
22	Komunita Dvora Vyšínek	52	KPZ Pilkovice	82	KPZ Cooltour		
23	KPZ Malešice	53	KPZ Dobřichovice	83	Z-a-kusmeto		
24	KomPot - výdejní místo Domeček	54	Biostatek Valeč	84	KPZ Nový Jičín		
25	KPZ Ekumenické akademie	55	KPZ Ekozahrada Raková - Odběrné místo Rokycany	85	KPZ Kroměříž		
26	KPZ Horoměřice	56	Ekofarma Ctiboř	86	Zelenina a květiny ze Svobodných Hor		
27	KPZ Olga	57	KPZ Ekozahrada Raková - Odběrné místo Raková	87	KPZ Přibor		
28	KPZ Dejvice	58	Komunitní farma Blahoňov	88	KPZ Kopřivnice		
29	Pospolí	59	KPZka Tišnov	89	Pošumavská KPZ		
30	KPZ Žižkov	60	KPZ Oriša Farm Tišnov	90	KPZ Naše místo		

Source: Farmers Directory (Mapotic, 2023)

Figure 6: The map of the CSA in the Czech Republic (updated: January 2023)



Source: Farmers Directory (Mapotic, 2023)

D. Farmer's boxes

Another example of a local food system is the direct network between farmers and consumers through **farmer's boxes.** This type of cooperation is based on the purchase of local and seasonal produce through the regular harvesting of produce (most often weekly) into boxes for consumers. Farmer's boxes are already prepared with a certain number of vegetables and fruits that the consumer subscribes to the producer for the season. The farmer prepares the boxes according to the current seasonal production and the consumer is the recipient and cannot change the composition or quantity. Often, there is a third party in the form of a crate dispenser who arranges the sale of the crates (*Community Supported Agriculture*, n.d.).

In the Czech Republic, there is a network of the farmer's boxes in the capital city, and also in the bigger cities. The are several example of the farmer's boxes: Svět bedýnek - www.svetbedynek.cz, Farmářske bedýnky - www.farmarske-bedynky.cz/, Zelenina domů - https://www.zeleninadomu.cz/farmarske-fresh-bedynky/, Ekofarma Rohoznice - https://www.ekofarmarohoznice.cz/dovoz-bedynek.

The best practise example of the farmer's boxes

Since 2011, the "Family garden Vidov" has been operating in farm boxes business in the České Budějovice district. The main philosophy is an emphasis on local production and the goal of the family garden is to create a community of people who regularly buy fresh vegetables, fruits and other goods from local producers in the form of farm boxes, thus minimizing the environmental burden of global production. Family garden Vidov offers its customers a rich seasonal assortment of farmer's boxes (Figure 7), which contain root vegetables, leafy vegetables, pods, bulbs, fescue vegetables, fruit vegetables, herbs. Fruits include apples, pears, shrubs, strawberries, blueberries, peaches and peaches. Added value of the family garden Vidov is in creating aa network with other suppliers in order to provide its customers with a complete range of the current harvest. These suppliers include, for example: Zemědělský podnik Malše a.s. - Roudné (cabbage, kale); Jiří Hamlík and Stanislav Petrášek - Krtely (cherries, sour cherries, apples, pears, plums); Jana Brožová - Dubné (forest blueberries); Zdeněk Grill - Trusíkovice (apples, peaches, plums, ciders); biozelenina Olešná,etc. (Šedivá, n.d.).

Figure 7: The example of the farm boxes (from the year 2021)

Source: Vidov family garden (Šedivá, n.d.)

E. Online marketplace

The local food system grouped in an online environment is also coming to the fore. One of the most popular in the Czech Republic is **online marketplace** called "Scuk". This online platform connects producers and consumers and facilitates sales directly from farmers through a wide network of distribution points throughout the country. It aims to minimise transport distances and transport times between producer and consumer while avoiding additional distribution costs. The platform was created to provide market access to local farmers and small local producers. In addition, the platform supports the creation of neighbourhood communities through a joint ordering system. As of October 2022, the online platform had 340 local farmers, 600 dispensing points, and 11,740 local products. The platform is committed to a Supplier Quality Code that includes requirements that meet the need for organic, sustainable, local, fair,

and additive-free production (no unnecessary chemicals) that meets animal welfare requirements. In addition, the platform ensures that no additional waste liabilities are incurred and also strives to maintain a minimal ecological footprint (Scuk.cz, 2022).

3.4.Best Practice - Support of Local Food Production

The sustainable approach focuses on integrating human health and the overall health of the ecosystem. Sustainability goals can be achieved by progressively implementing green growth and sustainable consumption strategies, e.g., in the area of public financing through locally oriented public procurement (J. Smith et al., 2016a). An excellent example of best practice to increase food self-sufficiency is **sustainable public procurement** focused on regional food production. The supply of regional products leads to shorter food chains, thus increasing the sustainability and resilience of the food system. Food supply disruptions (as in the case of the COVID-19 pandemic) can also provide an opportunity to transition the food system to sustainable agricultural practices (e.g., organic farming) that will increase the sustainability of food production while reducing negative environmental externalities (Vicente-Vicente et al., 2021). Vienna has introduced sustainability into public procurement through the EcoBuy project, and this project has wide implications for the development of regional local production, the promotion of organic farming, and consumer education in terms of encouraging the consumption of local produce.

3.5.1. Projekt EcoBuy Wien (ÖkoKauf Wien)

In 1998, Vienna implemented a strategic city project on environmentally friendly and sustainable public procurement called EcoBuy Vienna (ÖkoKauf Wien). The main objectives of EcoBuy Wien focused on issues such as biodiversity loss, climate change, water and soil pollution. Vienna decided to orient public spending in favor of organic farming on the basis of analyses of scientific studies that showed that organic farming is a less harmful way of producing food in the agricultural sector in terms of impacts on soil, biodiversity, and climate. A very important pillar of organic farming is the ban on the use of mineral nitrogen fertilisers, synthetic fertiliserss and fertilisers containing nitrogen (Mosor, 2016).

The programme had strong political support and also includes the areas of mobility, energy, and waste management. The bidding procedure was established by the city council's food working group. The working group, made up of experts, drew up a list of quality and environmental criteria to be followed in the procurement of food, which includes catering in

three hundred and sixty schools and four hundred kindergartens, care facilities and homes for the elderly (Uhnák, 2020). The directive requires a minimum of 30% organic food (in value terms) in public food procurement, which in numerical terms means 100,000 organic and nutritious meals per day in public facilities such as schools, hospitals, public canteens, homes for the elderly (FAO, 2018). In addition, during the COVID-19 pandemic, the programme gained strategic importance. Self-sufficiency in the food supply became an important issue for the government, municipalities, and end consumers. Many foodstuffs and commodities were unavailable, which had a huge impact on the price development of the missing products, which became scarce commodities from on a daily basis.

