MAPPING THE SCHOOL FOOD SYSTEM

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SCHOOLFOOD 4CHANGE

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Authors	Evelin Piirsalu, Ingrid Varov, Kaidi Kaaret, Kertu Uiboleht, Piret Kuldna (SEI Tallinn). Final editor: Amalia Ochoa (ICLEI)
Abstract	This report presents the results of the project's mapping study, which was carried out in 12 countries and 19 municipalities/regions, and which explored the existing school food systems, school food provision and procurement of food and catering services. A synthesis of the results in the form of a comparative analysis is presented at the end.
Keywords	Children, Pupils, School Food Provision, Policies, Costs, Cities, Countries, Procurement, Tenders, Opportunities, Barriers, Sustainability, Health, Nutrition, Curricula, Education, EU, Markets, Contracts

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LIST OF ACRONYMS

CR – Czech Republic

EU – European Union

FAO – Food and Agriculture Organisation

GHG – Greenhouse gases

GPP – Green Public Procurement

SF4C – SchoolFood4Change

SDG – Sustainable Develoment Goals

SPP – Sustainable Public Procurement

SME – Small and medium-sized enterprise

WSFA – Whole School Food Approach

EXECUTIVE SUMMARY

The report at hand has been developed as part of the SchoolFood4Change (SF4C) project, supported by the EU's Horizon 2020 programme. This report presents the results of the project's mapping study, which was carried out in 12 countries and 17 municipalities, and which explored the existing school food systems, school food provision and procurement of food and catering services. For data collection purposes, two surveys were conducted among the partners. The first survey was sent to the SF4C National Lead Partners, Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Slovakia, Spain and Sweden. The second survey was sent to regional authorities in Vienna, Ghent, Leuven, Copenhagen, Tallinn, Viimsi, Budapest, Dordogne, Lyon, Essen, Nuremberg, Madrid, Milan, Nuoro, Valencia, Malmö and Umeå. Slovakian and Czech Republic responses covered their all municipalities.

The participating countries and regions are incredibly varied across all metrics, from land area and population to governance structures and procurement methods practised. Differences are evident both when comparing different municipalities but also when comparing schools within the municipalities.

The situation in terms of the political framework regarding food, sustainability and public food procurement is quite fragmented. Half of the studied countries have a food policy in place either on the national or regional levels (in Belgium and Germany). Dietary guidelines are adopted in the majority of the countries, except for the Czech Republic and Hungary, and sustainability requirements in food procurement are practised in slightly over half of the participating countries. However, the specifics of these are rather varied. In some countries, the requirements concern the share of organic food, while others seek specific quality labels.

Most schools in the studied municipalities provide at least lunch every day. In six out of 19 municipalities/regions, breakfast is also served in some schools. The latter is often, that is for an extra charge, not part of the cost of a regular school meal. In seven municipalities, some snacks are also served during the day. Also, in seven of the 19 regions analysed, three meals are offered in kindergartens, whereas in the rest provide only lunch or lunch and a snack.

In terms of the school meal cost, there are two ways to structure this in the municipalities concerned: the meal cost consists of only food ingredients, excluding other expenses, or the meal includes food ingredients along with other costs. The first option is commonly used when the school has an in-house kitchen and labour costs are covered by the school or municipal budget. The second option is frequently used when the service is outsourced to a private catering company. This option, where the meal cost includes other costs, such as transportation, electricity, and equipment, is predominantly used in the municipalities analysed in the mapping study. School food prices vary significantly from around one to eight euros. In most cases, school food cost is subsidised either fully for all, or at least for low-income groups.

Regarding operational structure, contract catering provided by a private or a publicly owned company is the most common operational model used. In some regions, mixed operational models exist, meaning that some schools have in-house catering while others use contract catering. The food is prepared and served either on-site or prepared in central kitchens owned by the municipality (nine out of 14 analysed) and delivered to schools either in a ready-to-serve state or chilled to be re-heated in schools. Both options are practised fairly evenly in the municipalities analysed.

Over half of the studied municipalities have centralised their food and catering services procurement and usually conduct the procurement for their schools and kindergartens. Just 28% of municipalities have a decentralised system in which each institution individually purchases its food and catering service. Centralised purchases tend to be larger, exceeding national or EU financial thresholds. Furthermore, public food procurement is becoming increasingly digitalised. Half of the municipalities have digitalised their entire procurement process.

Most of the studied municipalities practice sustainable public food procurement. In the Czech Republic and Slovakian municipalities, sustainability criteria have so far not been applied in public tendering processes for food, however in other regions/municipalities, a high number of various sustainability requirements are used. The criteria/requirements vary - from the requirement of organic food and plant-based options to requiring various labels and low carbon emissions transportation. It is less common to demand solutions that minimise food waste or use energy-efficient equipment.

While most municipalities have attempted to procure more sustainable food and catering services, assessing the environmental and social impact of their food and catering service procurements is much less common. For example, only half of the studied municipalities have evaluated the environmental impact, and 72% have not assessed the social impact of their procurement practices in these areas.

In the SF4C project, food and catering service procurement focus more on innovative food procurement models; however, these concepts are not well known amongst the municipalities analysed. Nevertheless, all studied municipalities are interested in trying out these approaches. For example, Dynamic Purchasing Systems, framework agreements and SDG-aligned food tendering are the most relevant concepts for the municipalities participating in the mapping study.

As part of the mapping study, the regions also identified barriers to implementing sustainable and healthy school meals. From the answers, eight thematic barriers stood out the most. The most widespread barrier is the cost of sustainable alternatives or a meal's fixed cost, which does not allow for many changes. Lack of expertise of procurers regarding the sustainability criteria applicable, and the strict legal framework forbidding it, were also evident in many municipalities.

While the barriers exist in all of the analysed municipalities, many opportunities can also be perceived. The most prevalent opportunity (suggested by five municipalities) was health benefits, either by directly impacting children’s health or influencing dietary guidelines. Also, the opportunity to set local goals related to sustainability and the food system, and achieve those already set, was seen as important in some municipalities.

Finally, in terms of the most preferred focus points of the SchoolFood4Change project, the most widespread answers were regarding food education in the school curricula and opening opportunities for local small-scale farmers and SMEs. These focus points could also bring about society-wide positive impacts by fostering children’s education and thus improving their health in the longer term, and on the other hand, supporting local enterprises and thus improving local economies.

1 INTRODUCTION

What children and adolescents eat greatly affects their health, wellbeing, and concentration. The World Health Organisation has estimated that one-third of European school-age children and a fourth of adolescents are overweight or obese, with rates rising in many countries.[1] Vulnerable children from low-income or disadvantaged households are more likely to eat unhealthy diets that lack nutrition, exacerbating inequalities.

At the same time, food production significantly impacts the environment. Global food production contributes to climate change by emitting 30% of global GHG emissions[2]. Furthermore, agriculture has a significant impact on water use and quality. It uses massive amounts of water (up to 70% of global freshwater withdrawals)[3] and lowers water quality due to the runoff of nutrients from agriculture[4]. It requires vast areas of land (around 36% of the Earth's land is agricultural) and causes land use change and land degradation. In addition, it is a primary driver of deforestation and biodiversity loss[5] and impacts the depletion of fisheries.

School food is an integral part of the food system, where food consumption and production meet. Sustainable school food can contribute to achieving the environmental and climate objectives at the EU and national levels. Hence it contributes to fulfilling the goals in the European Green Deal, Farm to Fork Strategy and the EU's Biodiversity Strategy for 2030. Providing proper school meals for all children also helps to support food security. Providing healthy and sustainable food thus contributes positively to public health and the environment.

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[1] WHO 2022, WHO European Regional Obesity Report 2022. Copenhagen: WHO Regional Office for Europe

[2] IPCC 2014, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Intergovernmental Panel on Climate Change, Geneva, Switzerland, 2014).

[3] Molden 2007, "Comprehensive assessment of water management in agriculture" in Water for Food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture, D. Molden, Ed. (Earthscan, International Water Management Institute, London, Colombo, 2007).

[4] Vitousek et al. 1997, Human alteration of the global nitrogen cycle : Sources and consequences published by : Ecological Society of America Stable URL. Ecol. Appl. 7, 737–750 (1997).

[5] Benton, T. G., Bieg, C., Harwatt, H., Pudasaini, R. and Wellesley, L. 2021, Food system impacts on biodiversity loss. Chatham House, London.

The SchoolFood4Change (SF4C) project, supported by the Horizon 2020 programme, aims to facilitate a broad shift to sustainable, healthy diets by directly impacting over 3,000 schools and 600,000 pupils in 12 EU countries. The aim is fulfilled through a triple approach: The Whole School Food Approach (WSFA), Sustainable Public Procurement (SPP) and Planetary Health Diets. Before creating a shift towards healthy and sustainable diets and school food systems, it is essential first to explore where the SF4C project countries stand regarding their current school food systems, school food provision and procurement of food and catering services. Thus, a mapping study was carried out in 12 countries and 19 municipalities/regions to gather state-of-the-art data from the project countries. For data collection purposes, two surveys were conducted: one among the National Lead Partners (NLPs) of the SF4C project and the other among the representatives of cities, municipalities and regions. Based on the analyses and results, suggestions for best practices for improving the sustainability of food systems within the project can be made, as well as building a baseline to map progress in achieving the project's targets.

This report presents the results of the SF4C mapping of procurement and provision of school food, which discloses the national legal framework and innovative approaches, organisational and business structures and operational 'shop floor' performance regarding the delivery of public meals.

The following section provides a brief description of the methodology. This is followed by the results from the two surveys, which are divided into two main parts. The first part presents a general overview of each participating country and describes the national political and legal framework regarding school food. Furthermore, it also provides an overview of the school food governance, provision and procurement system in each city/region. The second part presents a comparative analysis of key topics in countries and cities/regions.

2 METHODOLOGY

The data for mapping the legal basis for the school food system, school provision models and practices, and procurement models were gathered via the questionnaire among the SF4C project partner countries (National Lead Partners) and the municipalities involved in the project.

The data collected in the mapping exercise covered both external and organisational contexts. External context included various domains such as knowledge of the relevant political and legal framework (e.g., regulations, strategies, policies, and initiatives) and food system data in the partner countries. The organisational context in the mapping involved information about procurement models, organisational models, and cost models related to school food provision. Project partners involved in the mapping also identified barriers and opportunities associated with switching to a more sustainable and healthy school meal procurement and priority categories/areas for each municipality in the project.

Data collection involved 12 countries (Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Slovakia, Spain and Sweden) and 17 municipalities in those countries: Vienna, Ghent, Leuven, Copenhagen, Tallinn, Viimsi, Lyon, Dordogne, Essen, Nuremberg, Budapest, Milan, Nuoro, Valencia, Madrid, Malmö and Umeå. As the Czech and Slovakian partners are associations of schools, no separate cities for those two countries are covered, but the information is presented rather at the local government and individual school level in general.

The data was collected via electronic questionnaires collected between May and August 2022. Additional desk research was done to clarify and harmonise the data collected and facilitate analysis. Country general statistics was collected using Eurostat and FAO. Population numbers, agricultural area (including organic area), and number of agricultural holdings (including number of small farmers) were acquired from Eurostat. The statistics about food export and import in value and quantities were obtained from FAO statistics. Other information was collected from the project partners. Where data was not available, it is marked “n/a”.

3 SCHOOL FOOD PROVISION AND PROCUREMENT SYSTEM IN SCHOOLFOOD4CHANGE COUNTRIES

This chapter gives an overview of the countries' profiles and food systems and the school food provision and procurement system in the selected municipalities in each SchoolFood4Change (SF4C) partner country.

3.1 AUSTRIA

3.1.1 COUNTRY PROFILE

	Country profile and general facts about the food system	
AUSTRIA	Total land area	83,883 km^2
	Total population	8.93 mil
	Number of regions	9
	Number of municipalities	2,093
	Total agricultural area	2,670,000
	Total organic agricultural area	680,000
	Share of organic area of total agricultural area in the country	ca 26%
	Food import quantity and value	23.10 tonnes 248.39 billion euros
	Food export quantity and value	22.69 tonnes 245.40 billion euros
	Total number of agricultural holdings	110,780
	Total number of small agricultural holdings (below 10 ha)	41,340

Sources: see tables 1-3.

3.1.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

At the national level, Austria has a sustainable public procurement action plan (so-called *naBe*). However, the naBe action plan is only binding for federal public administrations and not municipalities. The latter have regional programmes or guidelines, such as ÖkoKauf (EcoBuy) in Vienna. More detailed information about ÖkoKauf is in chapter 3.1.3. Procurement in general is regulated by the Federal Procurement Act (*Bundesvergabegesetz*) adopted in 2018.

The national legal basis for food safety and control is the Austrian Food Safety and Consumer Protection Act of 2006, which integrates provisions resulting from EU Regulations on food safety, food control and food hygiene. It assigns responsibilities for enacting EU legislation to national administrative bodies. In Austria, the Federal Ministry of Health has the overall responsibility for food safety and food safety legislation. It coordinates the activities of the nine Federal Provinces' food inspection authorities and laboratories designated for analyses of official samples.

Since 2011, Austria has a National Nutrition Action Plan with the main focus on over and malnutrition and the goal of reducing overweight and obesity.[6] The action plan is regularly revised. The Federal Ministry of Health and Women (BMGF) has created so-called school buffet guidelines within the action plan. Furthermore, recommendations have been developed for Austrian kindergartens and schools regarding the minimum requirements for lunches.[7]

In Austria, the SF4C project activities cover the capital of Austria: the city of Vienna. Detailed descriptions of school food provision and procurement of Vienna are presented in section 3.1.3.

[6] Sozialministerium. *Nationaler Aktionsplan Ernährung*. https://www.sozialministerium.at/Themen/Gesundheit/Lebensmittel-Ernaehrung/Ernaehrungsstrategien-und-Gremien/Nationaler-Aktionsplan-Ernaehrung-(NAP.e).html

[7] Richtig essen von Anfang an. *Essen im Kindergarten und in der Schule*. https://www.richtigessenvonanfangan.at/downloads/fuer-eltern/essen-im-kindergarten-und-in-der-schule/

3.1.3 CITY OF VIENNA

VIENNA	General facts	
	The land area of the municipality	414.6 km^2
	Total population	1 935 000
	Duration of the school year	September – July
	Length of the school year	180 days
	Number of schools	704
	Number of students in schools	247 000
	Number of kindergartens	2 827 childcare facilities (of which 739 kindergartens)
	Number of children in kindergartens	86 000
	Number of municipality schools and students	380 schools with total 112 000 students
	Number of municipality kindergartens and children	350 kindergartens with total 29 800 children

SCHOOL FOOD GOVERNANCE

The city of Vienna has both sustainability (*Smart City Strategie* and *Klimafahrplan*) and food policies (*Lebensmittelaktionsplan*, food action plan Wien isst G.U.T. - Vienna eats well) in place.

Vienna has a GPP programme called ÖkoKauf (EcoBuy), which is mandatory for all municipal institutions to abide by. The programme has set, among other product groups, criteria for food procurement.[8] Mandatory criteria are developed in the working groups where schools and kindergartens are also part. If all agree, the criteria are published and have to be followed in all tenders. ÖkoKauf Wien stipulates, among other things, a 30% share of organic food, organic or free-range eggs, and many criteria for GPP of school food (eggs, cow milk, poultry, as well as cleaning agents, electronic devices, lawn movers etc.). These focus mainly on environmental protection and longevity but not so much on social responsibility.

[8] https://www.wien.gv.at/umweltschutz/oekokauf/lebensmittel-beschaffung.html

Dietary guidelines are usually provided by the Austrian nutrition society (ÖGE)[9]. For example, they say children have to eat fish, even though some would prefer to not offer fish, especially from the sea.

The Federal Ministry of Education develops the school curricula and municipalities cannot influence the process very much. The municipality can only offer extracurricular activities. In Austria, food literacy and healthy nutrition are part of two main education principles (health education and consumer education principles). One possibility might be pushing for a change of the curricula, but this has to be done with the other counties.

SCHOOL FOOD PROVISION

In Vienna, municipally run schools provide one hot meal during the day (lunch), whereas in municipal kindergartens, children can have three meals. School food is provided by private companies via a catering service contract. The food is prepared in centralised kitchens, where the food is cooked, chilled and delivered to schools where it is heated up and served as a hot meal.

The school meal cost is not fixed at the municipality level (the same for all schools). In some schools, the meals are free for all children but in some schools, parents pay €4.13 a day. In kindergartens, the cost of meals is €68.23 a month. However, both in schools and kindergartens, meals are subsidised based on the incomes of parents.

The procurement of school food catering services is centralised within the municipality. Procurement is usually carried out using an 'open procedure', fully digitalised and the tenders are quite large and above the EU threshold. Sustainability considerations are generally set in the technical specifications or qualification criteria, these can be requiring organic food, vegetarian and plant-based options, seasonal food and ecolabels (Marine Stewardship Council, MSC label, EU ecolabel for organic, etc), solutions that minimise food waste and

[9] https://www.oege.at/uncategorised/the-austrian-nutrition-society/

practices that minimise waste in general. The award is based on a price to quality ratio analysis and a standard renewable contract is drafted with the successful bidder.

The municipality of Vienna does not see barriers related to more sustainable food procurement, rather, opportunities are seen in children's health, saving money in hospitals, less external costs related to food production practices, etc.

Preferred focus points for Vienna in the SF4C project:

- Increasing the rate of organic ingredients in school meals;
- Reduction of animal-based food/protein shift and animal welfare;
- Shortening the supply chain;
- Integrating food education into school curricula.

3.2 BELGIUM

3.2.1 COUNTRY PROFILE

BELGIUM	Country profile and general facts about the food system	
	Total land area	30 528 m^2
	Total population	11.55 million
	Number of regions	3
	Number of municipalities	581
	Total agricultural area	1 367 385 ha
	Total organic agricultural area	99 075 ha
	Share of organic	7.4%
	Food import values and tonnes	97.95 million tonnes 595.01 billion euros
	Food export values and tonnes	76.23 million tonnes 651.96 billion euros
	Total number of agricultural holdings	36 000
	Total number of small agricultural holdings (below 10 ha)	8 850

Sources: see tables 1-3.

3.2.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

Belgium has a decentralised governance structure, consisting of the Federal authority and three regions: Flanders, Wallonia and Brussels. The Federal level has jurisdiction over matters

regarding aspects of public health, nutrition, and food safety. Food health issues and consumer policies are generally handled at the federal level. Belgium follows the guidelines from FAVV, the Federal Agency for Food Chain Security regarding food safety. Further, the Federal Agency for Public Service Health, Food Chain Safety and Environment was set up in 2001. The FASFC is a federal executive agency with authority over the whole Belgian territory. It lays down the operational standards applicable to businesses and integrates an official control and inspection services for the food chain. Due to the government structure, there is no national strategy regarding food. On the national level there is a National Nutrition and Health Plan developed, which gives general nutrition guidelines for healthy diets. However, a strategic food policy along with refined dietary guidelines are competencies on the regional level (communities).

The three regions have jurisdiction over territorial matters, such as regional food strategy, public transport, agriculture, etc. On the regional level, public food procurement must follow the national health dietary guidelines and recommendations, and the law governing public procurement.

Further, three communities have jurisdiction related to people, such as education, youth, and welfare. These are the Flemish Community, French Community and German Community. The German Community is part of the Walloon region and shares the Walloon Food Strategy, while they have established their own regulations for education and health. The Brussels area is officially bilingual, and it has Flemish schools belonging to the Flemish community, and French schools belonging to the French community. The communities are responsible for all education, yet there are no binding laws on food literacy or a WSFA.

The Brussels region developed a ‘Good Food Strategy’ in 2015, which was set up as a guideline for the coming years to increase local sustainable production, support a transition to a sustainable food supply and reduce food waste. Some of the initiatives under the strategy included the Vegetable Garden project, which was implemented in schools to set up 10 new school vegetable gardens each year. As part of the strategy, a ‘Good Food Cantine Label’ has been developed to support caterers in their efforts to become more sustainable.