With the EcoBuy programme, Vienna procurement supplies food to around 85,000 people in hospitals, schools, kindergartens, and nursing homes. For kindergartens and 90 after-school care schools (30 000 children per day). Overall responsibility lies with the Ministry of Environmental Protection, but there is interministerial coordination through thematic working groups with members from local authorities, NGOs, municipal administrations and businesses, and involving procurement experts from all branches of government. In the period between 2001 and 2007, Vienna saved €44.4 million and more than 100,000 tonnes of CO2 through the EcoBuy programme (Barling et al., 2013; J. Smith et al., 2016b).

The assumption that sustainable food buying will lead to higher costs was refuted by a 2013 impact analysis. It is a fact that organic food is more expensive than conventional food, but in terms of a holistic approach encompassing the whole food system, production and transport externalities and negative environmental externalities (e.g., remediation of chemical contamination of soil), organic food is cost-neutral. The overall process is generally understood to mean that public authorities seek products and services that do not have such a bad environmental impact during their life cycle compared to those that would have been acquired otherwise. Therefore, sustainable public procurement takes a holistic approach to calculating the life cycle cost of a product and, if external costs are taken into account, the final price of the organic food sought in the procurement system is neutral (Uhnák, 2020).

The World health organization (WHO, 2022) also acknowledges the significant contribution of the transition to a new paradigm in public procurement in Vienna in line with the Copenhagen Mayors' Consensus, which strengthens the connection between people and planet. "Vienna's new paradigm of value-for-money takes into account the total cost of products and recognizes that cheap food is expensive, and society must pay for it. The latest measurable results of sustainable and green public procurement in Vienna are reflected in huge savings in public

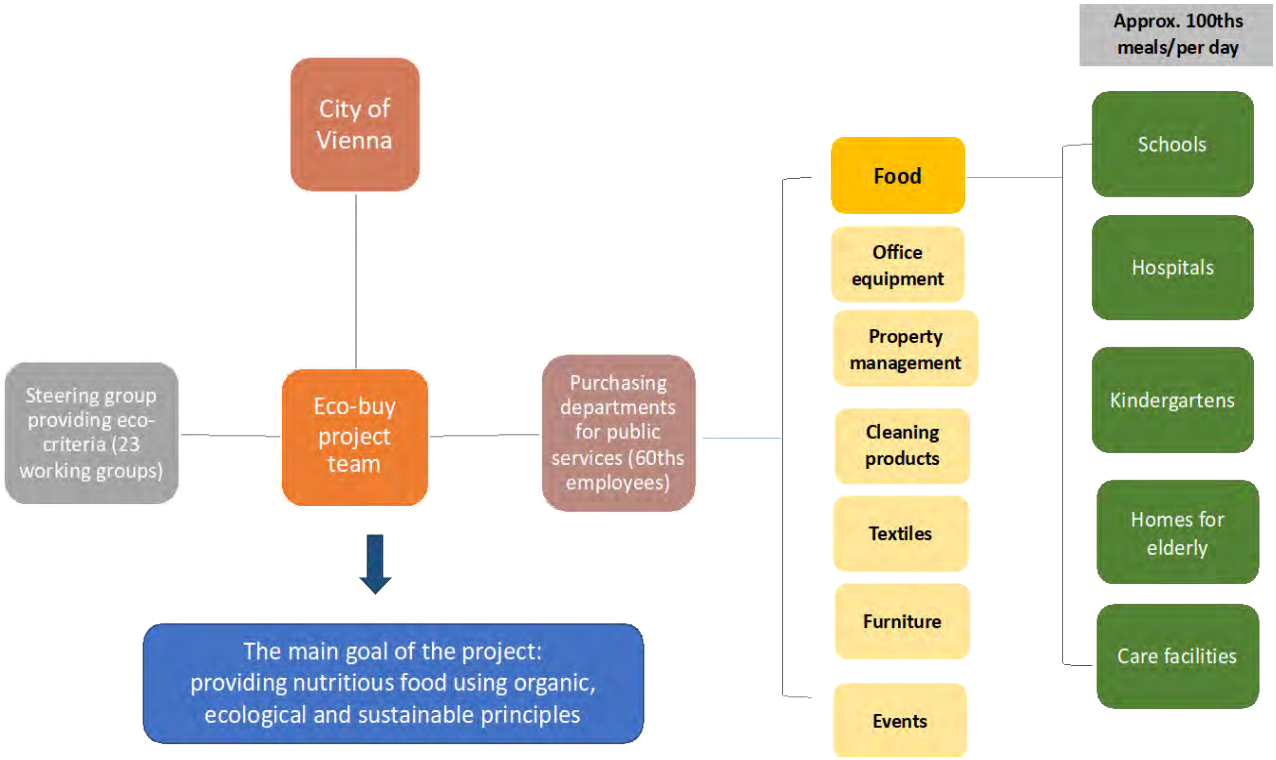
finances. A conservative estimate is that €1.5 million and 15,000 tonnes of CO2 are saved annually through savings in green building, work equipment (energy-efficient sanitation, energy-efficient lighting) and organic food. By 2022, the share of organic food in Vienna's schools and kindergartens will already be 50%. The aim is to reach 70% organic food in public institutions by 2025, which Vienna is trying to achieve through projects promoting community and student participation and education, such as the "Vienna Eats Well" and 'SchoolFood4Change' projects (WHO, 2022).

Eco-buy project design

Public procurement is the important part of public finances. By using its purchasing power, a government can lead by example and help shift markets. Purchase of public goods, services, and public works is managed by the Vienna Eco-Procurement. Based on the case study (ESMAP EECI Good Practices in Cities) from October 2011 showed that 16 percent (€1,500 billion) of the EU's GDP in 2008 were spent on public procurement, that is equivalent to half the GDP of Germany. Green public purchasing (GPP) and eco-procurement are terms used to reflect the use of this influence for environmentally-friendly goods and services (Lang, 2011). The aim of the project is to promote sustainable production and use of local food through a sustainable purchasing policy, by which economic efficiency must not be in conflict and must be taken into account in particular with regard to the whole value-added chain. The project is in line with the sub-objectives of reducing negative impacts on people, animals, plants, and the environment, taking into account the needs of future generations (Mosor, 2016).

The Eco-buy project is established as a cooperation project between various departments of the Vienna City Administration. The project is headed by a project leader and a Steering Group, composed of experts from the Chief Executive Office of the City Administration and all the relevant municipal departments: administration, environmental affairs, press and information service, coordination office for climate protection, office for environmental protection, hospital association, public utilities, housing department. Under the Steering Group, there are 23 specialized working groups that are responsible for developing, evaluating, and regularly updating all relevant ecological criteria for the purchase of goods and services by the Vienna representatives. These working groups are supported by consulting committees that have been established for public relations and legal issues (Lang, 2011). The Eco-buy project scheme is described on Figure 8, the procurement principles of the Eco-buy project are the backbone of the project (Figure 9).

Figure 8: Eco-buy project scheme



Source: own processed (City of Vienna, n.d.)

Figure 9: Principles of sustainable food procurement

Source: own processed (Mosor, 2016)

1. *Food from organic agricultural production*

The Vienna Purchasing Department purchases organic agricultural production based on EU specifications. Organic food production is standardised by EU-wide regulations (Council Regulation EC No. 834/2007) and international association agreements. Compliance with the regulations, which largely protect consumers of organic food from fraud, is guaranteed by regulated and state-approved controls. Most organic farmers in Austria are members of organic farming associations and therefore have to comply with stricter requirements than EU regulations under private law. The benefits of organic production include the protection of the environment, soil, water, biodiversity, and the natural landscape. A very important pillar of organic farming is the ban on the use of mineral nitrogen fertilisers, synthetic chemical pesticides, and genetically modified organisms (Mosor, 2016).

2. *Region of origin*

The regional food supply has a positive impact in terms of reduced CO2 emissions due to shorter transport times. For example, tomatoes from Italy cause 66% more CO2 emissions than tomatoes produced in Austria. Other environmental and health benefits of organically grown produce must also be taken into account. The freshness of regional food and the potential reduction in climate-damaging emissions due to the short transport distance are important attributes when choosing it. The preservation of rural structures, the character of the landscape and the promotion of traditional regional production, and thus the culture and character of the region, are further advantages of promoting regional production. In the project guidelines, the term regional production is defined as a distance of approximately 150 km from the place of consumption. Given the location of Vienna, regional production can be extended to surrounding countries and to nearby neighbouring countries (Mosor, 2016).

3. *Seasonality and freshness*

The preference for seasonal produce allows the purchase of fresh and fully ripened fruit and vegetables, which is cost-effective and environmentally beneficial due to shorter transport routes and lower storage costs. Seasonal local vegetables can usually be purchased at favourable prices, giving caterers a cost-effective advantage. Awareness of local seasonal food is raised as part of the purchasing process (e.g., the “Natürlich gut Teller/Naturally good plate“ project) (Mosor, 2016).

4. *Non-GMO products*

The legal requirements for organic farming are set out in the EU Council Regulation (EC) 834/2007. In the case of non-GM and organic food this means (Mosor, 2016):

- no genetically modified seeds,
- no genetically modified feed,
- no genetically modified animal breeds,
- no use of GMOs in processing, such as genetically modified rennet in cheese production,
- genetically modified food additives.

In the long term, the impact of the use of genetically modified organisms (GMOs) on the environment and human health is not yet clear. There is a risk that genetically modified plants will multiply uncontrollably, develop resistance types, interbreed with wild plants or other crops, and replace other plant species.

5. *Minimisation of waste*

Preventing waste and reducing food waste are important issues in sustainable food procurement. Adequate amounts of food purchased have also led to less resource consumption in processing, as well as financial savings that can be used for more environmentally friendly and fairly traded products. The type and material used to produce transport packaging and its multiple uses play a role in their choice (Mosor, 2016).

6. *Reduction of animal products*

A sustainable, organic and healthy diet means reducing the consumption of animal-based foods such as cold cuts, ham, meat, eggs, and cheese. According to Austrian nutritionists, two to three portions of meat and cold cuts are recommended per week, while in reality, on average up to nine portions of meat and cold cuts are eaten per week. Legumes, which are a valuable source of protein and a good alternative to animal foods, are recommended as an option to reduce meat consumption. A negative externality is that livestock farming and food production of animal origin contribute about a fifth of all anthropogenic greenhouse gas emissions (Mosor, 2016).

7. *Animal rights (ethical handling of animals)*

Austrian legislation is partly stricter than other EU countries on animal protection rights in all types of animal husbandry. However, the standards for organic livestock farming are much stricter than the legal provisions and safeguards and the higher level of rights for animals, which often live in oppressive and cruel conditions (Mosor, 2016).

8. *High social standards in production and trade*

Agricultural workers are one of the worst paid work groups globally and often face poor working conditions (e.g., use of chemicals, weather, water quality, etc.). One of the advantages of organic farm workers is that they are not exposed to pesticides. Fair trade must take precedence for imported products, as it guarantees higher social standards (Mosor, 2016).

9. Low degree of processing

Industrial food processing leads to the loss of vitamins and nutrients and to the addition of many food additives such as palm oil. Nutrition organizations recommend a high proportion of fresh foods and nutrient-friendly preparation methods, such as short cooking and reheating. Low-level food processing is used in the kitchens of the Vienna Hospital Association, which is served by Vienna Food Procurement (Mosor, 2016).

Further, four best practices (Table 3) in the contribution of sustainable procurement are described from the new procurement initiatives in Malmö/Sweden, Italy/Rome, Copenhagen/Denmark, East Ayrshire/Scotland including the City of Vienna/Austria. The author declares that sustainability goals can be achieved gradually by approaching green growth strategies and sustainable diets (J. Smith et al., 2016a).

Table 3: Sustainable food procurement that promotes organic food production

Case studies: sustainable food procurement promoting organic food production
In Malmö, Sweden – a city of 300,000 inhabitants – change in public sector food procurement began in 1997 with an increase in purchasing of organic food. Major change took place in 2010, when through a participatory process, a policy for Sustainable Development and Food was approved by the local government council. The policy aims to deliver good food of high quality in all public canteens and has targets for all food served in the city to be certified organic by 2020, with greenhouse gas emissions (GHG) related to food cut by 40 percent by 2020, compared to 2002 levels. At the end of 2012, 40 percent of the food budget (about nine million Euros) was spent on organic food.
The city of Rome, Italy feeds 150 thousand school children for 190 days per year, serving almost 150 tons of food per day. Food served in schools has undergone a 'quality revolution' since 1999 when a national law (Finance Law 488), reinforced by the personal interest of a Green Party mayor, created a regulatory context that encouraged many municipalities to introduce organic procurement for school canteens. School meal costs are met by a combination of fees paid by parents and municipal budgets. In the latest tendering process for the period 2013–17, the target for organic food procurement remains at 70 percent. New criteria include an emphasis on local products, sourcing produce from social co-operatives, the reduction of energy consumption, and the re-use of leftovers from school canteens.
Organic food on the public plate has been on the political agenda in Denmark since the 1990s as part of a sustainable food strategy. The city of Copenhagen has an annual food budget of 40 million Euros and 1750 kitchen employees prepare 60 thousand meals on a daily basis. Since 2009, the Organic Programme has been administered by the Copenhagen House of Food, as an independent, non-commercial foundation. The city aims to achieve 90 percent procurement of organic food by 2015. The programme has been partly supported by government strategy to develop public catering as a market for organic foods.
East Ayrshire, south-west Scotland, is a mix of urban and rural areas. It has a population of 120 thousand with higher-than-average levels of deprivation. East Ayrshire Council has developed and operated innovative procurement practices, prioritizing unprocessed, local and a proportion of organic ingredients for its school meals service since 2004. Procurement favours limiting the number of suppliers and building economies through scale. A key factor for change in East Ayrshire has been to configure/lot the contracts on a manageable scale that enables small and medium enterprises (SMEs) to bid for contracts. A study based on an average size local primary school (300 children) found that annual savings of 37.7 tonnes CO2 or 10.2 carbon (transport/distribution saving) had been achieved by localizing the supply chain. A further study using the Social Return on Investment method (SROI) calculated £6 value was returned to the local economy for every £1 spent on the project.