3.2.3 CITY OF GHENT

GHENT	General facts	
	Land area of the municipality	157.74 km^2
	Total population	264 666
	Duration of school year	September – June
	Length of school year	175 days
	Number of schools	48 primary schools Number of state and private schools: n/a
	Number of students in schools	5 666 in primary schools 2 201 in state schools 9 825 in private schools
	Number of kindergartens	42 municipality kindergartens
	Number of children in kindergartens	1 299

SCHOOL FOOD GOVERNANCE

The local case study areas, Ghent and Leuven's cities, are both in Flanders. In Flanders, the institute of Healthy Living makes non-binding guidelines for school meals. There are different types of schools in Flanders. State schools are under the Flemish Government and the jurisdiction of the Flemish Community, public schools are organised by provinces and municipalities and subsidise free schools, in which about 70% of the students go to, are organised by the Catholic Church and by Catholic Education Flanders. Furthermore, there are 'method schools' which are using a specific method in their curricula, such as the Steiner, Freinet or the Montessori educational method.

The main responsible body for school curricula is the Flemish Government and the Flemish Community. The Government cooperates in thematic fields such as: community education, subsidised official education and subsidised free education.

The city of Ghent has established both food and sustainability policies in its city.

SCHOOL FOOD PROVISION

A hot meal is served at lunch time in city schools, and kindergartens get snacks in addition to the hot meal. The lunch contains soup with bread, a hot meal and a dessert.

School food is organised through one contract with one catering company, which prepares the food in a centralised kitchen and delivers the hot meals to schools and kindergartens. The kitchen staff in the educational institution is responsible for heating and serving the food.

The average cost in kindergartens is €3.55 and a diet menu is €7.55. In primary and secondary schools, the average meal cost is €4.90, and a diet menu is €8.20. The food cost includes both food ingredients, transportation, staff pay, etc. The City of Ghent provides income-related discounts on the shelter fee, based on joint taxable income. The City of Ghent will process personal data to proactively grant these discounts. This discount is granted for the duration of one school year (from 1 September to 31 August) and takes effect the month of application in case it was not automatically applied for and granted in September. If the most recent tax notice cannot be submitted or the financial situation has changed to such an extent that the tax notice does not reflect the current situation, other evidential documents may be submitted in support of an income-related discount.

SCHOOL FOOD PROCUREMENT

Food purchases are centralised within the municipality and done through an 'open procedure'. Procurement is also digitalised. The city cooperates with market actors (suppliers and potential suppliers) through dialogue events with stakeholders, desk research, one-to-one meetings with suppliers, site visits, and informal chats.

Sustainability considerations are generally stated as technical specifications (which are mandatory) and as award criteria. These include requirements for organic produce, vegetarian and plant-based options, seasonal food, labels, solutions that minimise food waste and practices that minimise waste in general. Additionally, short supply chain can be a requirement for the award phase, which also helps with understanding the sustainability of the supply chain. Contracts are awarded based on a price to quality ratio analysis and a non-renewable standard contract is signed with the successful bidder. A new tender is prepared every four years.

The city of Ghent is part of the Cool Food Pledge[10], which commits to specific reductions in GHG by 2030. This has also impacted tender requirements and resulted in a decreased share of animal products in school meals since 2021. As part of the pledge, the GHG emissions associated with the food served in the municipality are calculated annually.

The region sees the main barriers to opting for more sustainable food procurement as the higher costs related to a higher share of organic produce and the lack of suppliers on the market big enough and mature enough to deliver sustainable meals. The environmental and social impact of the purchases made by the municipality are assessed regularly through peer reviews and an environmental calculator.

Preferred focus points for Ghent in the SF4C project:

- Opening up opportunities for local small-scale farmers and SMEs;
- Integrating food education into the school curricula.

3.2.4 CITY OF LEUVEN

LEUVEN	General facts	
	Land area of the municipality	56.63 km^2
	Total population	102 133
	Duration of school year	September – June
	Length of school year	36 weeks, 182 days
	Number of schools	65 schools in total: 16 state schools 40 catholic schools 2 private schools
	Number of students in schools	14 025 in secondary schools 7249 in primary schools
	Number of kindergartens	12 primary schools with kindergartens 4 separate kindergartens 25 catholic kindergartens
	Number of children in kindergartens	3916 in all kindergartens

[10] https://coolfood.org/

SCHOOL FOOD GOVERNANCE

The city of Leuven has established both a food policy and a sustainability policy. The Leuven food strategy 'Voeding Verbindt' (Food Connects), focuses on promoting healthy and sustainable food, bringing consumers and producers closer together, giving space for sustainable food production, focusing also on sustainable agriculture, preventing food loss and re-use of surpluses, and stimulating innovation.

The main body responsible for establishing curricula is the Flemish government, while the city has the leeway to influence it through intercity panels and school councils.

SCHOOL FOOD PROVISION

In Leuven, each school is responsible for deciding whether and how they organise food provision in schools. They can choose whether they offer warm meals at school. If they choose not to, students bring food in lunchboxes. If they do, lunch is organised through catering services, and the school manages the procurement. Very few schools still have an on-site kitchen, and even fewer are using the kitchen with staff or volunteers.

Most schools do not offer warm meals, especially following the effects of the COVID-19 pandemic. Breakfast is not served in schools nor in kindergartens.

In cooperation with Rikolto, the municipality conducted a pilot project in six primary schools, which applied for a subsidy for providing healthy and sustainable food. The schools that were granted the subsidy decided how to serve the food in schools. As an example, one school chose to provide breakfast carts, from which pupils could grab something to eat when they arrived at school in the morning. A few other schools decided to offer free soup for students. It was also important to receive the soup ingredients from local farmers. One school decided to provide a piece of fruit from local farmers for the pupils, a different one each day of the week. There is ongoing work in establishing another pilot project about offering warm meals.

SCHOOL FOOD PROCUREMENT

The municipality does not have an overview of the procurement process nor requirements used in tenders as each school procures their own food and catering through tenders. Also, the procurement process is not digitalised.

Preferred focus points for Leuven in the SF4C project:

- Opening opportunities for local small-scale farmers and SMEs;
- Reduction of animal-based food/protein shift;
- Tackling social issues (e.g., fighting unemployment);
- Shortening the supply chain;
- Integrating food education into the school curricula.

3.3 CZECH REPUBLIC

3.3.1 COUNTRY PROFILE

THE CZECH REPUBLIC	Country profile and general facts about the food system	
	Total land area	78 871 km^2
	Total population	10.70 mil
	Number of regions	14
	Number of municipalities	150
	Total agricultural area	3 493 609 ha
	Total organic agricultural area	575 152,5 ha
	Share of organic area	16.5%
	Food import quantity and value	15.87 million tonnes 226.09 billion euros
	Food export quantity and value	34.41 million tonnes 239.39 billion euros
	Total number of agricultural holdings	28 910
	Total number of small agricultural holdings (below 10 ha)	11 220

Sources: see tables 1-3.

3.3.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

The survey revealed that the nutritional requirements for school meals in the Czech Republic (CR) stem from Decree No. 107/2005 Coll. on school meals and its Appendix 1, so-called "consumption basket". That is, average monthly consumption of selected types of food per

dinner and day in grams. Average food consumption is calculated from the basic range of foods and child age to ensure that the relevant nutritional standards are met. The consumption basket contains ten essential commodities, from meat, fish, dairy products, sugar, and fat to fruit and vegetables. While nutritional requirements are provided, dietary guidelines do not exist nationally.

The Ministry of Education, Youth and Sports stipulates detailed conditions for school catering, the operation of school catering facilities and the scope of services provided. Though nutritional guidelines come from the consumption basket, the Ministry of Health also offers supplementary methodology via Nutritional Recommendations to calculate nutritional standards through the consumption basket. It was reported that no social or environmental considerations regarding school meal provision have been set up.

There are no public procurement guidelines for school food; only a legally binding price ceiling for meals (lunch in primary and secondary schools) or daily catering (morning snack, lunch, afternoon snack in kindergartens) is fixed. Thus, kitchens must abide by the monthly budget for ingredients based on the prices charged for meals. This means that the only criterion for procurement is the cost of the meal.

The Czech Republic has 8,728 school kitchens, each responsible for its own procurement. About 75% of schools provide meals produced from their own kitchens; the remaining schools have food delivered by external caterers, mostly from other school cafeterias. Some school kitchens are managed by small local private caterers and others by multi-national companies, like Scolarest. Each kindergarten has a kitchen or food preparatory facility for warming up food delivered from a nearby school cafeteria or private caterer. As indicated above, there is no public procurement by the municipalities. According to the information collected, the central government only marginally addresses food procurement, and currently, there is no legal framework of the policy governing food procurement and sustainable development. The Ministry of Education, Youth and Sports provides non-binding recommendations for school food providers and advises using fresh, seasonal and regionally sourced ingredients when possible.

About 400 schools in the Czech Republic are part of an international programme called "Eco-School", which is "*the largest global sustainable schools programme*"[11]. Nationwide, the only sustainable school food project is the Skutečně zdravá škola programme (SZS, translation: "Really healthy schools"). According to Jones et al. (2022, p. 547), the programme was initiated *"to improve the state of the school food and food culture through using more sustainably produced foods from local farms and experiential food education"*[12].

3.3.3 LOCAL LEVEL

THE CZECH REPUBLIC	General facts	
	Duration of school year	September – June
	Length of school year	10 months (2 months of summer vacation)
	Number of primary schools	4 238 (85% public; 6,4% private schools) (age 7-15)
	Number of students in primary schools	964 571
	Number of kindergartens	5 349 (4 782 public; 425 private; 50 church schools)
	Number of children in kindergartens	360 490

SCHOOL FOOD GOVERNANCE

The Czech government has no legal framework of the policy governing public/school food procurement and sustainability. The responsibility for school food procurement lies entirely with the head of the school cafeteria, who has the authority to procure products for cooking from whomever they choose. The only limitation is the price, as the monthly budget has a legal ceiling.

SCHOOL FOOD PROVISION

About 80% of all schools have on-site kitchens run by school chefs employed by the school themselves. The remaining 20% of schools source their food from on-site kitchens of other

[11] https://www.ecoschools.global/

[12] Mat Jones, Dorte Ruge & Verity Jones (2022) How educational staff in European schools reform school food systems through 'everyday practices', Environmental Education Research, 28:4, 545-559, DOI: 10.1080/13504622.2022.2032608

schools or have private companies provide catering services to several schools. However, there are a few centralised kitchens run by some municipalities, but that is considered very rare. Schools that cater meals from other schools always get hot meals delivered. Some canteens which serve delivered food also have heating facilities for reheating or keeping food hot.

In primary schools, only lunch is provided. In kindergartens, morning snacks, lunch and afternoon snack is provided to children.

The lunch provided at primary schools consists of soup, a main dish, salad, dessert, and a drink. The average cost per meal is around €1.20, which covers only food ingredients and is paid by parents. The local municipality and the state budget partly cover the school kitchens' operating costs.

Some municipalities/schools are part of the Ministry of Education, Youth and Sports "Free lunch" programme, where children, after approval, are served free lunches based on their low socioeconomic status. There are also private foundations supporting this scheme.

SCHOOL FOOD PROCUREMENT

School food procurement is decentralised; each school procures its own food/catering service. Procurement remains below the national threshold and is not digitalised. Most school kitchens in the Czech Republic use digital inventory management systems but not purchasing systems. Typically, a direct contracting procurement procedure is applied. However, it was stated that canteens do not sign contracts but rather use purchase orders. Approaches for engaging or dialoguing with the market are not in use due as there are no tendering processes carried out in the country. In addition, the survey results revealed that no assessment of the environmental or social

Preferred focus points for the CR in the SF4C project:

- Shortening the supply chain;
- Increasing the rate of organic ingredients in school meals;
- Opening up opportunities for local small-scale farmers and SMEs;
- Following seasonality;
- Measuring the environmental impact of food procurement (e.g., CO_2 calculation);
- Integrating food education into the school curricula;
- Improving price-quality ratios.

impact of procurement is presently done but indicated that food waste reduction would be a valuable indicator to assess impacts.

One of the main barriers to school food procurement in the Czech Republic stems from the legal framework because a legally binding price ceiling does not always allow for sustainable food choices. The absence of sustainability standards in the school food framework, as well as the absence of expertise at the purchasing level, specifically in school canteen leadership, is also considered to be a fundamental hindrance. However, the implementation of healthy and sustainable school meal procurement can bring a change to the national system of school food in the Czech Republic.

3.4 DENMARK

3.4.1 COUNTRY PROFILE

DENMARK	Country profile and general facts about the food system	
	Total land area	43 000 km^2
	Total population	5.84 million
	Number of regions	5
	Number of municipalities	98
	Total agricultural area	2 619 987 ha
	Total organic agricultural area	310 210 ha
	Share of organic	11.8%
	Food import value and quantity	16.49 million tonnes 156.02 billion euros
	Food export value and quantity	17.86 million tonnes 193.91 billion euros
	Total number of agricultural holdings	37 090
	Total number of small agricultural holdings (below 10 ha)	12 830

Sources: see TABLES 1-3.

3.4.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

The EU public procurement rules have been fully transposed into Danish procurement law. There is also a Danish National Plan for GPP which includes national adjustments. In

Denmark, there is a National Procurement Officer Network, where ideas are shared on how to enhance GPP. In Copenhagen, public procurement goes beyond conventional GPP criteria.

In Denmark, the National board of Health has drawn up seven dietary guidelines, also known as climate dietary recommendations. These recommendations are both aimed at meals provided in private homes as well as those served by the public. In Denmark, 0-6 year old children attend kindergarten, and 6-16 year olds attend school.

In the kindergartens, parents must vote on whether the municipality should supply the food provided or if instead parental paid lunches should be served in kindergartens. In Copenhagen, 89% of kindergartens support for municipality supplied lunch. Most of the institutions in Copenhagen have their own kitchen and the kitchen personnel are hired by the municipality. In kindergartens, the food is mainly produced on-site, only a few kindergartens do not have a kitchen and therefore have the food delivered from a catering company.

From the ages of six to 16, children attend school in Denmark. School food is not regulated by the national government; instead decisions are taken at the local government level as to whether they offer school food or not. In Copenhagen, there are 16 schools where school food is produced on-site with the help of students. In 45 schools, meals are pre-prepared at a central kitchen and then delivered to the schools at night. In those schools, pupils help kitchen staff to finish preparing the meal before serving it for lunch.

The Danish Health Authority has drawn up dietary recommendations for day-care centres and schools based on official dietary advice and Nordic Nutrient Recommendations. Advice and suggestions are also prepared for packed lunches. There is a focus on organic and sustainable meals.

3.4.3 CITY OF COPENHAGEN

COPENHAGEN	General facts	
	Land area of the municipality	179.8 km^2
	Total population	632 300
	Duration of school year	August – June
	Length of school year	40 weeks, 200 days
	Number of schools	71 public schools 56 private schools
	Number of students in schools	41 419 in state schools 10 355 in private schools
	Number of kindergartens	408 municipality kindergartens 367 state kindergartens 41 private kindergartens
	Number of children in kindergartens	32 806 in municipality kindergartens 31 233 in state kindergartens 1 573 in private kindergartens

SCHOOL FOOD GOVERNANCE

The Municipality of Copenhagen has established food and sustainability policies in its region.

The Ministry of Education is the main body responsible for setting school curricula. The Municipality has the possibility to influence this process by giving feedback to the Ministry at the stage of developing the legislature. The Municipality follows the National Procurement Law, which builds upon EU procurement laws. A political food strategy and various other environmental strategies are in place at the municipal and greater regional level with goals and actions incorporated into food purchases and contracts. The Copenhagen Food Strategy established goals for climate protection, organic food, less food waste and healthy meals for all citizens. A political decision was also made to prioritise school and kindergarten meals within the strategy.

The Organic Food label is a state controlled labelling scheme. It comes in three versions: Bronze (30-60% organic food), Silver (60-90% organic) and Gold (90-100% organic). Copenhagen Municipality has the goal all public meals serving a minimum of 90% organic

food. The Municipality of Copenhagen is also actively working to reduce food waste in all public dining areas.

SCHOOL FOOD PROVISION

In Copenhagen, there are two different models for school meals: *Food schools* and *Eat School Meals*.

In the Food Schools model, food is prepared in a large on-site production kitchen. In these schools, food, its production, and health are a central and integrated part of everyday life. It is also connected with the school's pedagogy and organisation. The school kitchen is designed to accommodate students' participation, and staff are trained to educate pupils on the topic of food.

The Eat School Meals model has a different concept. In this case, the food is produced in a large central kitchen, and delivered to schools on a daily basis, heated or cooked in a smaller kitchen, and then served to the children. In addition, it's also possible for children to bring packed lunches from home. The Eat School Meals model has the Gold organic food label, meaning that the food served is 90-100% organically grown, and the food is seasonal. Furthermore, the food served must reflect the diversity of the children who consume it. In this way, the Municipality of Copenhagen tries to create the right balance between development and food education on the one hand, and security and well-known dishes on the other. Food must appear authentic, respect traditions, be contemporary, and have high culinary quality. This model is designed as a climate-friendly lunch offer with a significant focus on food waste. Copenhagen's Food and Meals strategy is considered a starting point in their work.

In both models, children join kitchen staff to prepare and serve the food they eat.

Most kindergartens have their own kitchens and kitchen staff, while just 12 of them have their food delivered from a private catering company. Controversially, just 16 schools have their own kitchen and staff, while 45 schools have food from the municipal central kitchen. Additionally, ten schools have no system in place yet.

In terms of costs, lunches are ordered and paid by parents. The average meal cost at schools is €3, and at day-care institutions, €4 per day. The price includes both food and labour costs. In kindergartens, parents pay for lunch, while the municipality pays for additional meals, such

as breakfast and snacks during the day. In schools, parents pay about 50% of the total cost, while low-income parents receive subsidies and pay either half, a quarter or none of the cost of the food.

SCHOOL FOOD PROCUREMENT

Food procurement in Copenhagen is centralised within the municipality, and the process is completely digitalised. Usually, one large tender is targeted to a wholesaler that can deliver everything needed for smaller kitchen units. Smaller, below the EU threshold tenders are made for two large central kitchens, targeting SMEs. This system is built upon a market analysis where it was identified, which producers would like to offer their bids and which goods in the kitchen are needed.

Sustainability requirements are most often described in the technical specifications through mandatory environmental/social criteria. These requirements include organic food, vegetarian and plant-based options, free-range animal products, seasonal food, and low-carbon emission transportation. Tenders are awarded based on price-quality ratio analysis, and a framework agreement is signed with the successful bidder. The procurers use specific methods to assess the impact of procurement, such as an environmental calculator, along with peer reviews and assessments.

In Copenhagen Municipality, it is believed that implementing sustainable and healthy school meal procurement provides an opportunity to implement political goals and follow the effect of the contract clauses when implemented fully. The primary sustainability indicator used to prioritise and assess the impact of purchases made for schools would be GHG emissions.

The main barriers identified is the lack of sustainability expertise, the lack of offers on the market and high costs versus low budgets.

Preferred focus points for Copenhagen in the SF4C project:

- Opening up opportunities for local small-scale farmers and SMEs
- Reduction of animal-based food/protein shift;
- Integrating food education into the school curricula.

3.5 ESTONIA

3.5.1 COUNTRY PROFILE

ESTONIA	Country profile and general facts about the food system	
	Total land area	45 339 km^2
	Total population	1 331 796
	Number of regions	15
	Number of municipalities	79
	Total agricultural area	986 672 ha (2021)
	Total organic agricultural area	226 605 ha (2021)
	Share of organic	23.0%
	Food import quantity and value	2.26 million tonnes 25.43 billion euros
	Food export quantity and value	4.44 million tonnes 23.47 billion euros
	Total number of agricultural holdings	11 370
	Total number of small agricultural holdings (below 10 ha)	3 850

Sources: see tables 1-3.