Source: Revaluing public sector food procurement in Europe: an action plan for sustainability (Barling et al., 2013; J. Smith et al., 2016a)

3.5.2. Support for the South-Bohemian Regional Food Production

Regional production in the South-Bohemia Region is directly supported by the the South-Bohemia Region Office, which manages the promotion of regional production through various activities. One of the important instruments that have been created, is the tool for the support of the regional production "CHUTNÁ HEZKY. JIHOČESKY" / "TASTES GREAT. SOUTHBOHEMIAN", another tool is the web platform named "Product Map" (https://www.produktova-mapa.cz/). The "Product Map" is a web platform that facilitates the

building of fair supplier-consumer relations between South Bohemian food producers and their consumers. The aim was to create a user-friendly online map of South Bohemian food producers, restaurants connected to local suppliers of raw materials, shops and farms offering "yard sales". The map offers a more comprehensive approach to building shorter supply chains with an emphasis on greater use of local ingredients and food not only in commercial establishments, but also in purpose-built (non-profit) catering facilities (schools, hospitals, company canteens). An additional service is its link to an agritourism map of the region, a link to a calendar of “rural” events, a blog, and, in addition, a news offers related to the production, marketing, and presentation of regional food. The map is created and managed by the Regional Chamber of Agriculture South Bohemia with the support of the South Bohemian Regional Office (Regional Chamber of Agriculture South Bohemia, 2020).

In 2007, the project "CHUTNÁ HEZKY. JIHOČESKY" has been created by the Regional Agrarian Chamber of the South Bohemian Region with the support of the Regional Office of the South Bohemian Region. The purpose of the project is to systematically promote quality food products from South Bohemia and to provide a marketing communication support for regional production (Figure 10).

Figure 10: “CHUTNÁ HEZKY. JIHOČESKY” trademark

Source: “Chutná hezky. Jihočesky“ (Regional Chamber of Agriculture South Bohemia, 2022)

One of promoting tools is the competition of the same name, which is held annually under the auspices of the regional governor and guarantees participating South Bohemian food producers marketing benefits associated with the right to use the trademark "CHUTNÁ HEZKY. JIHOČESKY". The main objectives of the instrument are to increase the demand for

exceptional food produced in the South Bohemia Region, deepen cooperation between regional farmers, processors, and retailers, appreciate traditional values, strengthen regional independence and prosperity, and build awareness of the social benefits of promoting local products. Awarded regional producers will receive marketing communications support, inclusion in the range of partner retailers and training. In addition to workshops and seminars, social events are organised aimed at meeting each other, exchanging experiences and presenting quality South Bohemian food to the public, including the mediation of supplier-customer and partner relations, especially in the region, at national level, but also abroad. Part of the work of the Regional Chamber of Agriculture is to inform food producers about available subsidies related to investment in the processing of agricultural products, marketing support, innovations in the food industry, and to help establish cooperation with experts in research, innovation and education, and free food analysis in the modern laboratories of the Ecological and Food School in Veselí nad Lužnicí (Regional Chamber of Agriculture South Bohemia, 2022).

3.5. Decentralization - Trends and Challenges

The trend towards decentralisation is influenced by several factors, which were highlighted during the COVID-19 crisis. Sustainability of food production is critical given the increasing demand for food supply in line with land restoration and water conservation. Self-sufficiency in food supply is also a challenge for each country, which was evident during the pandemic situation (especially due to mobility constraints). Recent surveys seem to predict that more and more consumers are becoming aware of the importance of supporting local production as it has a positive impact on their health and that of their children, the environment and the preservation of traditional production.

3.5.1. Sustainability in Food Production

The requirement for sustainability of food demand is essential for the future food supply of the world's rapidly growing population, based on the study "Towards a Sustainable Food Future" published in the Global Food Policy Report. The main reason for this is the unequal distribution of food among different population groups, as "some 800 million people remain undernourished and 2 billion people suffer from micronutrient deficiencies". Eating habits are changing in favor of meat, with beef consumption in particular growing rapidly, with a negative impact on greenhouse gas emissions (Ranganathan et al., 2016).

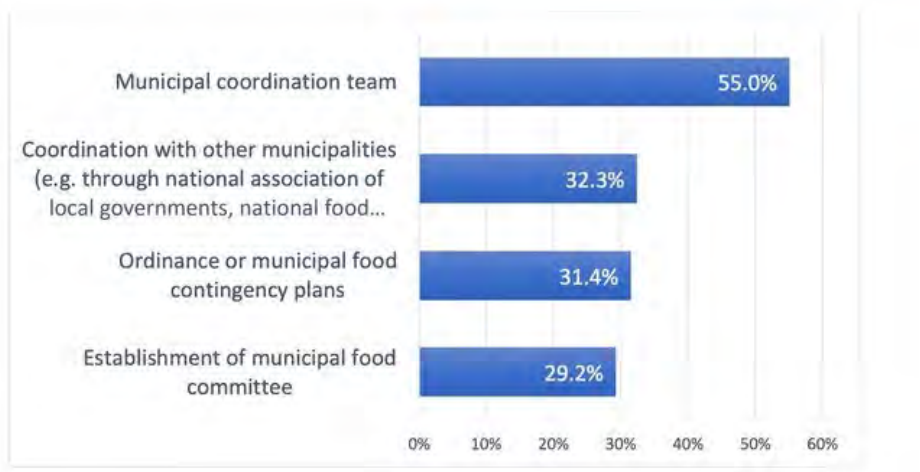
"The world needs to close a 70% food gap, that is, the expected gap between the calories available in crops in 2006 and the expected calorie demand in 2050. At the same time, the world needs to reduce agriculture's impact on land, water, and other resources as well as its contribution to climate change". Harmonizing ecosystems, water, land and natural resources enables food production in a sustainable way and long-term food security for the world population, as is established in the United Nations Sustainable Development Goals. The author's calculation of the impact of plant-based and animal-based food on land use, usage, and freshwater and Co2 emission from agricultural and land use changes shows a more favorable plant-based impact compared to animal production. The pronounced negative impact has been on beef production among animal-based products. Beef consumes more land and fresh water and produces more greenhouse gases (GHG) per unit of protein than other animal-based production. The fact is that beef accounts for one-third of the global livestock water footprint and whole ruminants are responsible for nearly half of greenhouse gas emissions from agricultural production (Ranganathan et al., 2016).

3.5.2. Food Supplies during COVID-19 Pandemic - Survey (FAO)

The Food and Agriculture Organization of the United Nations (FAO) monitored the serious food supply situation during the COVID-19 pandemic, as food systems were at high risk of disruption throughout the short and global value chains during the pandemic. To better understand the severity of the situation, FAO conducted a global pandemic survey in April-May 2020 (FAO, 2020b). The objective of the survey was to "map local responses and analyse progress and failures in managing urban food insecurity and the related implications for food security and nutrition". The survey collected 860 responses from urban actors and stakeholders from national and local governments, NGOs, and academic institutions. In particular, the survey revealed that food shortages, often associated with panic buying, have led to price increases, which have had a particularly negative impact on vulnerable social groups. Furthermore, the closure of schools and subsequent suspension of school meals and the overall reduction of the public catering system was a widespread problem for 86% of the respondents, as the unemployment of workers in the affected area increased. One of the key findings was that shorter supply chains mean that small towns and villages are less vulnerable to disruptions in the food distribution network and, therefore, more resilient to shocks. Such insights could strengthen evidence-based knowledge on which countries build policies and programs to address the crisis and its consequences. The survey also provided valuable information on topics

such as how to strengthen the performance and resilience of urban food systems, which should be ensured by direct links between rural and urban areas, with a sufficient number of agricultural workers. Prioritising shorter local food chains and empowering local governments with sufficient resources, a clear mandate and appropriate links with national government programmes to support local food chains is also a very important topic. The analysis of the questionnaire showed that local governments are key actors, with 55% of respondents confirming the existence of municipal coordination teams, while a third of respondents reported that special municipal food committees have been established to respond to emergencies such as the COVID-19 pandemic (Figure 11). These committees were primarily responsible for monitoring food prices and providing food to vulnerable populations. The survey showed that only 32.3% of the respondents reported coordination with other communities (e.g., national food networks). The importance of empowering local authorities is crucial to ensure a functioning food system. During the COVID-19 pandemic, local governments have shown tremendous potential to identify and connect actors in the food system, facilitate collaboration and coordination, and explore innovative community-based solutions. Furthermore, research has highlighted that to build resilient systems, there is an urgent need to understand the root causes of vulnerability in urban areas and support policy, planning and action to mobilize existing local and national resources to accelerate food system transformation. Promoting local food production, short supply chains, and greater self-sufficiency is an important part of this process, for example, by supporting traditional markets, but also by promoting e-commerce to improve the link between producers and consumers. They also stressed the creation of storage facilities at the local level to facilitate access to food reserves in emergency situations (FAO, 2020a).

Figure 11: Food governance measures during the COVID-19 crisis – global responses



Source: The survey Urban Food Systems and COVID-19 (FAO, 2020a).

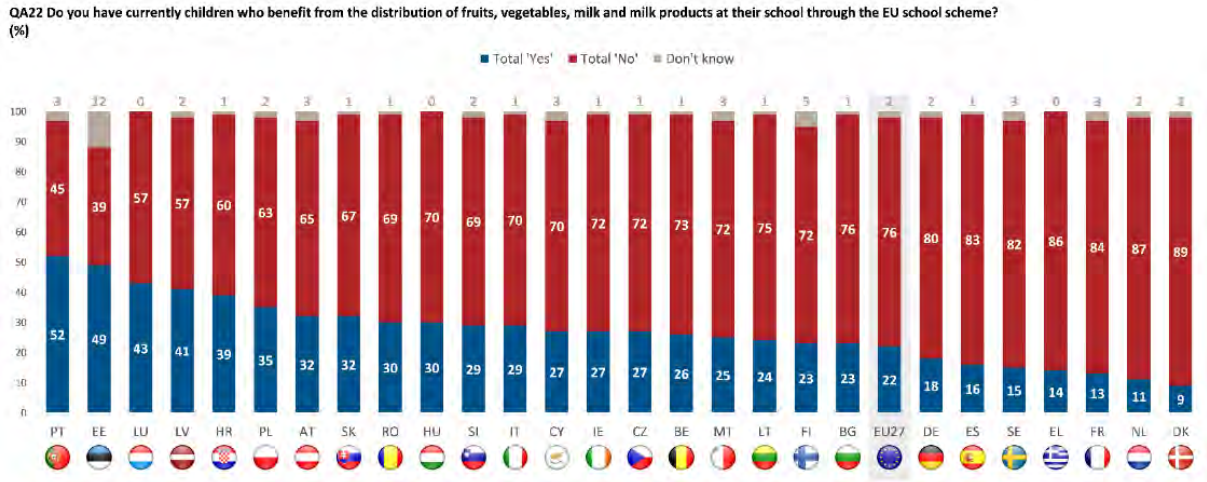
3.5.3. Europeans, Agriculture and the CAP - Survey (Eurobarometer)

Various types of Eurobarometer surveys have been conducted among Europeans in Europe. The survey named "*Europeans, Agriculture and the CAP"*, which took place between February and March 2022, was carried out through face-to-face interviews in the EU27 countries and aimed to clarify awareness and attitudes on topics such as agriculture, food safety, food localism, and adherence to the Common Agricultural Policy (CAP). The main findings of the survey are that almost half of Europeans consider a safe and stable food supply in the EU to be very important and a key objective of the CAP, and more than half of the respondents (55%) think that the CAP should also contribute to ensuring reasonable food prices for consumers. Six out of ten Europeans believe that providing safe, healthy, and high-quality sustainable food remains the main mission of the CAP (European Union, 2022).

More than half of Europeans consider seasonal products and local/short supply chain as the most important factors for food classified to EU school scheme. 39% of Europeans prefer zero waste packaging, and 32% of Europeans would appreciate wide variety of products. For 31% of the respondents, organic products are also very important to include. The fourth is the low environmental and climate impact, as well as the high animal welfare standards, which are very important. Healthy and balanced diets, food waste and seasonal products are the key topics which should be covered by the educational measures in the EU school scheme. Local/short food chains are mentioned by 38% of Europeans (European Union, 2022).