3.5.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

The Estonian Ministry of Rural Affairs released a programme called Estonian Food 2022–2025, of which one of the main goals is that the local consumer makes informed food choices. The plan is to achieve this by raising public awareness about reducing food waste and informing people about food quality schemes like geographical indications and organic labels. There is also an emphasis on the education and involvement of children and young people with educational programmes related to locally sourced food.

The Programme includes sustainability aspects in the context of contributing to the EU goal of sustainable food systems. It also mentions the importance of reducing the climate impact related to the production and transportation of raw materials and food, though no measures on how to achieve this are specified.

The Estonian Public Health Act aims to protect and promote human health and prevent diseases. One implementing act of the Public Health Act has established health protection

requirements for catering in preschools and schools. The requirements include the menu, energy and nutrient content of a school lunch.

The purpose of the Estonian Food Act is to provide the grounds for public handling of food and raw materials to ensure food safety and compliance with other requirements for food.

The public institutions responsible for food policy and procurement are:

1. Ministry of Rural Affairs – policy making for food and food quality, including organic food
2. Ministry of Social Affairs – policy making for public health
3. Health Board – enforces Public Health Act
4. Ministry of Finance – procurement policy
5. Agriculture and Food Board – enforces Food Act and organic food related regulations, supervision of food handling chain and food safety
6. Association of Estonian Cities and Municipalities – policy making, a representative organisation of local authorities to represent and protect the common interests of Estonian cities and municipalities
7. Estonian Regional and Local Development Agencies – a competence centre and national level development agency for local governments: provides procurement, policy development and service design.

Estonian national nutritional recommendations endorse eating more vegetables, whole grain products, berries and fruits, fewer dairy products, food from group fish-eggs-poultry and added dietary fats, nuts, and seeds.

To ensure food safety, the Ministry of Rural Affairs develops requirements and legislation and organises domestic food chain control and supervision.

Estonia is implementing the EU Farm to Fork strategy to contribute to climate neutrality by 2050 and make the current EU food system more sustainable.

3.5.3 CITY OF TALLINN

TALLINN	General facts	
	Land area of the municipality	159.3 km²
	Total population	450 850
	Duration of school year	September – June
	Length of school year	40 weeks, 175 days
	Number of schools	89
	Number of students in schools	53 657
	Number of kindergartens	142
	Number of children in kindergartens	22 447

SCHOOL FOOD GOVERNANCE

The food policy of the City of Tallinn is under development. Indirectly, sustainable food is included in the Tallinn City Strategy as one of the goals for a green transformation.

Tallinn participated in the Baltic Sea Region Programme project "StratKIT – Innovative Strategies for Public Catering: Sustainability Toolkit across the Baltic Sea Region", which promoted more sustainable school food and public procurement of catering services. Many schools participate in the global Eco-Schools programme, in which food is one of the 12 focus topics.

While the school principals are responsible for developing their schools' curricula based on the national curriculum, the Tallinn Education Department provides guidance and feedback to the public schools in the annual evaluation process.

SCHOOL FOOD PROVISION

Most generally, catering services are procured from private companies using contract catering model. For cooking meals, both on-site and centralised kitchens, from which the catering service provider distributes meals to multiple schools, are in use.

Schools provide lunch and, on certain occasions also, after school meals. For example, an after-school meal is provided for only primary school children who stay at school after the lessons. After school meals, however, are only provided for an additional charge, paid by parents. Kindergartens offer breakfast, lunch and afternoon snacks. The school lunch,

kindergarten breakfast and lunch are hot meals (type of meal delivery: cook and serve). Also, cold food (e.g., sandwiches, snacks) are available at both schools and kindergartens.

Since 1 September 2022, Tallinn's school lunch (hot meal) cost has been fixed for all schools at €1.56 per child per day (previously, the price was €1.34). The school lunch is fully subsidised, whereas the national government covers €1 euro and Tallinn municipality €0.56 per day. Thus, the school lunch is free of charge for all children. Meal costs includes both food ingredients and staff costs. The catering service provider must use at least 70% of the subsidy to buy food and up to 30% to organise the catering service.

The city also partly subsidises meals in kindergarten: €2 a day for children aged three to seven and €1.80 a day for children aged from zero to three years. Parents pay for the missing part if the actual meal cost is higher.

SCHOOL FOOD PROCUREMENT

Schools can procure the catering service themselves, but most prefer that the municipality lead the process and delegate the procurement task to the school owner. Thus, in Tallinn, the Education Department organises most of the procurement processes centrally for multiple schools at a time. School food tenders are for amounts which are above the EU procurement thresholds, are run through ‘open procedures’, and are fully digitalised. Sustainability issues have been leveraged the most during the pre-procurement market analysis/market dialogue phases. The City of Tallinn feels that they have information on the sustainability of the suppliers' supply chain in terms of environmental and social responsibility. However, the advantages and disadvantages of different procurement models should be analysed.

Health and sustainability issues have been fostered in the tender documents in the school food procurement through mandatory (national/regional) environmental/social criteria and required food education activities (for pupils and kitchen staff). Contracts catering service providers are renewable.

The environmental and social impacts of the city’s procurement actions have not been evaluated. To assess the impact of public procurement in schools, Tallinn would prioritise food waste reduction indicators.

Procurement barriers faced by Tallinn when implementing sustainable and healthy school meals are the following: lack of procurement and sustainability expertise, fixed school meal price, and legal framework. Tallinn sees national health guidelines as an opportunity for implementing sustainable and healthy school meal procurement.

Preferred focus points for Tallinn in the SF4C project:

- Increasing the rate of organic ingredients in school meals;
- Following seasonality;
- Measuring the environmental impact of food procurement (e.g. CO_2 calculation);
- Integrating food education into the school curricula.

3.5.1 MUNICIPALITY OF VIIMSI

VIIMSI	General facts	
	Land area of the municipality	47 km^2
	Total population	22 226
	Duration of school year	September – June
	Length of school year	40 weeks, 175 days
	Number of schools	6
	Number of students in schools	3 117
	Number of kindergartens	9
	Number of children in kindergartens	1 590

SCHOOL FOOD GOVERNANCE

The Municipality of Viimsi does not have a food or sustainability policy. Food education is integrated into the state curriculum, developed by the Ministry of Education and Research. Schools can undertake additional activities, for example, through participation in the Eco-Schools global programme. In all schools, there are posters on healthy food and exercise prepared by the National Institute for Health Development, and they conduct special lessons about healthy food and food preparation.

School development plans are confirmed by the school owner: the municipality. Based on state regulations, Viimsi Municipality has developed regulation requirements for public food procurement.

SCHOOL FOOD PROVISION

School food catering is outsourced to private companies. Meals are prepared in a central kitchen for all municipal schools. The school lunch is a hot meal (cook and serve), also cold food (e.g., sandwiches, snacks) is available. The catering contractor operates from one central kitchen located in one of the schools.

Food is provided three times a day at school. A warm meal for lunch is free for pupils, paid by the state and Viimsi municipality but breakfast and extra lunch (after school meal) are provided for an additional cost (paid by parents). The state provides €1 per day/child, and the municipality adds €0.65 per day/child for the school lunch. The meal cost covers both the ingredients and kitchen labour costs. Two times a week there is soup for lunch, on the rest of the days schools offer steak (meat or fish), vegetables and fresh salad.

The daily cost of the food provided in kindergartens is €2.10 - this contains three meals: breakfast, lunch and afternoon snacks. Parents and the municipality share the cost of food in kindergartens equally.

SCHOOL FOOD PROCUREMENT

Food for municipal schools and kindergartens is centrally procured by Viimsi Municipality. Public procurement for school catering is carried out as an ‘open procedure’, direct contracting (negotiated procedure without prior publication), below the EU thresholds, and completely digitalised.

In the procurement process, sustainability issues are included in the qualification criteria (selection and exclusion criteria), technical specification and contract clauses. The tender documents include mandatory (national) nutritional criteria. Contracts are awarded based on a price-quality ratio analysis (this includes price and other factors). As additional sustainability criteria, bidders are required to offer vegetarian and plant-based options, free range animal products, eco-friendly cleaning products (e.g., ecolabel certified), and solutions that minimise food waste (e.g. redistribution).

In terms of market dialogues or engagement, questionnaires/surveys and requests for information are mostly used. However, more details of the suppliers' supply chain in terms of sustainability would be needed, both in terms of environmental and social responsibility. The

environmental and social impact of municipally run public purchasing procedures is not evaluated. To assess the impact of procurement in schools, Viimsi would prioritise the indicators on healthy, fresh (seasonal) and tasty food as well as food waste reduction.

Currently, a four-year contract (not renewable) has been agreed upon between the municipality and a catering service company. To monitor catering contracts, a working group has been formed by the municipality in cooperation with the National Institute for Health Development, consisting of lawyers, representatives of the education department, schools, kindergartens, parents and pupils. The working group assesses the menus, their ingredients, the taste and appearance of meals, and the price offered from the tenders.

Procurement barriers faced by Viimsi when implementing sustainable and healthy school meals: Due to inflation and the economic situation, the contractor does not want to fix prices for a more extended period.

Viimsi sees the following opportunities when implementing sustainable and healthy school meal procurement: request of local (state/regional) food that would help local providers and farmers; local food is also environmentally friendly. Organic and seasonal food requests also support children's health.

Preferred focus points for Viimsi in the SF4C project:

- Increasing the share of organic ingredients in school meals;
- Following seasonality;
- Integrating food education into the school curricula;
- Improve the price-quality ratio.

3.6 FRANCE

3.6.1 COUNTRY PROFILE

FRANCE	Country profile and general facts about the food system	
	Total land area	672 051 km^2 (543 908 km^2 for Metropolitan France)
	Total population	67.66 million
	Number of regions	18
	Number of municipalities	35 038
	Total agricultural area	26.9 million ha
	Total organic agricultural area	2.7 million ha
	Share of organic	10.3%
	Food import quantity and value	81.53 million tonnes 874.62 billion euro
	Food export quantity and value	141.27 million tonnes 828.85 billion euro
	Total number of agricultural holdings	393 030
	Total number of small agricultural holdings (below 10 ha)	107 000

Sources: see tables 1-3.

3.6.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

Policies on national agriculture, food and maritime fishing in France are presented in an exhaustive legal document, **the French Rural and Maritime Fisheries Code**.[13] In particular, the policy on food, described in Article L1 (section I), gives environmental protection, climate change mitigation and adaption efforts a high priority to secure the availability of "*safe, healthy and varied foods of good quality and in sufficient quantity produced under conditions that are economically and socially acceptable for all*"[14]. To amplify the latter, various national tools such

[13] The Republic of France. (September 30, 2022). *Rural and Maritime Fishing Code.* [National law]. https://www.legifrance.gouv.fr/codes/section_lc/LEGITEXT000006071367/LEGISCTA000029575571/#LEGISCTA000029579994

[14] The French Ministry of Agriculture and Food. (2019). *France's National Food Programme: The Regions in Action 2019-2023*. Page 5. European Commission. https://food.ec.europa.eu/system/files/2021-04/fw_lib_fwp-strat_nfp-strt_fra_2019.pdf

as the *National Food Programme* (PNA) and the *National Nutrition and Health Programme* (PNNS) have been put forward by the government for the period 2019 to 2023. While PNNS determines "*targets, guidelines and focuses for policy on nutrition*", the cross cutting themes of PNA are broader, tackling the issues of social justice, food waste and the enhancement of food education.[15] With the focus on upholding national ambitions, PNA also supports initiatives known as the *Regional Food Projects*, which target social, economic, environmental or health-related issues on a local level in pursuit of taking into consideration local needs.[16] Regional Food projects seek to support ongoing projects and encourage the emergence of new ones, some of which are about integrating actions in school canteens.

Furthermore, France is making greater efforts to accelerate change and leverage ecological transition in procurement practices from the top down. Particularly relevant for the SF4C project are PNA's flagship measures on *institutional catering,* regulated by the EGAlim law, to advance dietary change, some of which concern the uptake of more organic products, promotion of plant-based proteins and new nutritional recommendations for school canteens.[17] In addition, the country has been developing a national action plan to promote sustainable public procurement since the 2000s. The current roadmap (3rd edition), *National Plan for Sustainable Procurement 2022-2025 (PNAD 2022-2025)*, carries an ambition to support the deployment of the advances of the law of August 22, 2021 (law no. 2021-1104) on the fight against climate change and strengthening resilience to its effects in terms of public procurement, namely the integration of an environmental and social dimension into all public procurement contracts, within five years[18].

Among the above mentioned national initiatives, the French government has also set up a plan called *France Relance,* which runs from 2021 to 2023. The plan was launched in response to the economic effects of the COVID-19 pandemic and is designed to enhance sustainable economic growth and resilience. One of its aims is to target school canteens in small

[15] Ibid. (p.5)

[16] Ibid. (p. 31)

[17] Ibid. (p. 27)

[18] The French Government. (n.d.). National Plan for Sustainable Procurement. https://www.ecologie.gouv.fr/sites/default/files/PNAD-PAGEAPAGE-SCREEN%283%29.pdf

municipalities specifically[19]. The plan provides support investments with up to 50 million euro (e.g. purchasing equipment for the preparation, storage and cooking of fresh produce; intangible assets such as software, prevention of food waste, training; intellectual assets such as assistance, technical consultancy, etc.). The French government has also implemented the *rural solidarity budget scheme*, the so-called "1 euro meal"**,** which is allocated to inter-municipal schools (of which at least two thirds of students come that are eligible for the rural solidarity budget) and schools in certain municipalities that are in accordance with the criteria. In this scheme, the government's support is increased to €3 for every meal that is not charged more than one euro.

In the SF4C project, two regions are covered: Auvergne-Rhône-Alpes and Nouvelle Aquitaine, namely the city of Lyon and the Department of Dordogne, respectively. Detailed descriptions and local school food systems of both regions will be presented in the following sections (3.6.3 and 3.6.4).

3.6.3 CITY OF LYON

LYON	General facts	
	Land area of city	48 km^2
	Total population	520 000
	Duration of school year	September – July
	Length of school year	Around 140 days
	Number of schools	208
	Number of students in schools	35 500 (public primary schools)
	Number of kindergartens	50
	Number of children in kindergartens	n/a

SCHOOL FOOD GOVERNANCE

School curricula are managed on a state level. While municipalities such as the city of Lyon do not have any leeway to influence this, teachers could initiate extra-curricular activities

[19] The French Ministry for Europe and Foreign Affairs. (n.d.). *France Relace recovery plan: building the France of 2030*. https://www.diplomatie.gouv.fr/en/french-foreign-policy/economic-diplomacy-foreign-trade/promoting-france-s-attractiveness/france-relance-recovery-plan-building-the-france-of-2030/

outside the programme. The city currently has a sustainability policy administered in the metropolitan area, including Lyon and 58 neighbouring municipalities. Though Lyon has some food related activities, they are not coordinated through a policy. For instance, many schools throughout the city organise various educational actions connected to sustainable food and involve children in school menu planning.

SCHOOL FOOD PROVISION

Different operational catering structures are in place, depending on whether this is a school or a kindergarten. While in-house and on-site catering for kindergartens is possible, in primary schools, municipality owned centralised kitchens are used and managed by a private caterer (a company named Elior). The caterer cooks and delivers meals to schools. As reported by the city, the caterers provide around 26,500 meals in 127 school cafeterias a day.

Lunches are provided both in schools and kindergartens. While kindergarten lunches are offered five days a week, in schools, these are provided four days a week (all working days except Wednesdays). The study also showed that two vegetarian meals are served each week out of four, and an entirely vegetarian option is offered daily in schools. Meals are typically pre-cooked and served later as a hot meal.

The municipality partially subsidises school meals in Lyon. The city pays the most significant share of costs, while the parents must pay for a part of the meal (varies between 80 cents and €7.30), depending on their income. The meal cost includes the cost of the ingredients, kitchen labour costs, food delivery to schools and the staff costs of educators working with children during meal times.

SCHOOL FOOD PROCUREMENT

In Lyon, school food procurement is centralised for schools and kindergartens. Procurement is an open procedure and above the EU threshold. The sustainability aspects of the procurement procedure are levered during market analysis, technical specification, contract negotiation and contract execution. During market dialogue activities, discussion events with stakeholders, surveys, one-to-one meetings with suppliers, requests for information and on-site visits are carried out. In tender documents, health and sustainability aspects are fostered through mandatory national and regional environmental and social criteria, while considering the price-quality ratio analysis.

Further attention is paid to the use of labels of quality and origin, and therefore labels such as organic farming or the Red Label (*Label rouge*) are required. In addition, tender documents contain information about using plant-based options, free-range animal products, eco-friendly cleaning products, low carbon emissions transportation activities and solutions to food waste from the contractors. Usually, standard renewable contracts are signed with the supplier. The city collaborates with the supplier to increase the share of local products and shorten supply chains. The city brings together the caterer and the agricultural branch, following the guidelines of the Agricultural Commission. The city is aiming to increase its share of organic products to 75% and local supply to 50% by 2026.

The utmost procurement hurdle that the city faces in implementing sustainable and healthy school meals is related to the requirement of local supply in all tenders. Though directly managed by the caterer, the city reported that the quantity of supply needed for school catering could present barriers. As for kindergartens, the main issue lies in logistics, namely being able to deliver to all 50 kindergartens, some of which only cater for twenty children. Currently, there is no assessment of the environmental and/or social impacts of Lyon's purchases. The survey revealed that a general approach to assess social and ethical procurement had been developed and is now being implemented, but ecological and social impacts still need be assessed.

The city reported that sustainable and healthy meal procurement offers a significant opportunity to reduce the city's environmental footprint by increasing meal quality and supporting local farmers in buying their products.

Preferred focus points for Lyon in the SF4C project:

- Increasing the rate of organic ingredients in school meals;
- Opening up opportunities for local small-scale farmers and SMEs;
- Following seasonality;
- Reduction of animal-based food/protein shift;
- Shorting the supply chain;
- Integrating food education into the school curricula.

3.6.1 DEPARTMENT OF DORDOGNE

DORDOGNE	General facts	
	Land area of the municipality	9 060 km^2
	Total population	416 000
	Duration of school year	September – June
	Length of school year	36 weeks
	Number of middle schools	35
	Number of students in schools	14 500
	Number of kindergartens	n/a*
	Number of children in kindergartens	n/a*

**The Department of Dordogne is not responsible for catering in kindergartens.*

SCHOOL FOOD GOVERNANCE

As presented previously, school curricula in France are under the responsibility of the national government, and thus the Department of Dordogne does not have any leeway to shape them. Dordogne is responsible for the catering services of 35 middle schools. The Department has both food and sustainability policies in place. It has succeeded in making school cafeterias a pedagogical moment and an example to follow. Dordogne has not only launched an ambitious programme of reorganising school canteens but has created around them value for the territory; a commercial outlet for small local producers who are now main actors and no longer spectators in the food system of the region.

The Department has a local policy aiming at entirely organic, local, homemade meals. To date, eight schools out of 35 are run under this policy, but all schools are expected to follow the path by 2026. These schools have been certified by ECOCERT and are the first schools in France to obtain this label and the level of 100% organic and local products. Dordogne has adopted a systemic approach that has made it possible to connect the real "nutritional" needs of school canteens with local food production, re-centring activities on the enhancement of the skills of each actor in the supply chain and all stakeholders, and putting human labour back at the centre of the local food system.

SCHOOL FOOD PROVISION

The Department of Dordogne is solely responsible for catering for middle school canteens. It has chosen to keep a kitchen in each establishment and have its agents prepare all meals in-house, with the support of a trainer and nutritionist. Each school has its canteen where meals are cooked freshly every day. The Department is not responsible for catering for kindergartens. However, they have some agreements with other cities to cook in the middle school canteens managed by the Department and transfer the hot meals to the respective kindergartens and schools.

Most middle schools in the Department of Dordogne provide only lunch. However, six boarding schools are given meals throughout the day (that is, breakfast, lunch, snacks and dinner), and in one school, lunch and snacks are provided for sports students who play football (around 50 children). Lunch is served four or five times a week (22 high schools are on five lunches and 13 on four lunches per week).