There is a huge potential for introducing school-based programs for the distribution of fruit, vegetables, milk, and dairy products in the Czech Republic. Although the survey showed a higher proportion of Czechs (27%) aware of the EU school programme compared to the European average (22%). The awareness of the EU School Program is highest in Portugal, Estonia, and Luxembourg (Figure 12) (European Union, 2022).

Figure 12: European School Scheme System/Europeans, Agriculture and the CAP



Source: Eurobarometer 2020 (European Union, 2022)

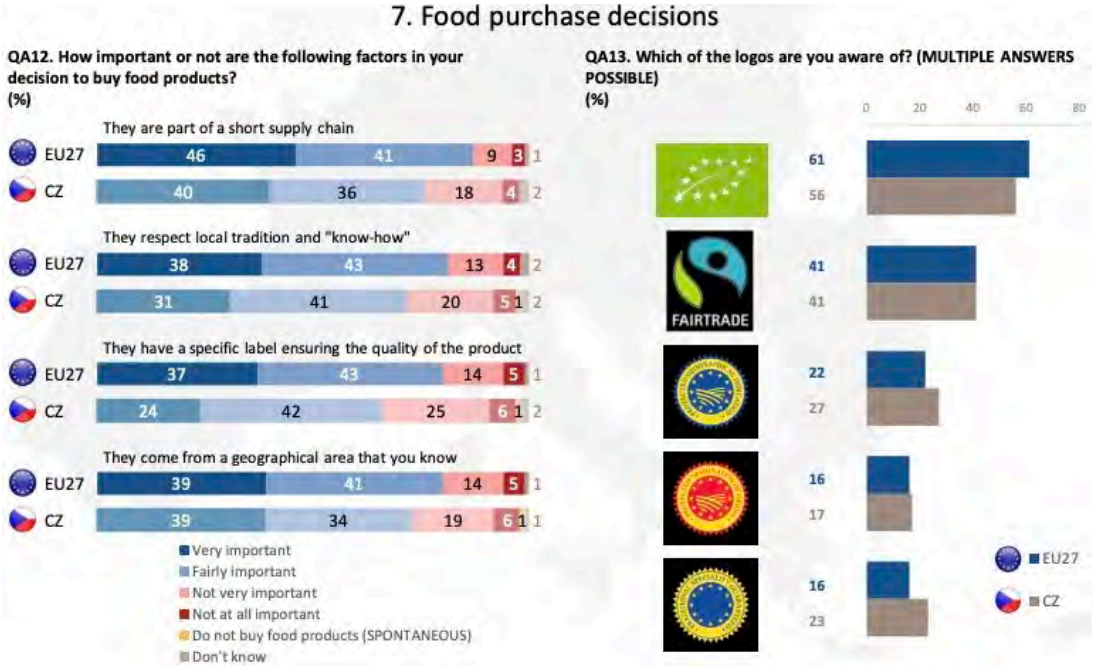
Only more than a fifth of European children benefit from the distribution of fruit, vegetables, milk, and dairy products in their school through the EU school system. 76% of Europeans are unaware of this school system, which is a huge opportunity for governments and public administrations to introduce local food systems in schools across Europe (European Union, 2022).

School system programmes could up-scale the importance of local food chains and should be promoted by city / regional councils supported by state administration. An opportunity in the school scheme program is confirmed by the widespread research study of Enthoven and Vand den Broeck: “Local food systems: Reviewing two decades of research”. The study has revealed the need for the integration of local food products into local institutions’ food programmes (e.g., schools, hospitals) (Enthoven & Van den Broeck, 2021).

Focusing on the survey section "Food purchasing decisions" (Figure 13), it is evident that (European Union, 2022):

- Short supply chains are important for almost three quarters of Czechs and more for EU27 citizens (87%).
- 72% of Czechs value local traditions and local know-how, while 81% of EU27 citizens.
- Special product labelling is important for 81% of EU27 citizens compared to 64% of Czechs, while specific labelling is not very important for one quarter of Czechs. On other question, the awareness of the logos was tested, the highest awareness among the EU27 and Czechs is for the organic logo and the Fairtrade logo.
- More than three quarters of respondents are interested in information about the origin of food production.

Figure 13: Food purchase decisions / Europeans, Agriculture and the CAP



Source: "Europeans, Agriculture and CAP" survey (European Union, 2022). N= 26,512 (EU27), 1,017 interviews (Czechia).

3.5.4. Legislative Support for Up-scaling the Process of Decentralization

The European Union intensively monitors global issues and faces various challenges to build sustainable and resilient food systems. The EU uses its legislative rights for setting new policy initiatives and its power to advocate the existing legislation, mainly for pesticide use, animal welfare, and precise protection of the environment legislation. Regarding transition support, there are EU instruments such as the cohesion funds and the European Agricultural Fund for

Rural Development (EAFRD). According to the goals of the Green Deal, the European Commission will make a legislative proposal for a framework for a sustainable and resilient food system before the end of 2023. The main objective of the framework is to accelerate and facilitate the transition of the changes by setting general principles, definition that are imposed on all food placed in EU as well as responsibilities on food system actors in the EU. Sustainable practices and standards will be recognized in unified certification and labelling (European Commision, 2020).

In line with the objectives of the Green Deal, the European Commission has published a "Farm to Fork" strategy in 2020. The Farm to Fork Strategy represents "a new comprehensive approach to how Europeans assess the sustainability of their food". The strategy aims to ensure a fair, healthy and environmentally sound food system that delivers environmental, health, and social benefits, offers economic gains, and creates a resilient food system that works in all external circumstances. The need for resilience in regional and local food systems will improve quality of life and reduce health-related costs to society, as well as ensure sustainable and resilient food production. For consumers, the strategy delivers a supply of sustainable, fresh, and less processed food with the elimination of long-distance transport, which brings additional costs and environmental impacts. The strategy is intended to contribute to achieving climate neutrality by 2050 and aims to move the current EU food system towards a sustainable model (European Commision, 2020).

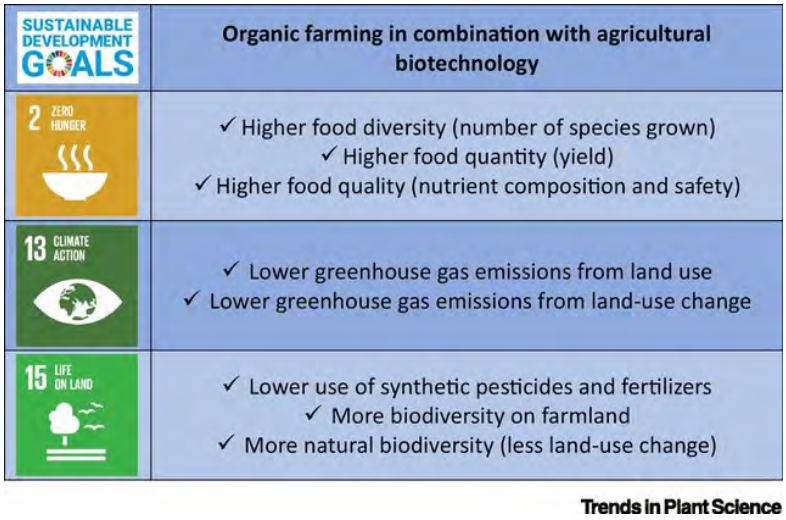
The Farm to Fork Strategy Action Plan foresees 2023 as the binding year for the publication of the draft legislative framework for sustainable food systems. A number of proposals are planned and are in the process of being formalised, namely, food waste reduction targets, a school feeding scheme, a farm sustainability data network, a carbon farming initiative, trading standards, a promotion programme, etc. A whole new set of standards will align the requirements for a sustainable local food system with the needs of the actors and facilities in that system. The policymakers could set the rules and the administration could support the development of the local system. The main objectives of the strategy are to "ensure sufficient affordable and nutritious food within planetary limits, halve the use of pesticides and fertilisers and the sale of antimicrobials, increase the amount of land devoted to organic farming, promote more sustainable food consumption and healthy diets, improve animal welfare, and reduce the use of pesticides by 50% by 2030" (European Comission, 2022).

The Farm to Fork strategy plans a number of initiatives and legislative proposals, including in the areas of organic farming, front-of-pack nutrition labelling and sustainable food labelling,

front-of-pack nutrition labelling and sustainable food labelling, front-of-pack nutrition labelling and sustainable food labelling, reducing food waste. The strategy is aligned and complementary with the 2030 EU Biodiversity Strategy. The Farm to fork strategy is linked to the Common Agricultural Policy (CAP) strategy, which aims to develop more sustainable and modern farming practices while protecting nature and combating climate change. (European Comission, 2022).

Purnhagen and the authors (Purnhagen et al., 2021) analyse the implementation of the European Farm to Fork strategy and the synergies between the use of new biotechnologies in the promotion of organic farming. It is clear that "sustainable food systems will require fundamental changes in people's consumption habits and lifestyles". The limitation of promoting organic farming is that organic farming often requires more land than conventional farming for the same amount of food produced. Therefore, innovations in farming processes should be needed to meet the objective of the Farm to Fork strategy. As the authors point out (Figure 14), the transformation toward sustainability and resilience is also included in the Sustainable Development Goals (SDGs) issued by the United Nations, specifically SDGs 2, 13 and 15 (Purnhagen et al., 2021).

Figure 14: Expected Benefits of the SDGs Resulting from the Combination of Organic Farming with Agricultural Biotechnology.



Source: Europe's Farm to Fork Strategy and Its Commitment to Biotechnology and Organic Farming: Conflicting or Complementary Goals? (Purnhagen et al., 2021)

In the recent study of Kujala and authors (Kujala et al., 2022), differences in organic farming distribution were analyzed. By using the method of qualitative comparative analyses, the authors reveal the importance of setting the right regional policies. Specific regional policies should combine both subsidy-led and market-led approaches for different kinds of regions in Finland. Stimulation processes in organic farming are depending on subsidies that are the most influencing factor for the organic food farmers. The regional differences next depend on the sector characteristic and the regional heritage and traditions. To reconcile regional differences in organic farming should be encouraged by educational activities and stimulation of the pro-active approach in value chain (Kujala et al., 2022).

4 RESEARCH

To gain deeper practical insight into the topic, the article is enriched with qualitative research between two experts in the field of promoting local food production. The research was conducted in the form of structured expert interviews. One respondent was Ms. Šťastná, Director of the Regional Agrarian Chamber of the South Bohemia Region, the other Ms. Kavanová, Marketing Communications Manager of the Czech Food Chamber. The structured expert interviews were conducted in June 2023 in the form of an online questionnaire and in-depth personal communication with both respondents. The aim of the qualitative research was to find out the current state, motivations and barriers of local entrepreneurship and to identify key areas of support for local food production and its development.

Both respondents are very experienced in the field, having worked in their professions for **more than 5 years.** One of the representatives works in the South Bohemia region, the other in the capital city of Prague.

The main benefits of local entrepreneurship are considered by respondents to be ***safety, economic, social, environmental and health benefits*** such as ***landscape care, distribution cost savings, product quality and health safety***. The disadvantages are a ***smaller assortment of local products and higher prices*** (compared to conventional food). The most common problems faced by local entrepreneurs are ***price disadvantages*** due to lower turnover, ***difficulty to compete in an era of globalisation***, the ability to find ***suitable distribution channels*** and the often expressed ***'neighbourly' envy.***

Both interview participants agree on the positive contribution of local entrepreneurship to food system ***sustainability, regional self-sufficiency, regional resilience, local community***

development and national food security. There is no consensus within respondents regarding current legislative support for local enterprise, with one respondent neutral and the other rather dissatisfied with current legislation.

For one respondent, the current legislative norms are seen as obstacles rather than useful support for local producers. Both respondents agree that the role of the state is to ***simplify administration and bureaucracy, not to act as an obstacle to business.*** The role of municipalities is to provide information through the media and also to remove possible obstacles to local business. One respondent considers the following legislative standards useful for local entrepreneurs**: *decrees and standards for specific products, amendments to the Food Law.*** On the other hand, the legislative norms that create obstacles to business are: ***non-transparent tax system and also some parts of European legislation.***

One respondent answered that he is directly affected by EU support for local business and his organisation draws on relevant grants. Both respondents are familiar in their professions with the implementation of EU Green Deal activities. Both respondents strongly agree that ***local entrepreneurship has a future perspective.*** With regard to COVID-19, respondents were divided in their answers, with one respondent believing that the situation has changed as smaller businesses are failing due to business restrictions. One respondent believes that the situation is more complex and that COVID-19 is not just one factor in business failure.

Both respondents agree with each other that ***consumer education*** is an important topic in local business and there is an opportunity to educate consumers about buying local food. In a nutshell, they consider ***education, promotion, less administration and bureaucracy, lower taxes, and equal subsidy conditions on the EU common market*** (especially national and regional) as the main tools that help local business development. One of the respondents appreciated the ***support of supervisory authorities*** as another tool. In both regions where the respondents live, ***local entrepreneurship is perceived with potential for its development.***

Based on the structured interviews conducted with experts, it is clear that local entrepreneurship still has untapped potential and that its expansion would be helped by interventions and helpful support from the government. Adjustments should be mainly in a ***simpler business environment, reduction of administrative requirements and also more support through educational tools to consumers***. Removing the burden that local entrepreneurs experience in their day-to-day business would greatly help them to focus on their core business, as their activity is not easy due to tough global competition in the market.