The local food policy states that five components should be included per meal: starter, main course, side dish, dairy product, and dessert, typically fruit or pastry. The meal composition follows national nutrition guidelines and the local food policy. The Department reported that all meals are cooked from raw products, respecting the seasonality of products. Substantial attention is paid to the nutritional aspects of meals, reducing the amount of salt and sugar in meals and using more spices instead.

The junior high school meals are partially subsidised. The gross price for a meal, which includes ingredients and labour costs is €8. The final cost for children after subsidies is €2.8 per meal.

SCHOOL FOOD PROCUREMENT

School food procurement in Dordogne is decentralised, meaning that each middle school manages its procurement under the guidelines set by the Department. Dordogne department services guide school managers and drive local production towards collective catering procurement. The procurement procedure is ‘open’, digitalised and below the national threshold.

As far as possible, procurement focuses on local and organic produce based on local ecosystems and specific procurement requirements. Sustainability is leveraged mostly through the inter-organisational procurement planning, qualification criteria and technical specification stages. 'Requests for information' have been the only market dialogue related activity applied by the Department thus far.

Tender documents foster health and sustainability criteria in various ways, such as through mandatory (national or regionally set) environmental and social criteria and price-quality ratio analysis. Furthermore, the provision of organic food, vegetarian and plant-based options, free-range animal products and the seasonality of food is considered. Dordogne also reported a strong emphasis on using labels but did not highlight any specific ones. Other requirements concern the support given to small-scale farmers and SMEs, using eco-friendly cleaning products, low carbon emissions transportation activities and practices that minimise waste, mainly plastic waste from the contractors.

The survey revealed that the Department is mainly conversant with framework agreements. The same type of contracts, including standard renewable contracts, are signed with school food caterers. Furthermore, the sustainability of the supplier's supply chain is not a requirement in tender documents, but some suppliers offer it nevertheless.

Concerning procurement models, the Department reported that framework agreements are most relevant for their municipality. Legal framework, lack of knowledge from buyers about local product diversity and costs were indicated as the main hurdles to implementing sustainable and healthy school meals in the procurement process. On the other hand, in doing so, the Department sees improvement in health, and re-localisation of procurement for local farmers and SMEs. While the social impact of procurement is being assessed on an ad-hoc basis, it is unclear if environmental impacts are evaluated or not. Social impacts are assessed using informal approaches, such as observations and on-site meetings. The survey respondent stated that organic food could be a helpful sustainability indicator to determine the impact of procurement in schools.

Preferred focus points for Dordogne in the SF4C project:

- Opening up opportunities for local small-scale farmers and SMEs;
- Measuring the environmental impact of food procurement (e.g., CO_2 calculation).

3.7 GERMANY

3.7.1 COUNTRY PROFILE

GERMANY	Country profile and general facts about the food system	
	Total land area	357 588 km^2
	Total population	83.16 million
	Number of regions	n/a
	Number of municipalities	10 796
	Total agricultural area	16.7 million ha
	Total organic agricultural area	1.8 million ha
	Share of organic area	10.8%
	Food import quantity and value	164.12 million tonnes 1671.71 billion euro
	Food export quantity and value	134.06 million tonnes 1802.03 billion euro
	Total number of agricultural holdings	262 560
	Total number of small agricultural holdings (below 10 ha)	62 320

Sources: see tables 1-3.

3.7.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

Currently, there are no food policies or strategies available at the national government level, but there is an ongoing discussion about creating a national food strategy. Instead, federal states can establish their own food policies or strategies.

The key responsible public institutions are the *National Quality Centre for Nutrition in Day-Care Centres and Schools* (NQZ), which coordinates and develops measures and initiatives around the topic of good food in day-care centres and schools[20], *Networking Centres for School Catering*[21], *the Competence Centre for Sustainable Procurement*[22], the *German Society of*

[20] https://nqz.de/

[21] https://nqz.de/vernetzungsstellen/vernetzungsstellen-schulverpflegung/

[22] https://www.nachhaltige-beschaffung.info/DE/Home/home_node.html

Nutrition[23]. Standards on nutrition and food, labelling and consumer information, hygiene and food safety are followed by a combination of regulations on both the EU and national levels. The local framework for procurement is determined by multiple national laws.

Many federal states have state specific procurement laws or administrative regulations on public procurement. However, local authorities have also administrative regulations or guidelines for public procurement. The regulations of the federal states and municipalities supplement or clarify the procurement regulations of the EU and the federal government. This is possible for tenders below the EU thresholds. However, with a few exceptions, the procurement regulations of the federal states do not contain any specific regulations for the procurement of organic food or catering services.

It is since the last major reform of public procurement law in Germany occurred, that environmental and social criteria may also be explicitly considered in procurement processes (§ 97 Abs. 3 GWB /§ 2 Abs. 3 UVgO). For example, the Berlin Tendering and Award Act (BerlAVG) states that public contracting authorities must consider the total life-cycle costs of a product or service (§7, par.2). Furthermore, the administrative regulation of procurement and the environment (VwVBU) declares that at least 15% of food comes from organic farming.

Subject to public procurement law are, for example, public school authorities and municipal kindergartens. Those that are not subject to public procurement law are Church led (independent) kindergartens and schools.

As a national health dietary guideline, the DGE Quality Standard defines requirements for a balanced and sustainable menu planning and preparation of meals. It serves as a guideline for anchoring health promoting and sustainable catering into the school environment. Only in the following federal states, the DGE quality standard for catering in schools is mandatory: Berlin, Bremen, Hamburg, Saarland and Thuringia.

There are numerous noteworthy sustainable school food initiatives in Germany, some of which are:

[23] https://www.dge.de/

- *Sarah Wiener Stiftung*: offers practical education on food and healthy nutrition and cooking classes ("ích kann kochen") for pre-school and primary school children.[24]
- *GemüseAckerdemie*, is primarily an educational programme for 3rd to 6th graders, where children learn where the food on our plates comes from on the school's own farmland. More than 860 schools in Germany, Austria and Switzerland are already working on the project.[25]
- *Kantine Zukunft Berlin* (Canteen "Future" Berlin) is an initiative dedicated to a sustainable transformation of Berlin's public catering. Through active and long-term consultation, with in-house trainings, seminars, and workshops as well as networking events (Canteen Meetups), teams from Berlin's canteen kitchens learn to change the urban canteen landscape towards more quality, sustainability, and appreciation.[26]
- *Anyone Can Do Organic* is the name of the nationwide information campaign for more organic products and sustainable nutrition in outside home catering for children and young people. The action programme aims to raise awareness of the value of healthy and child friendly nutrition among those responsible for the administration and cafeterias of schools and day-care centres, as well as educators, teachers, and parents.
- *BioBitte* initiative for more organic food in public kitchens is the nationwide initiative that wants to contribute to the use of more organic products in outside home catering. *BioBitte* is aimed at political decision makers, contracting authorities, specialist departments and those responsible for community catering. Among other things, the initiative presents background information, aids to action and examples of good practice and invites people to events.[27]

[24] https://ichkannkochen.de/english/

[25] https://www.acker.co/gemueseackerdemie

[26] https://kantine-zukunft.de/

[27] https://www.bmel.de/DE/themen/landwirtschaft/oekologischer-landbau/bio-bitte.html

The SF4C project involves two German cities: Essen and Nuremberg. Detailed descriptions and the local school food systems of both regions are presented in the following sections (3.7.3 and 3.7.4).

3.7.3 CITY OF ESSEN

ESSEN	General facts	
	Land area of municipality	210.34 km^2
	Total population	589 507
	Duration of school year	August – July
	Length of school year	40 weeks, 200 days
	Number of schools	158 (147 municipality and 12 private schools)
	Number of students in schools	n/a
	Number of kindergartens	58 (50 municipality and 8 private kindergartens)
	Number of children in kindergartens	Approx. 4 673

SCHOOL FOOD GOVERNANCE

The Framework Curriculum combines input from multiple actors, for instance, the Standing Conference of the Ministers of Education and Cultural Affairs, Ministry for Children, Family, Refugees and Integration of the State of North Rhine-Westphalia, Ministry for School, and Education of the State of North Rhine-Westphalia. The implementation of specific learning objectives is set by a school board, at the local headmasters' conference, and school teachers. Day-care centres for children funded by local authorities or non-public bodies are subject to public supervision by the responsible bodies for the public child and youth welfare services at the state/regional level. This is generally exercised by the region (Länder) (Landesjugendämter) youth welfare offices, who are responsible for the framework, but specific learning objectives remain at teachers' responsibility.

At present, the City of Essen only has an advisory function and only subsidises meals for children coming from vulnerable homes, both in day-care centres and schools. To shape learning objectives, the city holds dialogues with teachers and other parties involved in educating and/or catering for young children. The discussions held concern the possibilities and ways of positive effects of healthy and sustainable diets on climate and society.

The City of Essen has a sustainability policy and has taken up various sustainable school food related initiatives. Many are about developing urban and permaculture gardening and growing their food. *Ackerhelden* is an example of the latter, an initiative which seeks to engage people in more raised garden beds and urban gardening in schools and kindergartens. Noteworthy are grassroots initiatives between individuals and schools or kindergartens which, for example, have led to the establishment of a local food council, environmental association, and dedicated food volunteers. Essen also stands out with an initiative called *Zukunftsküche* (in English Kitchen of the Future), launched by the EU Green Capital Agency, which is part of the administration of the City, and the local food council. It takes place in a roundtable with locally engaged people working in different catering services, local kitchens, and community catering. The main aim of the roundtable is to discuss common challenges in a solution-oriented way, looking for possibilities for tackling problems such as lack of sustainability, organic food consumption and so forth. Other mentioned initiatives are the SF4C project and the EU school fruit, vegetables, and milk scheme.

There are various framework regulations in place that present operating instructions for tenders in Essen such as the *Sub-Threshold Procurement Regulations* (UVgO), the *Associated Service Instructions* (DA UVgO), the *Procurement Regulations* (VgV) and *Part 4 of the Act Against Restraints of Competition* (GWB). The award principles for municipalities are described in section 26 KomHVO. In general, the desideratum is to design award processes as uniformly as possible across municipalities (or nationwide). That is, the procedures are likely to differ between municipalities rather than in detail, especially since the legal situation prescribes the procedure relatively clearly. The basic principles here are, on the one hand, the principles of economic efficiency and economy of administrative action and, on the other hand, transparency, equality, and non-discrimination vis-à-vis bidders, with the aim of using municipal financial resources (i.e., ultimately taxpayers' money) economically and at the same time acting in compliance. Public contracts are usually (or above a certain value limit, obligatory) put out to tender via a central award platform, which virtually bundles all public contracting authorities. In principle, the procurement procedure works in such a way that the demand side approaches the City with a request. The City then prepares and carries out the corresponding tendering process and subsequently gives the demand side an award recommendation from the perspective of procurement law. The award itself, however, is executed by the demanding agency and it is also responsible for compliance with all other regulations. In most cases, the audit office is also involved as an external control body.

From December 2021 onwards, the procurement for 20 all-day schools has been organised centrally by the municipality. Schools receive their meals from a local catering service. Municipal procurement and legal experts (administrative employees) are responsible for the procurement procedures. Decisive criteria have been the price-quality ratio analysis so far. Sustainability, organic food, and local or seasonal food were not considered, at least not as decisive criteria. As of December 2021, 24 open and partially bounded all-day schools (with compulsory participation in school meals) organised and decided individually on their school meals and procurement. The approaches vary a lot depending on the number of school meal participants.

SCHOOL FOOD PROVISION

School food is prepared in the centralised kitchen within the municipality. The kitchen has in-house catering (subsidiary company) with cooks employed by the City of Essen. Food is delivered hot to the schools and there is no necessity to reheat it unless the temperature is less than 68 degrees (food law allows a maximum standing time of three hours from production to serving). In addition, cold dishes are included in this system. The permitted temperature here is maximum seven degrees at delivery.

Schools and kindergartens in Essen offer hot lunches, which always include vegetables and are followed by a dessert. A vegetarian alternative is also available. While raw fruit is always available during the day in schools, in kindergartens, it is available twice a week at snack time in the afternoon. Cold meals, such as sandwiches, are available if requested for excursions.

According to the Education and Participation Act, the state subsidises school food for vulnerable groups with low income such as unemployed people or welfare recipients. Depending on the low income, school food can be subsidised up to 100%. A school meal is €4, meal in kindergarten is €2.70. In both cases, the final cost includes food ingredients and kitchen labour costs.

SCHOOL FOOD PROCUREMENT

School food procurement in Essen is mixed. All-day supervision and care for children aged between six and ten is provided through intramural offers as well as in after school centres (e.g., Horte, in German) run by the public child and youth welfare services. All the regions in Germany are currently expanding their provision of education and care for children outside

classroom time. A growing number of primary schools have introduced fixed opening hours (approximately 7.30 to 13.00/14.00, depending on local conditions) so that parents can be sure their children are cared for even outside lesson time. This involves amended school and teaching concepts and offering activities that complement lessons and are run by non-school bodies. Participation in the additional activities is usually voluntary. This includes a voluntary participation in school meals. There are three different forms of all-day schools in Germany: fully bound, where all students are obliged to make use of the all-day offer; partially bound where students have the choice to commit to making use of the all-day offer (e.g. individual class units or grades) and open form, where the all-day offer is made available to students on a voluntary basis; registration is usually binding for half a school year. For the fully bound form, there is a contract between the City of Essen and one catering service provider. Schools in the partially bound and open form set up contracts individually on their own.

Essen reported that some purchases made are above and others are below the EU threshold. Procurement procedures can be both 'open' and 'restricted' and are fully digitalised. Restricted procedure for procurement tends to be below the EU threshold. The city further stated that the average ratio is indefinable as it changes from year to year, depending on the fluctuating number of children eating at school.

Market dialogues are not common in Essen. Mainly desk research activities have been carried out.

In tender documents, price-quality analysis, availability of vegetarian and plant-based options and free-range animal products are considered necessary requirements. The city has used dynamic purchasing systems and framework agreements as food procurement models. The use of models varies, depending on the product to be procured. Typically, standard renewable contracts are signed with the supplier.

The City of Essen carries out the environmental impact of procurement regularly but does not evaluate social impact. The respondent, however, was not sure of the methods of assessment being used. The City of Essen would prioritise GHG emissions as an indicator to assess the impact of procurement in schools and the most relevant procurement models could be SDGs-aligned food tendering.

The central procurement barriers to implementing healthy and sustainable school meals stem from the legal framework, lack of sustainability/procurement expertise as well as market's offer, high costs, and having too many participants involved within the municipality. In addition, it was noted that the high diversity/individuality of schools in food procurement approaches and partly small numbers of pupils taking part in school meals can present obstacles. However, if the barriers are overcome, it could increase sustainability/procurement expertise and achieve a coordinated approach to food procurement. Overall, this would have a positive impact on the legal framework.

Preferred focus points for Essen in the SF4C project:

- Opening up opportunities for local small-scale farmers and SMEs;
- Following seasonality;
- Measuring the environmental impact of food procurement (e.g., CO_2 calculation);
- Integrating food education into the school curricula.

3.7.1 CITY OF NUREMBERG

NUREMBERG	General facts	
	Land area of the municipality	21 800 km^2
	Total population	530 222
	Duration of school year	August – July
	Length of school year	36 weeks, 190 days
	Number of schools	189
	Number of students in schools	39 081
	Number of kindergartens	394
	Number of children in kindergartens	20 700

SCHOOL FOOD GOVERNANCE

The Bavarian Ministry of Education and Cultural Affairs is responsible for school curricula that also applies to schools in Nuremberg. The city reported that there is a food policy for meals in kindergartens, but it remained unclear whether there is a policy that applies to schools. It was also noted that sustainable food initiatives in Nuremberg schools are not common.

While there is no local public procurement for schools, kindergartens in Nuremberg follow a guideline for caterers which lists principles for organic and sustainable meals. The Municipality gives recommendations to schools for their inviting tenders but, as a rule,

schools or public-private partnership companies that run some schools have the mandate to sign contracts with the catering companies. As of today, the City of Nuremberg does not have any influence on the final agreements because, according to Bavarian law, school meals do not belong to the municipality's duties.

SCHOOL FOOD PROVISION

The city stated that parts of or the whole process of preparing the public meal had been outsourced to private companies thus catering service contracts are signed. In some schools catering companies work in on-site kitchens and cook fresh meals but mostly the hot meal is delivered to schools. However, the person responding to the survey admitted that there are still a few schools that heat up frozen meals, but this number is decreasing.

Schools and kindergartens in Nuremberg usually offer lunches and snacks. Those whose lunches are subsidised are only given a hot lunch. As reported by the City, school meals, specifically lunches, are only subsidised for children from vulnerable groups. Others are required to cover the whole cost which covers lunch and snacks. The cost for a meal is €4.80 and this includes ingredients and kitchen labour costs.

SCHOOL FOOD PROCUREMENT

Each school is responsible for organising its own catering service in Nuremberg. Procurement is decentralised and organised by the school or the public-private partnership company that runs the school. Contracts between schools and caterers are usually standard and renewable. Procurement is reported to be below the EU thresholds and direct contracting is used, meaning that the terms are negotiated without prior publication. The city stated that procurement processes are not digitalised.

The sustainability aspect has been most advantageous in defining qualification criteria, contract negotiations, and contract clauses. However, the municipality can only make recommendations for the tendering and procurement process as well as on health and sustainability issues. The person involved in the survey stated that they have not carried out any market dialogues thus far and are not familiar with any of the listed food procurement models (e.g. dynamic purchasing model). For the presented reasons, the city lacks information about the school food suppliers' supply chains. The City highlighted that framework agreements could be relevant for the municipality.

The survey revealed that the city's primary barrier in implementing healthy and sustainable school meals in the existing procurement system is the current legal framework, lack of sustainability or procurement expertise and high costs. The city expressed that public procurement could lead to a comparable offer of school meals and enhance regional, seasonal, and ecological food at all schools and kindergartens. The city also sees it as a great potential to reduce costs, integrate local farmers and producers and improve logistics.

According to the information received, there is no assessment being done of the City's impacts from its procurement decisions. However, if these were evaluated, the GHG emission indicator would be very relevant.

Preferred focus points for Nuremberg in the SF4C project:

- Increasing the rate of organic ingredients in school meals;
- Opening up opportunities for local small-scale farmers and SMEs;
- Following seasonality;
- Reduction of animal-based food/protein shift;
- Tackling social issues (e.g. fighting unemployment);
- Measuring the environmental impact of food procurement (e.g., CO_2 calculation);
- Shortening the supply chain.

3.8 HUNGARY

3.8.1 COUNTRY PROFILE

HUNGARY	Country profile and general facts about the food system	
	Total land area	93 025 km^2
	Total population	9.7 million
	Number of regions	8
	Number of municipalities	3 155
	Total agricultural area	5 049 000
	Total organic agricultural area	303 200
	Share of organic	5,7%
	Food import quantity and value	11,65 million tonnes 149,.91 billion euro
	Food export quantity and value	33,64 million tonnes 171.59 billion euro
	Total number of agricultural holdings	232 060
	Total number of small agricultural holdings (below 10 ha)	159 740

Sources: see tables 1-3.

3.8.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

Hungary has a Public Procurement Act in place since 2015, which defines the national rules on public procurement procedures and implements the applicable EU Directives. This Act is valid in all parts of the country.

In Hungary, there is no explicit food policy established on the national level, yet there are regulations which require the nutrition/food and the hygiene and the food safety standards, such as the Government Decree 676/2020 which deals with the regulations regarding public food contracts. Furthermore, The Child Protection Act (Act XXXI of 1997) regulates school meals for children. The law states that the state and municipalities must run the child protection system. Regarding food safety, Government Decree 4/1998 sets food safety and hygiene regulations. The National Food Chain Safety Office provides the catering industry with guidelines for good hygiene practices in the catering and food service.

In 2016, a nationwide programme was established which aims to reduce the amount of food wasted in Hungary, led by the National Food Chain Safety Office. As part of the Waste-less programme, several workshops were conducted in primary schools on food waste prevention, and during summertime, the Waste-less team educated children about food waste In summer camps.