5 DISCUSSION

In the context of growing global concerns about food security, the concept of local food production and consumption is one of the dominant food-related trends. Local food and rural development have been developed to improve by the emergence of local food initiatives, which have contributed to improving the situation of smallholder farmers and revitalising local communities. Local food networks are built on direct relationships between producers and local communities, and the key to their success lies in the trust and social links between producers and consumers. (Hinrichs, 2000).

The apparent trend towards decentralisation of food systems is perceived by both EU and national authorities, who use various types of research to reflect consumer preferences towards local origins, short supply chain and traditional production. Based on a survey on European citizens' attitudes towards agriculture, it is clear that the majority of respondents prefer short supply chains (76% of Czechs and 87% of EU citizens). Traditional local production is valued by 72% of Czechs and 81% of EU citizens, which shows the high value and quality of traditional production for its inhabitants. Special labelling, e.g., the organic logo, is very important for EU citizens, but less so for the Czechs. The difference between EU and Czech consumers is, therefore, in the differentiation and actual purchase of locally produced goods. In the EU, consumers look for special state-issued labels such as the organic or fair-trade logo, in the Czech Republic local purchases are not based on this logo (European Union, 2022). Czechs more often buy local products on the basis of trust and knowledge of local production, trust in traditional producers or the visible quality of local products, the organic logo is not a key indicator for purchasing decisions.

In addition, black swan such as the COVID-19 pandemic, have highlighted the shortcomings of the global supply chain and emphasized the need for self-reliance and building resilient systems at the level of individual countries or regions. Supporting local food production, shortening supply chains, promoting B2C sales through e-commerce channel, and creating storage facilities for food reserves are tools for the food systems transformation (FAO, 2020a).

One of the findings of the review is that the European Farm to fork strategy should cover the whole spectrum of topics of transformation from mass agricultural production to a more organic/sustainable one. The transition to a sustainable food system will create new business opportunities that will have a positive impact on financial flow, and as well as help protect Europe's nature and biodiversity (European Commision, 2020). The most important issues

would be the correct implementation by national legislative bodies in each country, respecting the specificities of regions/local production. Obstacles could be initial mistrust of regulations from above, administrative requirements, or insufficient personal resources to manage or report on the activities of local producers.

An important part of the top-down support is also the green public procurement, which sets new parameters that are implemented not only with the requirement for the lowest price, but also for parameters such as "recyclability, biological degradability, material and energy consumption of production, health safety, transport distance from the producer to the consumer etc (Ledvina, 2007). The **best practice example from Vienna Eko-buy** project is the great example of the power of the decentralization activities supporting the importance of sustainable living and bring about the availability of more ecologically-friendly products to the market. The procurement of the Vienna public services purchases 30% of organic production and prefers regional food (up to 150 km from the place of the consumption). In spite of expections, based on impact analyses, the prices of qualifying products and services have declined and become within the range of the typical ones before the project was initiated (Lang, 2011).

6 CONCLUSIONS

The local economy provides a close link between consumers, the environment and the economy, and collaboration between all actors improves relationships and creates positive externalities. The main reasons for moving towards local food production are that local food meets sustainability needs, supports regional/local producers, and its production builds local communities and contributes to the support of regional/local producers ans thus to the growth of local self-sufficiency.

Local food systems have registered positive developments in recent years. The main drivers of decentralisation of regional/local food production are the consumers themselves or communities (bottom-up drivers) who form local networks with producers. Local producers are searching for direct distribution channels or creating co-operation networks, to ensure that the fixed costs of their production are covered, and at the same time reduce the final price for consumers by selling without intermediaries. Some of the most common forms of local food systems include farmers' markets, CSAs, direct purchase from farmers, farmers' markets, or farmers' boxes, which together with consumers create the local economy.

From the consumer perspective, the preference for local production is obvious. Inhabitants of the Czech Republic and the European Union prefer to shorten food supply chains and value traditional local production. The qualitative part of the review also noted the need for top-down support by setting appropriate legislation, reducing administrative burdens and promoting the consumption of local food. According to the experts interviewed in the field of local food promotion, local food production has great potential for the future, as it brings benefits in terms of cost savings (short supply chain, fewer distributors), quality and freshness of local production and positive environmental benefits (care for the landscape, CO2 reduction, water management, etc.). Appropriate legislative and subsidy support could help in building a local food system in the region and also in increasing consumer education on the preference and benefits of consuming local food production. One of the long-term goals of politicians and regional/city councils in the country should be to focus on creating favourable conditions for the functioning of local food systems, supporting local production that will be an important source of livelihood for local communities.

An effective way to support the creation of a local food system is to introduce sustainable procurement for municipalities (a best practice from Vienna). Sustainable procurement focused on regional production brings a number of benefits, in particular the reduction of negative environmental impacts (CO2 emissions, water and soil pollution, waste management etc.), the reduction of food purchasing costs, the economic development of the region, quality local food (organic food in the case of Vienna) for the population and at the same time ensuring the food self-sufficiency of the region.

Based on the literature review and structured expert interviews, the aim of my thesis will be defined as "Decentralising food systems: the importance of the local entrepreneurship" and will be concluded with further quantitative research among consumers. Primary research will focus on consumer's purchasing behaviour (purchasing frequency, product mix, preferred distribution channels, etc.) and will explore motivations and perceptions of appropriate tools to increase overall consumption of local products.

I decided to formulate a main hypothesis and sub-hypotheses based on the qualitative research and its results:

- Hypothesis: Decentralising food systems is an appropriate way to support local production and develop local communities while ensuring the sustainability, self-sufficiency and resilience of regions.

- Sub-hypothesis 1: Top-down support for local entrepreneurship is a way to develop functional local food systems.

- Sub-hypothesis 2: Legislative support for local entrepreneurship embedded in strategic European documents and Czech legislation is aimed at direct support for local entrepreneurship.

- Sub-hypothesis 3: Consumers perceive local production as high quality and consider its further development important.

Further research in the thesis will focus on two target groups: first one is local producers/traders and second one is the consumers. Data collection will be combining a method of qualitative and quantitative research. A qualitative survey using expert interviews will be conducted to examine trends in direct support of local entrepreneurship among local producers and traders selling primarly local production. The aim of the quantitative research will be to determine consumer purchasing behaviour, consumer perceptions of the value of local products, motivations and barriers to buying and attitudes towards appropriate support for its consumption.

7 RESOURCES

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