3.8.3 CITY OF BUDAPEST

BUDAPEST	General facts	
	Land area of the municipality	525 km^2
	Total population	1 723 836
	Duration of school year	September – June
	Length of school year	180 days
	Number of schools	384 state schools 215 private schools
	Number of students in schools	141 675 in state schools 50 072 in private schools
	Number of kindergartens	389 municipality kindergartens 32 state kindergartens 193 private kindergartens
	Number of children in kindergartens	39 213 in municipality kindergartens 941 in state kindergartens 8 248 in private kindergartens

SCHOOL FOOD GOVERNANCE

The City of Budapest has established a sustainability policy in the city. Food policy for the municipality is currently under development as part of the EU-funded FOODCLIC project.

The Ministry of Interior is responsible for public education and for the school curricula throughout the country and the municipalities have no opportunity to influence this process.

In its public purchases, the Municipality of Budapest follows the national Public Procurement Act, and has set its own public procurement rules, however, these do not focus on food related issues.

The Municipality participates in the DIVINFOOD project, aiming to popularise forgotten plant varieties and, through this, develop plant-based food chains that are better adapted to environmental challenges. Additionally, Budapest is a partner in the FOODCLIC project, which aims to develop an urban food strategy and raise awareness on food sustainability in schools. The nationwide Wasteless project also operates in the city's schools, aiming to reduce food waste and raise awareness of it.

SCHOOL FOOD PROVISION

Usually, two meals are served in educational institutions – one main meal for lunch, and a snack in the morning or the afternoon. There is breakfast, lunch and two snacks offered in schools in Budapest. The average cost of school lunch is €1 plus 27% taxes, altogether €1.27, which includes a soup and main dish for lunch, and the breakfast and snacks are about 50% of this sum. The meal cost includes only ingredients.

SCHOOL FOOD PROCUREMENT

The Municipality of Budapest maintains a catering service provider, which is responsible for catering service in the educational institutions in Budapest. This service is partly funded by the municipality, and partly by the parents. The catering service provider acts as a contracting authority and is obliged to procure food and related services as well. Food procurement is done centrally within the municipality.

The catering service provider is in contact with suppliers of produce, and food is prepared in a central kitchen. Procurement is completely digitalised and done through an open procedure. Generally, sustainability requirements in the tenders are described in the technical specifications and seasonal food is required from bidders. A standard renewable contract is signed with successful bidders.

The main barriers to improving these services are related to the transparency of the catering service provider's activities and its suppliers. Furthermore, the outdated legislation on public catering limits the ability to prepare more sustainable food, as it is mandatory by law to serve animal protein every day.

Preferred focus points for Budapest in the SF4C project:

- Opportunities for local small-scale farmers and SMEs;
- Reduction of animal-based food;
- Measuring the environmental impact of food procurement;
- Shortening the supply chain;
- Improving the price-quality ratio.

3.9 ITALY

3.9.1 COUNTRY PROFILE

ITALY	Country profile and general facts about the food system	
	Total land area	301 230 km^2
	Total population	59.24 million
	Number of regions	21
	Number of municipalities	7 904
	Total agricultural area	12.8 million ha
	Total organic agricultural area	2 million ha
	Share of organic	15.5%
	Food import quantity and value	88.30 million tonnes 641.49 billion euro
	Food export quantity and value	57,69 million tonnes 763,70 billion euro
	Total number of agricultural holdings	1 130 530
	Total number of small agricultural holdings (below 10 ha)	873 280

Sources: see tables 1-3.

3.9.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

In Italy, a national food policy or strategy has yet to be developed. However, there are food-based guidelines in place. In 2016, a food guideline was published called *Mediterranean diet UNESCO intangible cultural heritage of humanity – guidelines for promoting a lifestyle and cultural approach for sustainable development*. The guideline identifies the key elements for the promotion of a culture favouring sustainable development through the lifestyles, the wealth of knowledge and the traditions of the territory associated with the practices and representations of the Mediterranean Diet.[28]

There are also dietary guidelines that are updated every few years - the most recent one *Dietary Guidelines for Healthy Eating* was published in 2019.[29] The Italian Society of Human Nutrition's

[28] https://www.obesityday.org/usr_files/biblioteca/UNESCO_dieta-mediterranea-lineeguida.pdf.

[29] https://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/italy/en/

(SINU) *Daily Recommended Values of Nutrients and Energy for the Italian Population* (LARN), which are used in dietary planning, form the foundation for nutrition recommendations.[30]

In addition to different health and nutritional guidelines for school food, Italy has also developed many environmental criteria specifically for food. The Ministry of Ecological Transition released the *National mandatory environmental and social criteria for public procurement of food services and food*. These include mandatory requirements for several aspects of school food catering, for example the minimum quota of organic food (varies per food type), measures for reducing food waste and the use of high energy efficiency appliances.

3.9.1 MUNICIPALITY OF MILAN

MILAN	General facts	
	Land area of the municipality	181.8 km^2
	Total population	1 371 498
	Duration of school year	September – June
	Length of school year	33 weeks, 200 days
	Number of schools	435 state schools 226 private schools
	Number of students in schools	93 660 in state schools 27 991 in private schools
	Number of kindergartens	27 state kindergartens 170 municipality kindergartens
	Number of children in kindergartens	2 007 in state kindergartens 7 338 in municipality kindergartens

SCHOOL FOOD GOVERNANCE

Milan has both a food policy and a sustainability policy in place. The food education curricula in schools are determined by the city's Education Department and its Food Policy area. There is medium/high leeway for the municipality to influence school curricula on food education.

[30] https://eng.sinu.it/larn/

SCHOOL FOOD PROVISION

In Milan, school meals are provided by Milano Ristorazione, a municipal-owned catering company (municipal agency for school canteens). Milano Ristorazione is responsible for procuring the food.

In Milan, some schools have an on-site kitchen, and a centralised kitchen serves others within the municipality. The contracted service provider has 24 external kitchen centres, and 81 kindergartens have an on-site kitchen.

The school meal includes a hot or cold lunch and an afternoon snack. There is also a programme for offering mid-morning fruit that the schools can implement voluntarily. There is no breakfast offered at schools or kindergartens. In kindergartens the provided meals are a hot lunch and an afternoon snack.

The actual cost of a school meal is €4.23. The cost includes food ingredients, kitchen labour costs and food transport from the kitchen centre to the school. The financing model for school meals is partially subsidised – families pay according to their income. There are six levels, and the meals are free for the families with the lowest income. The lowest category is identified according to national standards of income indicators.

SCHOOL FOOD PROCUREMENT

School food procurement requirements are included in the Italian Public Contracts Code. This obliges public procurers to meet the minimum environmental criteria set by the Ministry of Ecological Transition. It is important to note that the code also forbids using lowest price as a criterion for awarding contracts.

A long term service contract for school food in Milan was awarded to Milano Ristorazione (an in-house company). Food is prepared in 24 external kitchen centres and in 81 day-care centres with an internal kitchen.

The city owns 99% of the company's property. The menus are fixed by the provider and the control unit from the City of Milan and shared with the parent commissioners and experts and health authorities at a local level. The Milan food policy strategy is at the core of this service and the Food Policy area is responsible for the control unit of this service. TheCcity and Milano Ristorazione work together on communication and education activities. The menus are

regularly reviewed by coordinating with stakeholders to make the food more sustainable and healthier.

The procurement is centralised as Milano Ristorazione purchases all food. This is above the EU thresholds for sub central authorities. Usually, an 'open' procurement procedure is used. Sustainability aspects have been leveraged most to qualification criteria (selection and exclusion criteria), award criteria and contract clauses. Regarding market dialogue, there have been events with stakeholders and requests for information.

Health and sustainability issues have been fostered in the tender documents in the school food procurement through mandatory (national/regional) environmental/social criteria. There are requirements for organic food, seasonal food, labels and use of energy efficient equipment and eco-friendly cleaning products. Small scale farmers are supported. Low carbon emissions transportation activities are required from the contractors. Also, food education activities for pupils or kitchen staff are required.

Milan's main procurement barrier when implementing sustainable and healthy school meals is the cost of goods. The opportunities for Milan to implement a sustainable and healthy school meal procurement are healthier children, a better environment, and a more widespread food culture.

Preferred focus points for Milan in the SF4C project:

- Increasing the rate of organic ingredients in school meals;
- Opening opportunities for local small-scale farmers and SMEs.

Milan assesses the environmental impact of procurement on an ad-hoc basis. They do not evaluate the social impact of procurement. To assess the impact of procurement they use an environmental calculator. The sustainability indicators Milan would prioritise to assess the impact of procurement in schools is GHG emissions.

3.9.1 MUNICIPALITY OF NUORO

NUORO	General facts	
	Land area of the municipality	192.3 km^2
	Total population	34 227
	Duration of school year	September – June
	Length of school year	36 weeks
	Number of schools	7
	Number of students in schools	1 288
	Number of kindergartens	13
	Number of children in kindergartens	751

SCHOOL FOOD GOVERNANCE

Currently, there is no food or sustainability policy in place in the Municipality of Nuoro. However, it is the City's intention to draft both policies and apply them to all future actions in managing the food system. School managers of each school mainly influence food education curricula. Though the municipality has little leeway in influencing the educational planning in schools, Nuoro has its own Food Education Plan, updated annually and proposed to schools and stakeholders (e.g., parents, trade and producer associations), that can be involved in it. The Food Education Plan aims to promote food culture and disseminate the importance of a healthy diet and the prevention of obesity in childhood. The plan aims to raise the awareness of all service users (students, teachers, and parents) through events and educational meetings on topics and issues of particular interest.

There are regional school food guidelines from 2016 called "Regional Guidelines for School Catering of the Autonomous Region of Sardinia". There is also a regional regulation from 2010 promoting the quality of Sardinian products.

SCHOOL FOOD PROVISION

In Nuoro, the school meal organisational model is a catering service contract (parts of, or the whole process of preparing the public meal are outsourced to private companies).

Meals are all prepared in kindergarten kitchens and then transported to the primary schools in thermal containers with a maximum travel time of ten minutes.

There is one on-site kitchen in each kindergarten (thus 10 kitchens). The kindergarten kitchens also manage the preparation of meals for primary schools. Therefore, the kitchens in the kindergartens also cook for the primary schools that are part of the same school complex.

The schools serve only one hot meal (lunch) but no breakfast. Kindergartens provide only lunch and snacks but no breakfast.

The average actual cost of a main school meal is €4.94 and it includes: main course, second course, side dish, bread, and fruit. The meal cost includes both food ingredients and kitchen labour costs. The financing model is mixed subsidies. The service is financed by budget funds and parent contributions. Parents contribute with diversified rates according to the ISEE (incomes and economic situation indicator in Italy) bands approved by the authority. Families in determined economic or social vulnerability are exempt.

SCHOOL FOOD PROCUREMENT

The tender specifications provided for the procurement of the school canteen service are: short supply chain products, Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) products. For each product purchased, supply chain certification must be guaranteed.

Nuoro and the ASL (public local health authority) are public institutions involved in the school food service. The procurement process is mainly managed by the contracting company, in full compliance with the requirements of the tender documents, the technical proposal and the contract.

In the executive phase of the contract, the Municipality systematically verifies compliance with the standards and commitments made by the company. Verifications are carried out through checks on supplies, product certifications, traceability of each product. Periodic on-site inspections are carried out to check the food quality and customer satisfaction (students, teachers and school staff).

In Nuoro, school food procurement is centralised within the municipality. Procurement is carried out by the contracting company which is in charge of the school cafeteria service of the public schools on behalf of the municipality. Tenders are usually above the EU thresholds for sub-central authorities. Only open procurement procedures and these are fully digitalised.

Sustainability aspects have been leveraged most to market analysis/market dialogue, qualification criteria (selection and exclusion criteria), technical specification, award criteria, contract clauses and contract execution (follow-up). Regarding market dialogue, there have been 1:1 meetings with suppliers and requests for information.

Health and sustainability issues have been fostered in the tender documents in the school food procurement through mandatory (national/regional) environmental/social criteria. Award is based on a price-quality ratio analysis (price and other factors). Food requirements in tenders include organic food, vegetarian and plant-based options/free-range animal products, seasonal food and labels. Requirements for contractors include using energy-efficient equipment and eco-friendly cleaning products (e.g., meeting ecolabels), solutions that minimise food waste (e.g. redistribution). Typical products (quality schemes, such as Protected Designation of Origin – PDO) are supported. Also, food education activities (for pupils or kitchen staff) are required. An additional requirement is the use of tap water and avoiding plastic bottles. Usually, a non-renewable contract is signed with the awarded service provider.

The Municipality of Nuoro has some information on the environmental sustainability of the school food suppliers' supply chain, and they ensure the exclusion of genetically modified products from sourcing.

The relevant procurement models in the Nuoro municipality are Dynamic Purchasing Systems and SDGs-aligned food tendering.

The main procurement barriers Nuoro faces when implementing sustainable and healthy school meals are a limited supply of local products, high costs, and inadequate logistics due to the insularity and lack of efficient transport infrastructures. The opportunities for Nuoro when implementing a sustainable and healthy school meal procurement are improving the price-quality ratio in procurement, acquiring more expertise in sustainability and

Preferred focus points for Nuoro in the SF4C project:

- Tackling social issues (e.g. fighting unemployment);
- Measuring the environmental impact of food procurement (e.g. CO2 calculation);
- Shortening the supply chain;
- Integrating food education into the school curricula;
- Improving the price-quality ratio.

improving logistics and communication skills in interacting with all the stakeholders involved in the service.

Nuoro does not assess the environmental or social impact of its procurement. The sustainability indicators Nuoro would prioritise to assess the impact of procurement in schools is protection of human rights along the food supply chain.

3.10 SLOVAKIA

3.10.1 COUNTRY PROFILE

SLOVAKIA	Country profile and general facts about the food system	
	Total land area	49 035 km^2
	Total population	5,46 million
	Number of regions	8
	Number of municipalities	2891
	Total agricultural area	1 862 650
	Total organic agricultural area	222 896
	Share of organic	11.7%
	Food import quantity and value	8,87 million tonnes 113.37 billion euro
	Food export quantity and value	11.06 million tonnes 105.33 billion euro
	Total number of agricultural holdings	19 630
	Total number of small agricultural holdings (below 10 ha)	9 830

Sources: see tables 1-3.

3.10.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

There is no food policy in place in Slovakia at the national government level. The (national) Public Procurement Office is responsible for procurement legislation. The Public Health Authority enforces hygiene and food safety requirements. The Ministry of Health is responsible for nutrition and food, but no national guidelines on food or nutrition standards are issued in Slovakia.

However, there are food standards for school food. The Ministry of Education, Science, Research and Sport of the Slovak Republic has issued Act no. 245/2008 Coll. on education and training and its section 140 sets material and consumption standards and recipes for school meals. The regulation is a guideline for school cafeterias on how and what to cook in schools. The regulation aims to ensure children and students access to nutritionally balanced meals and education on healthy eating.

The Slovak Republic monitors the level of application of GPP in the context of the National Action Plan for GPP for 2011-2015. This action plan obliges ministers and chairpersons of central government bodies to apply the principles of green public procurement within their competence and recommends the chairpersons of self-governing regions and the chairperson of the Association of Towns and Municipalities of Slovakia to apply the GPP in practice within their competence. At the moment, GPP is not implemented in the school food system and there are no mandatory environmental or social criteria to follow.

3.10.3 LOCAL LEVEL

SLOVAKIA	General facts	
	Duration of school year	September - June
	Length of school year	36 weeks, 252 days
	Number of schools	2 347 state schools 201 private schools 188 Christian schools
	Number of students in schools	589 716 plus 32 234 plus 44 033
	Number of kindergartens	2781 public kindergartens 109 Christian kindergartens
	Number of children in kindergartens	157 862 plus 6 152

SCHOOL FOOD GOVERNANCE

As mentioned previously, Slovakia does not have a food nor sustainability policy in place. The Ministry of Education, Science, Research and Sport of the Slovak Republic is responsible for deciding the food education curricula in schools. However, there is leeway for schools to influence what they include in the curriculum. The ministry provides the syllabus but how the curriculum is completed is up to the schools themselves.

SCHOOL FOOD PROVISION

There are two operational structures in place in Slovakian schools. Depending on the municipality, there is either in-house catering or a catering service contract. If the student is on a special diet, then the parents can provide their food.

The school meal is delivered in a cook-and-serve type method. It is always a hot meal and includes soup, main dish, milk, or tea. A regular meat meal is served twice per week, one day with reduced meat meal, one day with a vegetable meal and one day with a flour-based meal (mostly sweet). The meals are the same in kindergartens and schools. Breakfast is not offered.

The average cost of a school lunch in Slovakia is €1.20. The meal cost includes only food ingredients. The financing model for school meals is partially subsidised – the state covers a part and parents pay the rest. It is always a hot meal: soup, main course, milk or tea.

SCHOOL FOOD PROCUREMENT

Most of the schools in Slovakia procure their own food as a low value order, within the 215 000 euro limit. Most primary schools do the procurement themselves, most of the kindergartens are under the responsibility of the municipality and they handle the kindergarten food procurement.

The following description is about the school food system on the national level for public schools. Every school has a kitchen and canteen, some schools cook their own meals and some contract the service from private caterers. Those that cook themselves must follow regulations and guidelines from the Ministry of Education and cook according to the material consumption standards and recipes. The Ministry of Education also employs methodical workers that cooperate and educate the kitchen staff. The Office of Public Health visits to control school kitchens' hygiene and food standards.

Private schools can contract a catering company that does not have to cook based on the regulations and the recipes of the Ministry of Education, but they must follow basic hygiene and food standards and also recommended nutritional doses.

In Slovakia, the school food procurement type is mixed. Either the school does their own procurement, or the municipality does it for them – this is mainly for kindergartens as they are

small. The procurement is below the EU thresholds. The procurement procedure is direct contracting ('negotiated procedure without prior publication'). The procurement is partially digitalised – it is ensured if the municipalities are involved in the procurement process. In March 2022, a new platform was launched to have a fully digitalised procurement. However, it does not yet work as it should. Kitchens have problems finding small-scale farmers as they are not signed-up to the portal.

Slovakia reported that Innovation Procurement (PPI) is the procurement model that is most relevant for them.

The barriers in Slovakia when implementing sustainable and healthy school meal procurement are the high cost of food, lack of market offers for good quality products, lack of local products, procurement education and expertise and flexibility.

The opportunities for sustainable and healthy school meal procurement in Slovakia are support for small farmers through a simpler and flexible procurement model and by providing samples of legal paperwork (contract, requirements on products).

In Slovakia, there is no environmental or social impact assessment of procurement in place for school food. The sustainability indicator Slovakia would prioritise to assess the impact of procurement in schools is food waste reduction.

Preferred focus points for Slovakia in the SF4C project:

- Opening up opportunities for local small-scale farmers and SMEs;
- Tackling social issues (e.g. fighting unemployment);
- Shortening the supply chain;
- Integrating food education into the school curricula;
- Improving the price-quality ratio;
- Cost-effective assessment such as Life-Cycle Costing;
- Education of the school staff.

3.11 SPAIN

3.11.1 COUNTRY PROFILE

SPAIN	Country profile and general facts about the food system	
	Total land area	505 935 m^2
	Total population	47,40 mil
	Number of regions	17
	Number of municipalities	8 131
	Total agricultural area	23 000 000 ha
	Total organic agricultural area	2 354 915 ha
	Share of organic	10%
	Food import quantity and value	83.65 million tonnes 494.07 billion euro
	Food export quantity and value	75.97 million tonnes 596.70 billion euro
	Total number of agricultural holdings	914 870
	Total number of small agricultural holdings (below 10 ha)	595 570

Sources: see tables 1-3.

3.11.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

The main responsible authority for the national food strategy is the Ministry of Health and Consumer Affairs. It developed the Strategy for Nutrition, Physical Activity and Prevention of Obesity (NAOS) in 2005 in coordination with the Spanish Food Safety Agency, the General Directorate of Public Health and a wide range of experts and researchers. The fundamental goal of the strategy is to promote a healthy diet and foster physical activity to invert the growing trend of obesity, thus reducing morbidity and mortality attributable to chronic diseases substantially. Spanish dietary guidelines for children and adolescents were developed as part of the NAOS Strategy. Current dietary guidelines date from 2018.

In schools, the strategy aims to teach children about healthy eating habits and promote regular physical activity and sport. Actions at schools are proposed to be developed jointly by the Ministry of Health and Consumer Affairs and the Ministry of Education and Science through the General Secretary of Education.

Public authorities in Spain follow Law 9/2017 on Public Sector Contracts, which transposes various EU Directives and provides the requirement of incorporating environmental and social considerations in any of the phases of the public contracting process. The Law transposes the compulsory introduction of a special execution condition related to innovation, of an environmental or social nature.

The Spanish Ecological Public Procurement Plan for 2018 to 2025 also includes food and catering services as part of the priority product groups. Regarding food procurement, Law 17/2011, articles 40 and 41 set requirements for schools to include food requirements in their tenders so that the food supplied is varied, balanced and nutritious. Recently a public consultation was launched to establish minimum nutritional quality and sustainability criteria that guide the contracting, acquisition and supply of food and beverages in school canteens.

There are various exemplary school food related initiatives that are ongoing in Spain. A couple of these worth mentioning are the Canarian Eco-dining rooms programme aims to link organic production with the consumption of organic products in schools and other public canteens. The current programme includes 43 public centres, three private schools, one nursery school and three agricultural training schools. This makes altogether 10 607 guests and 101 producers. The communication between consumers and producers is organised through a web application. In addition to the example from the Canary Islands, since the 2016/17 academic year, the Network of Municipal Nursery Schools of Madrid (which includes 68 nursery schools for ages 0-3) has been committed to improving the nutrition in their school communities. Their work focuses on incorporating various environmental considerations in the contractual obligations and evaluable criteria in the tenders and providing training and templates.

3.11.3 REGION OF VALENCIA

VALENCIA	General facts	
	Land area of the municipality	23 255 km^2
	Total population	5 057 353
	Duration of school year	September – June
	Length of school year	181 days
	Number of schools	5 municipality schools 1 002 state schools 335 state-subsidised schools 33 private schools
	Number of students in schools	1750 in municipality schools 300 253 in state schools 183 825 in state-subsidised schools 20 971 in private schools
	Number of kindergartens	254 municipality kindergartens 62 regional kindergartens 567 private kindergartens
	Number of children in kindergartens	13 996 in municipality kindergartens 7 913 in regional kindergartens 23 611 in private kindergartens

SCHOOL FOOD GOVERNANCE

The Region of Valencia has established both a food policy and a sustainability policy at the regional level.

The Regional Ministry of Agriculture, Rural Development, Climate Emergency and Ecological Transition is responsible for promoting and encouraging healthy and available food in schools.

The Regional Ministry of Education, Culture and Sport is responsible for the organisation and execution of school canteens, including promoting and developing sustainability criteria in food services. The regulations governing the planning and preparation of menus in public schools are created following the dietary standards drawn up jointly with the Regional Ministry of Universal Health and Public Health.

The respective Territorial Directorates of the Regional Ministry of Education, Culture and Sport are responsible for signing the contract for the school canteen service and monitors for public schools.

SCHOOL FOOD PROVISION

The Regional Ministry of Education, Culture and Sport and the Regional Ministry of Universal Health and Public Health have developed a Guide to school Canteen Menus, which includes at least 20 different menus which are reviewed periodically. In these menus, special attention is paid to preventing and controlling overweight and obesity in children and adolescents. Evaluation forms are also developed to ensure that the school menus correspond to the requirements set. Further, all school canteens must have a special or alternative menu to cater to pupils who cannot eat certain foods for health, religious or cultural reasons.

The average price of a menu is €3.68, which includes two courses, a dessert, bread, salad, and water. The meal cost includes both food ingredients and kitchen labour costs. The food is partially subsidised depending on the sociological circumstances and income of the applicants. The share of financing can be up to 100%.

SCHOOL FOOD PROCUREMENT

Each school procures their food and catering and sets the clauses in the tenders while considering the national and regional requirements. Accordingly, the food must contain at least 40% fresh seasonal fruit and vegetables, organic products in a percentage of at least 3% of the total purchases, adapted menus for specific intolerances, etc. Each school is responsible for its contracts with catering service providers, and a standard, non-renewable contract is signed. The schools have an online application for the management of contracting of the canteen service and other functional administrative aspects related to it. Currently, the region does not evaluate the environmental impacts of its purchases.

Preferred focus points for Valencia in the SF4C project:

- Increasing the rate of organic ingredients;
- Opening up opportunities for SMEs;
- Reduction of animal-based foods;
- Measuring the environmental impact of food procurement;
- Shortening the supply chains;
- Integrating food education into the school curricula.

The region of Valencia sees the main barrier related to adopting healthy, sustainable school meals as the lack of vision and experience in the framework of the sustainable agri-food chain and the limited supply of local organic products on the market.

3.11.4 MUNICIPALITY OF MADRID

MUNICIPALITY OF MADRID	General facts	
	Land area of the municipality	604.3 km^2
	Total population	3 286 662
	Duration of school year	September – July
	Length of school year	46 weeks
	Number of schools	n/a*
	Number of students in schools	n/a*
	Number of nursery schools*	74
	Number of children in nursery schools (0-3 years of age)	8507

* The City Council of Madrid is only responsible for catering in nursery schools.

To date, the municipality of Madrid has 74 nursery schools that belong to the Municipal Network of Nursery Schools. Nursery schools are considered non-compulsory educational centres aimed at children from three months to three years of age. Nurseries are coordinated by the General Directorate of Families, Children, Education and Youth of the City of Madrid, which is responsible for promoting, encouraging and coordinating family and children's policies (e.g. sectoral policies in support of families) and services (e.g. research and the carrying out of studies, informative actions or any other type of actions aimed at a better understanding of the situation and problems of children, adolescents and families) and determining its technical characteristics, assessment criteria and compliance monitoring.

NURSERY SCHOOL FOOD GOVERNANCE

Various national and regional strategic documents have been set up to provide guidelines on how nursery school food should be governed. In 2016, Madrid City Council set up the **Milan Pact Monitoring Committee** to provide space for dialogue and coordination between the city council government departments and organised civil society stakeholders. As a result, the Committee developed the Healthy and Sustainable Food Strategy (2018-2020) for Madrid, aligning policies and programmes that affect its food system in different areas and at various administrative levels and promoting a rights-based approach. The latest version of the

Strategy is set from 2022 to 2025. One of its strategic actions focuses on reinforcing the **Canteens Programme** in nursery schools. Promoted and coordinated by the General Directorate for Families, Children, Education and Youth, this action aims to strengthen and improve the incorporation of healthy and sustainable criteria for the nursery school menu in the Municipal Network of Nursery Schools in Madrid. In the latest version of the strategy (2022-2025), more emphasise has been put on incorporating organic and/or short supply chain food groups and seasonal foods, as well as implementing accompaniment and communities of learning and practice in nurseries. This last point is especially useful for creating and consolidating practice-oriented learning communities, which allow the educators and families involved to improve their performance and generate knowledge about organic food in canteens within the community of each nursery school.

All the nursery schools in the Network are accompanied by experts in child nutrition and organic food, belonging to the **Eco-Eaters Platform** and other social entities to foster the transition to healthy and sustainable menus gradually. To support the process, the General Directorate for Families, Children, Education and Youth set up a technical group of paediatricians from Madrid Salud, nutritionists, and educational technicians who developed **Healthy and Sustainable Eating Guidelines for Nursery Schools**, targeting two groups: professionals and families. The two guiding documents aim to offer criteria to lead a healthy diet in nursery schools and households with children from 0 to 3 years old.

The strategic line of promoting adequate nutrition and healthy lifestyles are aligned with the NAOS Strategy (Nutrition, Physical Activity and Prevention of Obesity), which aims to reverse the trend of the prevalence of obesity by promoting a healthy diet and the practice of physical activity and thereby substantially reduce the high rates of morbidity and mortality attributable to non-communicable diseases, especially among children.

The City Council of Madrid has its pedagogical principles but is required to comply with the regulations of the Municipality of Madrid about minimum requirements, both in terms of space and ratios, as well as in terms of pedagogical content. Each entity can develop its project if they comply with the City Council's general principles. Many are conducting projects within nursery schools, kindergartens and schools, such as *Germinando* on School Gardens and *Garúa and CERAI* with their project "Sustainable Menus, Healthy Planet" to offer information and educational resources to families who have children of school age.

NURSERY SCHOOL FOOD PROVISION

According to the latest sustainable and healthy food procurement criteria developed within the Healthy and Sustainable Eating Guidelines, all nursery schools in the Network must offer lunch with fruit as a dessert at least four days a week. In food preparation, the criteria also require using more seasonal, fresh, and local ingredients and incorporating more plant-based protein alternatives (e.g. legumes) while avoiding unhealthy culinary techniques (e.g. frying), among other requirements. Special or alternative menus for children who cannot eat certain foods for health, religious or cultural reasons are also contemplated. Timings for food introduction and portion size among infants are also considered. In some cases, regulated by municipal legislation, fresh and daily prepared on-site breakfast and/or afternoon snacks are offered to infants, following the nursery school food procurement criteria described above.

The City Council of Madrid has set the monthly fee for canteen service at **96 euros** on average. The average price for lunch is **4.82 euros**, which includes two courses, dessert, bread, salad, and water. The meal cost consists of both food ingredients and kitchen labour costs. The Municipality of Madrid sets the criteria for subsidised meals for schools and kindergartens. As for kindergartens, the food is partially subsidised depending on the sociological circumstances and income of the applicants. The share of financing can be up to 100%.

NURSERY SCHOOL FOOD PROCUREMENT

The nursery schools' food procurement in the Municipality of Madrid is primarily decentralised with a couple of exceptions. Food procurement is decentralised in 72 nursery schools (out of 74), meaning that each nursery manages its procurement under the guidelines set by the Madrid City Council. Among those are nurseries that use on-site kitchens, and others collaborate with external catering services. Food procurement is centralised within the municipality for the remaining two nurseries, and both use on-site kitchens for meal preparations.

Exceptionally, food procurement criteria are modified for the external catering services in decentralised nursery schools as these nurseries share the on-site kitchen with primary schools, following the Municipality of Madrid procurement criteria. The municipality is responsible for tendering food companies, but the nurseries are accountable for choosing food suppliers that meet the City Council and nursery schools' healthy and sustainable food

criteria. The procurement procedure for nurseries' food provision is usually open, completely digitalised and above the EU thresholds.

The sustainable procurement criteria have been developed mostly in training and capacity building for procurement officers, as well as award criteria, contract clauses, technical specifications, and contract execution follow-up. Concerning market dialogues, the City Council of Madrid have been involved in 1:1 meeting with food suppliers. Health and sustainability matters have been fostered in tender documents through mandatory environmental/social criteria, organic food and seasonal food requirements, small-scale farmers' support, use of eco-friendly cleaning products required from the contractors, practices that minimise waste (mainly plastic waste) needed from the contractors and the support of quality products (e.g. Protected Designation of Origin - PDO). The City of Madrid does not have any food provision models for nursery schools. Still, it is aware of some that have yet to be incorporated within the school food provision of the Community of Madrid. The administrative contracts for managing the education service, including food criteria and cooks are signed with nursery schools. Furthermore, short food supply chain products are required in the tender documents.

The City Council of Madrid neither evaluates environmental or social impact nor uses any methodology. Nevertheless, the Network has developed a legal framework (*Carta de Servicios de la Red Municipal de Escuelas Infantiles*) that sets the commitments and services provided by the Network in municipal nursery schools. Due to assessing the impact of contracting food suppliers in kindergartens, the Network might prioritise the presence of organic products, food waste reduction, and menu evaluation.

The Network aims to improve the amount of organic food in nursery school meals, the seasonal foods, the reduction of animal protein products, the impact assessment of the nursery school's food procurement, the short supply chain products, and the integration of food education in the curriculum through qualified health professionals.

As a barrier, the municipality has identified the need for a more legal framework, experience in sustainability criteria for tenders, the high costs, and the complicated administrative contracting process. However, they already have a consolidated Network, guaranteed by the Community of Madrid, in which more and more kindergartens are getting on board. In addition, other municipal institutions, such as day care centres for the elderly, may also benefit from it.

Preferred focus points for Madrid in the SF4C project:

- Increasing the rate of seasonal and short-supply chain ingredients of school meals;
- Opening opportunities for local small-scale farmers and SMEs;
- Measuring the environmental impact of food procurement (e.g. CO2 calculation);
- Integrating food education in the school curricula;
- Cost-effective assessment such as Life-Cycle Costing.

3.12 SWEDEN

3.12.1 COUNTRY PROFILE

SWEDEN	Country profile and general facts about the food system	
	Total land area	447 425
	Total population	10.38 million
	Number of regions	21
	Number of municipalities	290
	Total agricultural area	3 013 000
	Total organic agricultural area	610 800
	Share of organic	20%
	Food import quantity and value	13.92 million tonnes 213.72 billion euro
	Food export quantity and value	9.35 million tonnes 189.52 billion euro
	Total number of agricultural holdings	58 790
	Total number of small agricultural holdings (below 10 ha)	20 600

Sources: see tables 1-3.

3.12.2 NATIONAL POLITICAL AND LEGAL FRAMEWORK

The Swedish procurement legislation is mainly based on the national Public Procurement Act. Sweden also has established a national procurement strategy in 2016[31]. There is no mandatory environmental criteria in place for food procurement. However, currently (in 2022), there is a legislative consultation process ongoing, which would introduce an obligation from 2023 to take climate, the environment, human health, animal care and social and labour law aspects into account in public procurement.

In Sweden, the national Food Strategy[32] is considered a platform, from which current and future governments shape food policy up to 2030. Regarding food procurement, the Strategy foresees that the public sector raises knowledge about food production, specifically among children. The Strategy further sets an aim for an increased volume of organic food and services to be procured and to complement GPP with a life cycle cost perspective.

Municipalities can seek support from the Public Procurement Agency of Sweden, which has established a set of sustainability criteria for public food procurement. Interestingly enough, the criteria for food are the most downloaded and used criteria of all the category criteria developed by the Agency. Furthermore, national guidelines for school meals are published by the Swedish Food Agency. Applying these national guidelines is voluntary for municipalities, yet these offer support of how to serve and provide sustainable school meals. Moreover, according to Swedish School Law[33], school meals must be cost-free for students and cares and these must be nutritious.

The Swedish Food Agency also runs a competence centre (on the assignment of the national government) on public meals. The competence centre consists of people with different

[31] https://www.regeringen.se/informationsmaterial/2016/06/nationella-upphandlingsstrategin/

[32] https://www.government.se/articles/2017/04/a-long-term-food-strategy-for-sweden/

[33] https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/skollag-2010800_sfs-2010-800

expertise on public meals and supports municipalities in developing more sustainable public meals in Sweden[34].

Various food related initiatives are going on in Sweden, both on the national and regional levels. The Swedish Food Agency is currently coordinating a nationwide mission-based approach towards sustainable and healthy school meals: School meals as a recipe to transform food systems[35]. Sweden also has a national, free and digital survey tool that helps schools develop meal quality from a holistic perspective[36].

On the regional level, municipalities have various ongoing initiatives, such as the Municipality of Södertälje, which has developed a testbed for sustainable food products. The testbed aims to bring more sustainable food products to the market through collaboration with public chefs and meal developers.

3.12.3 MUNICIPALITY OF MALMÖ

MALMÖ	General facts	
	Land area of the municipality	334,45 km²
	Total population	351 749
	Duration of school year	August – June
	Length of school year	40 weeks, 200 days
	Number of schools	89 municipality schools 50 private schools
	Number of students in schools	40 864 in municipality schools 12 191 in private schools
	Number of kindergartens	199 municipality kindergartens 75 private kindergartens
	Number of children in kindergartens	15 785 in municipality kindergartens 3233 in private kindergartens

[34] https://www.livsmedelsverket.se/matvanor-halsa--miljo/maltider-i-vard-skola-och-omsorg/nationellt-kompetenscentrum

[35] https://www.livsmedelsverket.se/matvanor-halsa--miljo/maltider-i-vard-skola-och-omsorg/skola/hallbart-skolmaltidssystem

[36] https://www.skolmatsverige.se/

SCHOOL FOOD GOVERNANCE

Malmö city belongs to Malmö municipality and to the Region Skåne in the south of Sweden. Malmö city has established both a policy for food and sustainability.

The Swedish National Agency for Education is the central administrative authority responsible for the curriculums and syllabus for the public school system, publicly organised pre-schools, school aged childcare, and for adult education. Local schools are responsible for local adaptation and interpretations of the curriculum.

The National Agency for Public Procurement, through the Swedish Public Procurement Act, regulates the municipality's work on procurement. The City of Malmö also adopted a Purchasing Policy in 2018. In addition, guidelines have been developed on how purchasing operations in the city of Malmö are to be conducted. There are several specific guidelines about, for instance, sustainable purchases, labour law conditions, Convention on the Rights of the Child, anti-discrimination, climate requirements of transport, etc.

Schools must also consider nutrition requirements put out by the Swedish National Food Agency and the local policy for sustainable development and food in its food procurement actions. The latter has set two goals for the region: all food served in Malmö should be at least 90% organic, and GHG emissions from food procurement should be reduced by 40% by 2020.

Sweden has a nationally set goal of 60% of public meals to be organic by 2030. The food served in Malmö city reached 89% organic in 2021. The current national level is approximately 40%. During this decade, school lunches have also reduced their carbon footprint by 1.3 kg CO_2 eq.

SCHOOL FOOD PROVISION

In Malmö, 45,000 hot school lunches are served five days a week in all public primary and secondary schools. School lunches cover approximately 30% of the pupils' daily recommended food intake.

School meals are prepared in nearly 90 school restaurants and distributed to 76 primary schools, ten high schools, three preschools, and one staff restaurant. They have an additional meal delivery service to about 40 of the city's 199 preschools that do not have a centralised meal organisation. The school restaurants, which plan, prepare, cook, and serve the school

meals, have been actively working to reduce the overall impact of the food they serve on the environment and climate. This is primarily due to various national and local policies aiming to minimise food production footprint in the region and the country. The Region of Skåne has reached its political goals due to the support and cooperation between the school restaurants and the administrative system. Clear and ambitious long and short term goals have provided consistency and enabled perseverance. The most significant impact has been done on changing how food is served and what is served. The region has decided to change their menus completely to have more plant-based menus in accordance with the nutritional recommendations of the Swedish Food Agency, which requires careful menu planning and monitoring. As a result, meat and fish are on the menu once or twice a week, and vegetarian meals at least twice a week.

The operational structure of school catering is a combined version of in-house catering, where meals are prepared and catered in schools and centralised catering, where meals are cooked in a centralised kitchen within the municipality. Most schools have kitchens where food is prepared, yet they all share a centralised school menu. Some schools do not have professional kitchen facilities and deliver their food from other schools. The aim is to reach 100% of schools to have their own kitchens.

Breakfast, lunch and afternoon snacks in both schools and kindergartens

The average cost of a school lunch is 10.46 SEK (approximately €0.96), excluding overhead costs. The cost covers a choice between two hot meals, a salad buffet which is made up of at least five varieties, carbohydrate component, such as pasta or potatoes and extra protein sources like eggs and seeds. The municipality fully subsidises food costs for all preschool, primary and secondary school children.

SCHOOL FOOD PROCUREMENT

Food procurement in Malmö is centralised, digital and done by the procurement unit of the City. There is one designated person which deals solely with public food procurement. Under the Internal Service Department, the administration of School Restaurants further oversees the purchases made. These two agencies cooperate for new purchases and receive further support from the cross-administrative reference group.

Public tenders include various mandatory environmental and social criteria. For example, the requirements for food include organically grown produce, vegetarian and plant-based options, free-range animal products, seasonal food, and labels such as Fairtrade. In addition, contractors must use eco-friendly cleaning products and low-carbon transport possibilities. Furthermore, the minimisation of food waste and general waste is required.

The environmental impact of the City's procurement is assessed by using an environmental calculator.

Food contracts are awarded based on the ratio of price-quality, and a framework agreement is signed with the successful bidder.

Currently, the main barrier seen in the region are a lack of third-party certification, including social criteria, a lack of resources in terms of time, competence, and finances to conduct audits in the supply chain and ensure compliance, and logistics for all the 1 200 units which receive deliveries. Nevertheless, the City of Malmö finds multiple opportunities when implementing sustainable and healthy school meal procurement, such as reducing GHG emissions of food and fostering food literacy for youth.

Preferred focus points for Malmö in the SF4C project:

- Opportunities for local small-scale farmers and SMEs;
- Reduction of animal-based food;
- Measuring the environmental impact of food procurement;
- Shortening the supply chain;
- Integrating food education into the school curricula.

3.12.4 MUNICIPALITY OF UMEÅ

UMEÅ	General facts	
	Land area of the municipality	2316.96 km^2
	Total population	130 997
	Duration of school year	August – June
	Length of school year	35.6 weeks, 178 days
	Number of schools	49 municipal schools 9 private schools
	Number of students in schools	12 835 in municipality schools 444 in private schools
	Number of kindergartens	86 municipality kindergartens 19 private kindergartens
	Number of children in kindergartens	5 607 in municipality kindergartens 767 in private kindergartens

SCHOOL FOOD GOVERNANCE

Umeå city belongs to Umeå municipality and the Region Västerbotten. The city has established both a food policy and a sustainability policy. The Swedish National Agency for Education is the central administrative authority governing the national curricula set in the Education Act.

School curricula includes aspects such as the school's values and mission, goals and guidelines for education and syllabi that are supplemented with knowledge requirements. Preschool curriculum addresses children's development and learning, children's influence in activities and their relationships with parents. School principals lead and coordinate the pedagogical work at preschools and schools. While the curricula are developed by national players, schools have the freedom to interpret and adopt them in their local contexts. The aspects of sustainable development and sustainable food systems are included in preschool curricula and most school subjects. The City of Umeå has set a goal to increase the purchase of organic and locally grown food.

SCHOOL FOOD PROVISION

Food is served via a mix of operational models, such as on-site kitchens, centralised kitchens, cook-and-serve chilled and cook-and-serve hot. Most schools have on-site kitchens where

food is cooked and served to children. The municipality procures wholesale services, which then, based on specific orders from schools, provide school kitchens with edibles.

In kindergartens, it is compulsory to serve a vegetarian meal and a meal which contains fish (MSC certified) once a week. Every child is offered at least two different meal options in schools, one of which is always vegetarian. One day a week all options are vegetarian, and fish is served once a week. The CO_2 impact of the meals is calculated for the entire menu.

Schools in Umeå offer lunch for students, while recreational schools also provide breakfast and snacks. In kindergartens, breakfast, lunch, and snacks are served.

The average cost includes milk, salad, bread, accessory, main component, and side-dish, such as pasta or rice. A meal costs a maximum of 11.79 SEK (approximately €1.08) and the meal cost includes only food ingredients. The food in schools and kindergartens is fully subsidised by the municipality.

SCHOOL FOOD PROCUREMENT

As mentioned previously, food procurement in Umeå is done centrally through a municipal unit, the Procurement Agency. The department that needs the goods or services initiates the purchase process, and the Procurement Agency puts together a procurement group. The procurer acts as a project manager and is responsible for the procurement. The procurer also invites potentially interesting market players and prospective bidders to a dialogue prior to launching the procurement process to ensure that the requirements align with what can be delivered. For purchases that are above the EU thresholds, tender documentation must be approved by the Municipal board prior to advertising. Tenders are submitted by the market and evaluation is performed by the procurement group. The municipal board must then approve the winning tender before the contract can be awarded. School food is procured through an ‘open procedure’.

All public procurement of food done for schools and kindergartens must follow the Swedish Food Safety Agency guidelines. Sustainability aspects are covered through mandatory national/regional environmental and social criteria, requesting organic food, vegetarian and plant-based options, labels such as Fairtrade, low carbon transport, animal welfare, and seasonal foods. Tenders are awarded based on the price-quality ratio, and a framework agreement is signed with the successful bidder.

Currently, the biggest barrier Umeå has is the inability to demand locally produced food due to existing legislation. Furthermore, since Umeå makes large purchases of food, there are few prospective bidders capable of delivering. Other barriers include high costs for organic food and local logistic challenges, as the food needs to be delivered to 160 units.

Preferred focus points for Umeå in the SF4C project:

- Increasing the share of organic ingredients in school meals;
- Opening up opportunities for local SMEs and small-scale farmers;
- Tacking social issues.

4 COMPARATIVE ANALYSIS

4.1 OVERVIEW OF COUNTRIES

The overview of school food systems and public procurement in the SF4C countries is based on the mapping questionnaire completed by the twelve partnering countries within the SF4C project: **Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Slovakia, Spain and Sweden.** The general facts about all the studied countries are presented in Table 1.

Table 1. General facts about the countries in the mapping study

Country	Land area (km^2)	Total population (mil)*	Number of regions	Number of municipalities
Austria	83 883	8,93	9	2 093
Belgium	30 528	11,55	3	581
Czech Republic	78 871	10,70	14	150
Denmark	43 000	5,84	5	98
Estonia	45 339	1,33	15	79
France	672 051	67,66	18	35 038
Germany	357 588	83,16	16	10 796
Hungary	93 025	9,73	8	3155
Italy	301 230	59,24	21	7 904
Slovakia	49 035	5,46	8	2 891
Spain	505 935	47,40	17	8 131
Sweden	447 425	10,38	21	290

**Source: Eurostat 2021, National Lead Partners*

The overview of the food systems in the investigated countries is provided in Tables 2 to 4 – namely, the share of agricultural area in the countries, the number of food suppliers and small-scale enterprises, and the share of food exports and imports.

In terms of agricultural area, the share in each country varies significantly. The percentage of the agricultural area as part of the total land is highest in Denmark (61%), Hungary (54%) and France (49%) and lowest in Sweden, accounting for only 7%. In most countries, the share of agricultural land is around 40% of the total land area. Agricultural land per capita is the highest in Estonia (0.74 ha per inhabitant), and the lowest in Italy (0.20 ha). On average, the share of

the organic area of total agricultural land is around 10%. However, in three countries (Sweden, Estonia and Austria), it is much higher (these shares are 20%, 23% and 26%, respectively).

Table 2. Agricultural area, organic area and agricultural holdings in the countries

Country	Total agricultural area (ha)*, share of total land area	Agricultural land per capita (ha)	Total organic area, incl. area in conversion (ha)*, share of total agricultural area	Total number of agricultural holdings, 2020**	Total number of small agricultural holdings (below 10 ha), 2020**
Austria	2 670 000 (32%)	0.299	680 000 (26%)	110 780	41 340
Belgium	1 367 385 (45%)	0.118	99 075 (7,4%)	36 000	8 850
Czech Republic	3 493 609 (44%)	0.393	575 153 (16,5%)	28 910	11 220
Denmark	2 619 987 (61%)	0.449	310 210 (11,8%)	37 090	12 830
Estonia	986 672 (22%)	0.742	226 605 (23%)	11 370	3 850
France	26 900 000 (49%)	0.102	2 700 000 (10,3%)	393 030	107 000
Germany	16 700 000 (47%)	0.201	1 800 000 (10,8%)	262 560	62 320
Hungary	5 049 000 (54%)	0.519	303 200 (5,7%)	232 060	159 740
Italy	12 800 000 (42%)	0.216	2 000 000 (15,5%)	1 130 530	873 280
Slovakia	1 862 650** (40%)	0.341	222 896** (11,7%)	19 630	9 830
Spain	23 000 000 (45%)	0.485	2 354 915 (10%)	914 870	595 570
Sweden	3 013 000 (7%)	0.290	610 800 (20%)	58 790	20 600

*Sources: *National Lead Partners (latest year available), **Eurostat 2020*

The shares of food exports and imports in the analysed countries vary extensively. Out of the twelve countries surveyed, seven export more than import, and for the remaining countries, the balance is negative, meaning food imports exceed exports in the country. France has the largest import-export 'imbalance', where food imports exceed exports by over 45 billion euro. In Germany, Italy, and Spain, the situation is the other way around, and exports exceed imports (by over 120 billion euros).

4.1.1 POLITICAL AND LEGAL FRAMEWORK

Regarding the legal framework governing food, sustainability and public food procurement, the landscape for countries participating in the SF4C project is versatile (see Figure 1). In half of the countries, a **food policy** is in place either on the national government level or the federal

(regional) states. The latter is the case in Germany and Belgium. In Belgium, the Brussels region has established a *Good Food Strategy*; in Germany, many state governments have established their own food policies.

Table 3. Food export and import quantities and value

Country	Export quantity (mil tonnes)	Export value (bil euro)	Export per capita	Import quantity (mil tonnes)	Import value (bil euro)	Import per capita	Export-import balance (bil euros)
Austria	22.69	245.40	27	23.10	248.39	28	-3
Belgium	76.23	651.96	56	97.95	595.02	51	57
Czech Republic	34.41	239.39	22	15.87	226.09	21	13
Denmark	17.86	193.91	33	16.49	156.03	27	38
Estonia	4.44	23.47	18	2.26	25.43	19	-2
France	141.27	828.85	12	81.53	874.62	13	-46
Germany	134.06	1 802.03	22	164.12	1671.71	20	130
Hungary	33.64	171.59	18	11.65	149.91	15	22
Italy	57.69	763.70	13	88.30	641.49	11	122
Slovakia	11.06	105.33	19	8.87	113.37	21	-8
Spain	75.97	596.70	13	83.65	494.07	10	103
Sweden	9.35	189.52	18	13.92	213.72	21	-24
Total	**618.68**	**5 811.86**		**607.71**	**5 409.84**		**402**

Source: FAOSTAT (2020)

National dietary guidelines are in place in nine of the twelve countries analysed. Among them is France, where dietary guidelines are voluntary to help public food service providers prepare a balanced menu. In contrast to other countries, Belgium has adopted a National Nutrition and Health Plan at the federal level, which gives general nutrition guidelines and promotes healthy balanced diets. However, each region is responsible for a more refined set of dietary guidelines, such as Flanders's reversed food pyramid recommendation. Survey respondents from the Czech Republic and Hungary reported that there are no national dietary guidelines at the national level but stated that nutritional requirements had been set up for school meals (e.g., “consumption basket”) in the Czech Republic and general standards nationwide in Hungary.

	National food policy adopted	Dietary guidelines adopted	Sustainability requirements in food procurements (eco-labels, share of organic)
France			
Czech Republic			
Spain			
Sweden			
Belgium			
Austria			
Slovakia			
Germany			
Italy			
Hungary			
Estonia			
Denmark			

Figure 1. Overview of national food policies, dietary guidelines, and sustainability criteria in food procurements. Blue = exists, light blue = exists on regional level, red = does not exist

While some mandatory **sustainability requirements** in food procurement are set up in most participating countries, the specifics of the requirements are rather varied. In Spain, for example, there is a requirement to include a condition related to innovation, environment, or social nature, yet the regulation does not specify the requirement. In Italy and Germany, requirements mainly concern the share of organic food. In Vienna, Austria, there is a requirement to follow the guidelines of ÖkoKauf Wien (EcoBuy Vienna) and the NaBe criteria. In the Brussels and Walloon regions, for instance, a "Good Food" label has been in existence for canteens since 2015, while in Flanders, there is no mandatory set of criteria. The EGAlim law in France combines the share of organic products and products issued under other quality labels and also sets limitations on the use of plastics and prevention of food waste and other environmental requirements. While there are currently no mandatory environmental criteria set up in Sweden, it is a part of an ongoing legislative process. Regardless, the public sector widely uses voluntary sustainability criteria and guidelines for public procurement. The results showed that the Czech Republic, Slovakia, Hungary, Estonia and Denmark do not have any sustainability requirements in food procurement.

4.2 OVERVIEW OF MUNICIPALITIES

In total, 19 municipalities or regions participated in the survey and in the SF4C project. Out of these 17 were municipalities (including the region of Valencia). In the Czech Republic and Slovakia, there is no designated municipality but the results from these countries represent municipalities in general in those countries but are referred to as regions in this report. Therefore, as seen in Table 4, the whole area and the country's population are brought out. The study included municipalities of different size both in terms of area and population. The population varies from 22 000 in Viimsi (Estonia) to over five million in the region of Valencia (Spain). Similarly, the land areas span from 47 km^2 (smallest) to over 9 000 km^2 (largest).

Regarding the duration of the school year, generally, school starts in September. Yet, in five of the areas it begins in August and ends in June (in Umeå, Malmö and Copenhagen) or July (in Nuremberg and Essen). The number of school days also varies, as the shortest school years are 175 days in Tallinn and Viimsi (Estonia), and the longest (250 days) in Slovakian municipalities (see Table 4). In Madrid, the mapping included only kindergartens where the children go from September until July (altogether 46 weeks, 230 days) and August is a vacation month.

As seen in Table 5, the majority of the case study areas in the project have established a sustainability policy. Generally, the regions with a sustainability policy have also adopted a food policy. There are only three regions, Essen, Lyon, and Budapest, in which there is only a sustainability policy without a food policy. Of the 19 regions, 13 have adopted a sustainability policy, ten a food policy and five have confirmed that neither is in place.

Table 4. Land area, population and school year in the analysed municipalities, province and region

Country	Name of municipality/ region	Land area of municipality/ region	Population of municipality/ region	Duration of school year	Length of school year
Austria	Vienna	414.6 km²	1 935 000	September - July	180 days
Belgium	Ghent	157.74 km²	264 666	September - June	182 days
Belgium	Leuven	56.63 km²	102 133	September - June	36 weeks, 182 days
Czech Republic	All municipalities	78 871 km²*	10 516 707**	September - June	36 weeks
Denmark	Copenhagen	179.8 km²	632 300	August - June	40 weeks, 200 days
Estonia	Tallinn	159.3 km²	450 850	September - June	40 weeks, 175 days
Estonia	Viimsi	47 km²	22 226	September - June	40 weeks, 175 days
Hungary	Budapest	525 km²	1 723 836	September - June	180 days
France	Dordogne (province)	9 060 km²	416 000	September - June	36 weeks
France	Lyon	48 km²	520 000	September - July	180 days
Germany	Essen	210.34 km²	589 507	August - July	40 weeks, 200 days
Germany	Nuremberg	186.46 km²	530 222	August - July	36 weeks, 190 days
Italy	Milan	181.76 km²	1 300 000	September - June	33 weeks, 200 days
Italy	Nuoro	192.3 km²	34 277	September - June	36 weeks
Slovakia	All municipalities	49 035 km²*	5 459 781**	September - June	36 weeks, 252 days
Spain	Valencia (region)	23,255 km²	5 057 353	September - June	181 days
Spain	Madrid	604.3 km^2	3 286 662	September - July	46 weeks, 230 days
Sweden	Malmö	334,45 km²	351 749	August - June	40 weeks, 200 days
Sweden	Umeå	2 316,69 km²	130 997	August - June	35,6 weeks, 178 days

**Land area of the country, **Population of the country*

Table 5. Overview of sustainability and food policies in place in the analysed municipalities, province and region

Country	Municipality/region	Local sustainability policy adopted	Local food policy adopted
Austria	Vienna	✓	✓
Belgium	Ghent	✓	✓
Belgium	Leuven	✓	✓
Czech Republic	All municipalities	—	—
Denmark	Copenhagen	✓	✓
Estonia	Tallinn	—	—
Estonia	Viimsi	—	—
France	Dordogne (province)	✓	✓
France	Lyon	✓	—
Germany	Essen	✓	—
Germany	Nuremberg*	✓	✓
Hungary	Budapest	✓	—
Italy	Milan	✓	✓
Italy	Nuoro	—	—
Slovakia	All municipalities	—	—
Spain	Valencia (region)	✓	✓
Spain	Madrid	—	✓
Sweden	Malmö	✓	✓
Sweden	Umeå	✓	✓

**There is a sustainability policy for office materials and footballs and a food policy for kindergartens in Nuremberg.*

4.3 SCHOOL FOOD PROVISION

4.3.1 MEALS PROVIDED IN SCHOOLS AND KINDERGARTENS

Most schools in the studied municipalities provide at least lunch every day. In some schools of Lyon and Dordogne, lunch is provided four times a week (all weekdays except Wednesdays). In Belgium, pupils often bring their lunch boxes to school. As Leuven does not have city schools, the schools decide themselves if they want to or can offer lunch and there are very few schools offer a warm meal. In Ghent, the city provides hot meals to the schools it is in charge of, but not for schools that fall under a different authority.

Lunch is usually a hot meal, including meat and vegetables and non-meat options available either every day (in Essen) or some days a week with a few exceptions, where both hot and cold meals are provided (such as in Copenhagen and in Milan).

Six municipalities out of nineteen stated that some schools (e.g., only private schools or some municipality schools) also provide breakfast: Budapest, Copenhagen, Malmö, Tallinn, Viimsi and Department of Dordogne. Often that is for an extra charge, not part of a regular school meal payment or cost.

Seven municipalities mentioned in their responses that one or two snacks are offered during the day. The snacks are usually in the form of fruits and raw vegetables. In some municipalities, fruits and raw vegetables are available all day (Essen), or as part of lunch or afternoon snacks (Budapest, Department of Dordogne, Malmö, Milan, Nuremberg, Umeå). In Estonian municipalities, after-school meal (additional to lunch) is given for primary school children, who stay in school also after the lessons are over. This is usually provided for an additional charge and when ordered by the parents.

Kindergartens in seven of the 19 municipalities/regions analysed offer three meals from Monday to Friday. These are usually breakfast, lunch and afternoon snacks or light meals. The rest provide only lunch (Lyon) or lunch and snack. Lunch in kindergarten is usually like school lunch, mostly hot, but snacks are often served cold (sandwiches, fruits, vegetables, etc.). Madrid offers lunch with fruit as a dessert at least four days a week, whereas in some cases, regulated by municipal legislation, infants get fresh and daily prepared on-site breakfast and/or afternoon snacks as well.

4.3.2 COST STRUCTURES

There are two different ways of structuring (and calculating) the costs of school meals in the municipalities analysed (see also Table 5). The first structure is where the cost of school meals (lunch in particular) is calculated based only on the cost of the (food) ingredients and excluding other expenses.

The school lunch (hot meal) cost is calculated based on the food ingredients, mainly when the school has an in-house kitchen, and the school or municipal budget covers the labour costs. Examples are Umeå, Malmö, Budapest, and the Czech and Slovakian municipalities. The cost

varies around one euro and entails different meals. For instance, in Malmö and Umeå, the school lunch entails the main component of the meal (meat, fish or vegetables), a side dish (pasta, rice, and potato), milk, salad, and bread.

Table 5. Cost of school meal and cost models in municipalities

	Name of municipality	Cost of school meal	Subsidies
Including only food ingredients	Budapest	1.91 EUR	Partially subsidised
	Czech Republic municipalities	1.2 EUR	No subsidy (parents cover the whole cost)
	Malmö	10.46 SEK (~0.96 EUR)	Fully subsidised (free for pupils)
	Slovakian municipalities	1.2 EUR	Partially subsidised
	Umeå	11.79 SEK (~1.08 EUR)	Fully subsidised (free for pupils)
Including food ingredients and other costs	Copenhagen	3 EUR	Partially subsidised (based on income)
	Dordogne	8 EUR	Partially subsidised, parents cover part of the cost
	Essen	4 EUR	Partially subsidised (based on income)
	Ghent	4.2 (menu for special diets 7 EUR)	No subsidy (parents cover the whole amount)
	Leuven		No subsidy (parents pay all cost)
	Lyon	7.3 EUR	Partially subsidised, parents cover part of the cost
	Madrid	4.82 EUR	Partially subsidised based on sociological circumstances and income)
	Milan	4.23 EUR	Partially subsidised (based on income)
	Nuoro	4.94 EUR	Partially subsidised (based on income)
	Nuremberg	4.80 EUR	No subsidy (parents cover the whole cost)
	Tallinn	1.56 EUR	Fully subsidised (free for pupils)
	Valencia	3.68 EUR	Partially subsidised (based on income)
	Vienna	4.13 EUR	Mixed subsidies
	Viimsi	1.65 EUR	Fully subsidised (free for pupils)

The other cost structure means that the cost of school meal includes both food ingredients and all additional expenses, such as the labour costs of the canteen and kitchen staff, and in some cases, costs of transportation, electricity, and equipment. This structure is most used when the catering service is outsourced, predominantly used by the municipalities analysed. However, for example, Dordogne does not have an outsourced school catering service, but employees of the municipality manage kitchens in every school. The costs per meal in this type vary from €1.56 in Tallinn to eight euros in the Dordogne.

Subsidising the school meal varies from no subsidies (parents cover the whole cost of school food) to fully subsidised, which means that school food is free for all pupils.

The most vulnerable groups get the meal free of charge in municipalities where parents must otherwise fully pay the cost of school food (Ghent, Nuremberg and in the Czech municipalities) or partially (Copenhagen, Milan, Nuoro, Valencia, Essen, Madrid). For example, in Nuremberg lunch for vulnerable groups is paid but not the snack during school breaks. In the Czech Republic, some municipalities/schools are part of the Ministry of Education's "free lunch" programme, where children, after approval, are served free lunch based on their low socio-economic status.

In Lyon, Dordogne, and Slovakian municipalities, costs are partly covered by the municipality and/or national government for all children. In Vienna and Ghent, mixed subsidies depend on the type of school – some schools provide free lunch, and some provide subsidies based on income. For example, in Vienna, many schools offer free meals (85 schools), and in 115 schools, lunch costs €4.13.

On the other hand, in Tallinn, Viimsi, Malmö and Umeå, school lunch is free of charge for all children. In Tallinn and Viimsi, the national government covers part of the cost (1 euro per each meal) and the municipality the rest. In Malmö and Umeå, the city covers the meals price for all preschool, primary and secondary school children.

4.3.3 OPERATIONAL AND MANUFACTURING STRUCTURE

The operational structure of the school food provision in the studied municipalities is quite diverse (see Table 6). Contract catering provided by a private or publicly owned company is the most common operational model. 14 out of 19 municipalities/regions have contract

catering, whereas Milan and Budapest have a catering contract with a publicly owned company. The other twelve municipalities have contracts with private companies selected through public procurement. In contract catering, the procurement covers both food ingredients and catering services.

Some schools have in-house catering where meals are prepared and served by the schools, and procurement covers only food ingredients, not the service. In Malmö, Essen, and Dordogne, the schools run in-house catering.

Copenhagen, Umeå, and the Slovakian and Czech municipalities have mixed operational models. In the Czech Republic, in-house catering at the municipal level is more prevalent as approximately 80% of schools have in-house catering, 15% have contract catering through a publicly owned company and about 5% contract catering through a private company. Manufacturing models vary from the on-site kitchen model, where food is prepared on-site and served immediately after, to the centralised kitchen model, where kitchens are run either by the municipality, region/province, or catering service provider.

In Dordogne and Nuoro, school meals are made only in on-site kitchens. In Leuven, food in kindergartens and schools is prepared in municipality-owned centralised kitchens. In Essen, school meals are manufactured in the central kitchen owned by the province. In Vienna, Viimsi and Ghent, the food is cooked in central kitchens belonging to the catering service provider. The rest of the municipalities (altogether nine) practice mixed manufacturing models, where some schools have on-site kitchens, and some schools get their food from central kitchens. In general, it is more common for the municipalities to own the central kitchens: nine of 14 have central kitchens. More information is presented in Table 6 below.

In on-site kitchens, food is prepared on site and served hot immediately. In centralised kitchens, there are two options: either food is prepared in the central kitchen, delivered hot in thermoses to schools and served to children, or food is cooled down after cooking, delivered to schools, and re-heated before being served to children. Both options are practised in the municipalities with central kitchens quite evenly.

Table 6. Operational and manufacturing models in the municipalities.

Municipality	Kitchen				Operating model			Manufacturing model			
Model (see below)	A	B	C	D	E	F	G	H	I	J	K
Czech Republic municipalities	V		V		V		V	V		V	
Umeå	V		V		n/a	n/a	n/a	V		V	
Nuremberg	n/a	n/a	n/a	n/a	V			n/a	n/a	n/a	n/a
Valencia	V	V			V			n/a	n/a	n/a	n/a
Malmö	V		V				V	V		V	
Slovakian municipalities	n/a	n/a	n/a	n/a	V		V	V			
Vienna		V			V						V
Ghent		V			V				V		V
Essen			V	V			V			V	
Budapest	V	V	V		V	V	V	V			
Nuoro	V				V			V			
Madrid	V				V		V	V			
Milan	V		V			V				V	
Leuven			V								V
Tallinn	V	V			V			V	V		
Lyon			V		V						V
Dordogne	V						V				
Viimsi			V		V				V	V	
Copenhagen	V		V		V		V	V	V	V	

A – onsite kitchen; B – central kitchen owned by the service catering provider; C – central kitchen owned by municipality; D – central kitchen by the province/region; E – contract catering by private catering company; F – contract catering by publicly owned catering company; G – in-house catering; H – Cook and serve (hot meal cooked on site); I – Cold food (sandwiches, snacks); J – Cook and hold (food is delivered hot); K - Cook and chill (meal cooled down and heated served later as a hot meal).

4.4 SCHOOL FOOD PROCUREMENT SYSTEM

4.4.1 PROCUREMENT MODELS

Over 50% of the studied municipalities have centralised food and catering services procurement for schools and kindergartens. 28% of municipalities have a decentralised system, meaning each institution procures its food and/or catering service on their own. Essen, Tallinn, Madrid and the Slovakian municipalities have mixed models. In Tallinn, schools can procure the catering service themselves, but most prefer if the municipality leads the process. Thus, if there are many such schools, these purchases are combined, and the municipality runs the procurement procedures. This is similar in Slovakia. Either schools do their own procurement, or the municipality does it for smaller educational institutions, kindergartens, collectively. In Essen, the procurement depends on whether a school offers education and care for children outside lesson times (for more details, please see section 3.7.1). In Madrid, 72 nursery schools (out of 74) use decentralised procurement, whereas the remaining two nurseries have centralised procurement.

The size of the procurements depends quite closely on the procurement model. Centralised procurement procedures often tend to be larger, exceeding the national or EU financial thresholds. The EU threshold for food and catering services is 140,000 euro. In nine out of 19 municipalities/regions, the procurements are large, exceeding the EU threshold. In Nuremberg, Viimsi and Slovakian municipalities, the procurements are below the EU threshold and in Dordogne, even under the national threshold. In Copenhagen and Essen, the procurement size varies, so some exceed the EU or national threshold, and some do not.

Most studied municipalities (over 60%) use an ‘open procedure’ for food and catering services. In the Czech Republic and Slovakian municipalities and in Nuremberg, direct contracting is practised, which means a ‘negotiated procedure without prior publication’ is used. In Viimsi, Leuven and Essen, different procedures (open procedure, restricted and direct contracting) are used.

Procurement procedures are increasingly becoming digitalised. Over half of the municipalities taking part in the current study have digitalised their entire procurement processes, and 22% have partly digital procurement.

The most common contract type used is the standard renewable contract – half of the studied municipalities have used standard renewable contracts. In contrast, framework agreements and non-renewable contracts are equally used in the quarter of the municipalities.

Engaging with potential suppliers through a 'market dialogue/engagement' process in the pre-procurement stage is an effective way to offer a good occasion for supply side actors (producers, caterers, farmers, etc.) to influence the content of the contract notice at the early planning stage. Also, it ensures that potential suppliers can meet the sustainability and health requirements that are applied. By utilising information from the market, contracting authorities can prepare and publish call for attractive and realistic tenders for many companies to participate in. Market dialogue processes are not widely practised in the municipalities analysed. Six of 19 respondents (from Nuremberg, Valencia, Leuven, Lyon, Slovakian and Czech municipalities) have not performed any market dialogue activities. However, it is possible that some municipalities request information from potential suppliers without giving it a name and thus do not identify as establishing an engagement process. At the same time, the activities that have been conducted are quite simple. Only a few municipalities, such as Umeå, have been applying various market dialogue practices. Most municipalities have only tried one type of activity. For example, the most common has been to request information from the suppliers. Also, dialogue events with stakeholders, 1:1 meetings with suppliers, site visits and informal chats have been practised to involve the market in the procurement process. Desk research and questionnaire/survey among the suppliers is less practised among the studied municipalities.

4.4.2 SUSTAINABILITY ISSUES IN PUBLIC PROCUREMENT

Using sustainability criteria is quite new in some municipalities. For example, sustainability criteria have not been applied in the tender processes in the Czech Republic and Slovakian municipalities. In Budapest, only seasonal food has been required. Only food education activities (for pupils or kitchen staff) have been required in Tallinn. Many municipalities such as Ghent, Madrid, Milan, Nuoro, Dordogne, Vienna, Umeå, and Malmö have used many (nine to ten) sustainability criteria. Both Lyon and Copenhagen have also implemented six or seven different criteria. Essen requires one sustainability criteria – vegetarian options. In Nuremberg, the tendering and procurement processes are the schools' responsibility, so the municipality cannot apply sustainability criteria, but only give recommendations.

The most common sustainability criteria used in the procurement of food or catering services are the requirement of organic food, vegetarian and plant-based options or free-range animal products, seasonal food, and low carbon emissions transportation. Requiring different labels, such as Fairtrade, Rainforest Alliance, MSC (Marine Stewardship Council), EU organic label from food products or eco-labels from cleaning products, is also quite common. Demanding solutions that minimise food waste (e.g., redistribution schemes), practices that minimise mixed (mainly plastic) waste, and using energy-efficient equipment from contractors are less common. Also, supporting small and medium-sized enterprises or small farmers with procurement criteria has not been frequently practised.

Not all studied municipalities have specified where sustainability criteria have been applied in the tenders. However, based on 13 municipalities that have collected that data, it can be said that sustainability has been leveraged the most as part of the technical specifications (69% of replied municipalities), qualification criteria, i.e., selection and exclusion criteria (61%) and contract clauses (54%). Sustainability as part of the award criteria has been applied less frequently (38% of replied municipalities). Few have used contract negotiations, market dialogue, following-up the contract execution and inter-organisational procurement planning.

The mapping results show that it differs in the studied municipalities whether and how the sustainability criteria have been included in the food and catering service procurements. However, almost all municipalities have made attempts to procure more sustainable food and catering services. On the other hand, assessing the environmental and social impact of their food and catering service procurements is much less common. For example, only half of the studied municipalities have evaluated the environmental impact, and 28% have assessed the social impact of their procurement practices in these areas. Only the city of Ghent systematically and regularly assesses the environmental and social impacts of its procurement practices, and Umeå assesses both the environmental and social impacts of its procurement on an ad-hoc basis. Furthermore, Malmö, Copenhagen and Essen are assessing the environmental impacts regularly, and Milan is doing so on an ad-hoc basis. In contrast, Dordogne evaluates the social impact of its procurement on an ad-hoc basis.

A few municipalities (Leuven, Lyon and the Department of Dordogne) lack explicit knowledge about social and environmental impact assessment practices in their municipalities.

The tools that are used for that are an environmental calculator (in Malmö, Copenhagen, Milan and Ghent), peer reviews and assessments (Umeå, Ghent, and Copenhagen), stakeholder surveys (Umeå) or more informal tools, such as observation and meetings on-site (Dordogne).

The most common criteria that are prioritised in the environmental and social impact assessment are greenhouse gas emissions and food waste reduction – both considered necessary by an equal number of municipalities (seven out of 19 respondents). Protection of human rights along the food supply chain, etc., and organic share, healthy, fresh (seasonal), tasty food, holistic approach and internship and/or employment requirements for individuals from vulnerable groups have also been mentioned.

Knowing about the suppliers' sustainability helps to understand which kind of sustainability criteria to set and whether these are suitable or acceptable for potential suppliers. Also, it helps to assess the sustainability of the meals provided. An equal number of municipalities answered that they have information on the sustainability of the suppliers and who do not have that information (five out of 19 in both cases). Four out of 19 answered that they only have partial information. Either because it depends on the school, as some schools know their suppliers better than others, or sometimes suppliers provide such information on their own initiative.

In the SF4C project, more innovative food procurement models such as, Dynamic Purchasing Systems, Innovation Partnerships, SDGs-aligned food tendering with control and reporting structure, use of blockchains as a certification system for the food value chain, Public-Private Partnerships, Innovation procurement, are in the focus of food and catering service procurement. However, these concepts and models are not well known amongst all of the municipalities taking part in the project, as 14 out of 19 have stated that they are not familiar with these concepts. However, Malmö, Umeå, Copenhagen, Essen, Dordogne and Nuoro stand out as some of these models have been applied in these municipalities. In Umeå, Malmö and Essen Dynamic Purchasing Systems are being used. In addition, Nuoro has practised an open tender process with procurement of quality products with a short supply chain, PDO and PGI, with sustainable meat and fish supply. Copenhagen has applied SDGs-aligned food tendering following a control and reporting structure. Malmö, Essen, Dordogne and Copenhagen have put Framework Agreements in place.

Nevertheless, all studied municipalities are interested in trying these models. For example, Dynamic Purchasing Systems, framework agreements and SDG-aligned food tendering are the most relevant concepts to the municipalities participating in the mapping study (mentioned by three to five municipalities). Innovation procurement, Innovation partnership, Public-Private Partnership, and use of blockchains as a certification system for the food value chain were considered as less relevant as only one or two municipalities mentioned these. At the same time, one-third of municipalities have not decided yet where they would like to focus. That is either because they are unfamiliar with the mentioned concepts, would like to discuss and analyse the usefulness internally, or would like to learn how other municipalities work with these models.

4.5 OPPORTUNITIES AND BARRIERS

4.5.1 BARRIERS

Regarding barriers identified by the 19 respondents, eight thematic barriers stood out the most (see Figure 2). The two regions did not specify any obstacles. The most widespread (in 13 of the 19 municipalities/regions) barrier to implementing sustainable and healthy school meals is the cost of sustainable alternatives or the fixed cost of a meal that does not allow for many changes. Lack of expertise of procurers regarding the sustainability criteria applicable, and the strict legal framework forbidding it, were also evident. The former is seen as a major barrier in nine municipalities and the latter in seven. The strict legal framework as a local barrier has differing implications in the municipalities analysed. For example, in Budapest, it is mandatory by law to serve animal protein every day. However, its substitution with plant-based food on some days could bring about significant savings in emissions.

Another barrier arising (in six municipalities), is the lack of local food supply on the market and the difficulties of including local criteria. Additionally, some municipalities highlighted that since the procurements are very large and include a multitude of different actors, only large bidders tend to take part of it. Similarly, a related barrier is the logistics of the catering itself, which is often difficult due to the high number of schools and kindergartens in the municipalities.

Further, two municipalities indicated the issue with a lack of certifications and supply chain transparency as a prohibiting factor, and another two, the lack of local political commitment and sustainability standards in schools.

Figure 2. Wordcloud of the aspects mentioned as barriers by the municipalities.

4.5.2 OPPORTUNITIES

The analysed municipalities highlighted multiple opportunities related to switching to a more sustainable and healthy school meal procurement (see Figure 3). In total, 15 out of 19 municipalities/regions answered the question in the survey and suggested six thematic fields of opportunities. The most prevalent opportunity was health benefits, which arose in five municipalities. Health benefits were regarded as directly impacting children's health or influencing healthy dietary guidelines.

Setting up local goals related to sustainability and the food system, or achieving the ones already set in the municipality, was seen as a further opportunity. Additionally, a few municipalities indicated that it could be possible to build up local expertise through collaboration with other countries and cities. Sustainable and healthy food procurement is also seen to benefit the environment and economic development as three municipalities indicated that it could bring about emissions reductions, and another three could help them support local small-scale enterprises. As part of the support for small-scale enterprises, it was suggested to create ready-to-use and flexible samples of legal paperwork to make the process smoother. Furthermore, in some municipalities it is believed that procurement efforts and improving food literacy might also have a positive long-term impact on the legal frameworks. In contrast, another municipality thought that without the support of the state, no fundamental changes can be made.

Figure 3. Wordcloud of the aspects mentioned as opportunities by the municipalities.

4.5.3 POTENTIAL OF THE SCHOOLFOOD4CHANGE PROJECT IN THE MUNICIPALITIES

As part of the survey, the partners in SF4C were asked to point out the most beneficial focus points of the project, meaning what would be the best focus for them, considering individual contexts, including legal and political frameworks.

The most widespread answers across the 19 regions were regarding food education in the school curricula and opening opportunities for local small-scale farmers and SMEs, which

both received 14 votes (Figure 4). These focus points are also specifically the ones which would bring about society-wide positive impacts. On the one hand, it would foster children's education and thus improve their health in the longer term, and on the other hand, it would support local enterprises and thus improve local economies.

The potential for reducing the environmental impact of food procurement and shortening the supply chain received both equal 11 votes, and menu-related specifics followed, such as increasing the share of organic food, reducing the amount of animal-based foods in menus/meals, and following seasonality. Cost-related aspects, such as improving the price-quality ratio and cost effectiveness assessment were not so important, gaining only 5 and 2 votes, respectively.

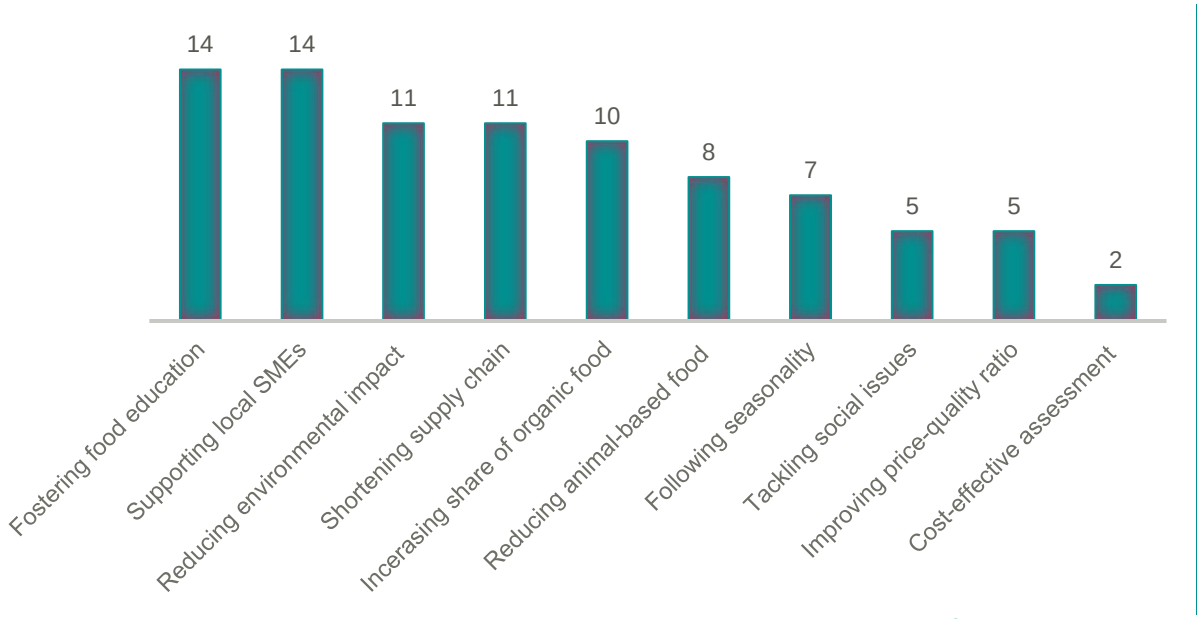

Figure 4. Answers to question 36: Where do the partners think the SF4C project should focus the most in their municipalities?

THANKS FOR THE FOOD!

It's time for a new menu

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SCHOOLFOOD 4CHANGE

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