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RESILIENT ECONOMIES AND COMMUNITIES

BSR Food Coalition

BSR Food Coalition mission-oriented framework

*Let sustainable development lead to smart
solutions connecting local farmers with a
more healthy future for our children*

Baltic Municipality Food Coalition

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RESILIENT ECONOMIES AND COMMUNITIES

BSR Food Coalition



Association of Municipalities
of Tartu County



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Bibliografinė informacija pateikiama Lietuvos integralios bibliotekų informacinės sistemos (LIBIS) portale [ibiblioteka.lt](http://biblioteka.lt)

ISBN 978-609-481-198-2

Preface

The project BSR Food Coalition (#S002) connects local farmers and public authorities to ensure regular access to organic food meals at schools, and thus a continuous demand for healthy food supply.

Context

Various district municipalities across the Baltics have put food and sustainability as a theme in their long term regional strategic plans. Essential involvement, collaboration and having a common goal from municipalities are key to advancing food systems sustainability and to tackle the challenges that come with it. Sustainable school meals as catalysts for food system change is a lever to enable large-scale (integrated) food sustainability transitions.

Solution

A Farm to School Mission-Oriented Framework that is aimed at fostering the development of a community of practice, to support replication, adaptation and expansion of successful Farm to School programme models. The framework is being developed for use by local and regional municipalities, programme practitioners, policy-makers and development partners, as well as civil society and community-based organisations and the private sector too.

Challenge

A small number of innovative approaches are being tested and implemented in Klaipeda, Kurzeme-, Latgale-, Tartu- and Vorumaa region but the resulting outcomes remain to be leveraged for impact at scale in line with the targets of Agenda 2030 and the European Farm to Fork strategy. Based on survey results of the five regions that was conducted in autumn 2022 by Lead Partner Klaipeda University, building a Farm to School system requires more communication, direct school administration contacts with local farmers, greater involvement of municipalities in legislative amendments, as well as help in creating shorter food supply chains.

Piloting

Thanks to the Interreg Baltic Sea Region Programme and its team, by believing in our BSR Food Coalition project, we have managed to take Farm to School from conversations to piloting. The aim is to implement co-planned Farm to School test beds (pilots) in each project partner's region: Klaipeda, Kurzeme, Latgale, Tartu and Vorumaa. Each partner with the flexibility to adapt to own think-out-of-the-box ideas and local context, but with solutions adapted to today's climate challenges and to the following entry points:

1. Smallholder farmers are very important to food security, and increasing agricultural productivity is closely linked to reducing rural poverty and hunger. Yet, food continues to be lost and wasted, instead of reaching school meals.
2. Organic food is always part of the sustainable school food and the demand for it is increasing in the Baltic States but the supply is weak and unorganised.
3. To bring Farm to Fork into school meals, and to provide market access to smallholder farmers.

Framework developed by Klaipeda University and Sustainable Gastro in collaboration with BSR Food Coalition project partners: Association Klaipeda Region, Latgale Planning Region, Kurzeme Planning Region, Association of Municipalities of Tartu County, Development Centre of Voru County, Nordic Council of Ministers' Office in Lithuania, Nordic Council of Ministers' Office in Latvia and Nordic Council of Ministers' Office in Estonia.

The framework has been developed within the BSR Food Coalition project funded by the Interreg Baltic Sea Region Programme.

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MODULE 1

UNDERSTANDING FARM-TO-SCHOOL PROGRAMME

1.1 From school catering to the Farm-to school programme

Today's world tendencies, such as an increasing population, growing consumption, the problems of climate change, and anthropogenic pollution of the environment, are becoming more prominent, and raise the relevant issues of food quality and sufficiency. The priorities of world, European, including Baltic countries, strategic documents are related to the goals of implementing sustainability and food strategies. In order to ensure the sustainable development of countries, in 2015 the UN approved the 17 Sustainable Development Goals, which cover the areas of improving the social environment, economic development, environmental protection, and cooperation (The Sustainable Development Agenda 2030, 2015). All UN member states are committed to the implementation of these goals, where one of the strategic issues addressed is to eliminate hunger, ensure food self-sufficiency and better nutrition, and promote sustainable agriculture. Sustainable and resilient food production systems are the key to achieving this goal. Transitioning to sustainable agriculture will help ensure food security in the future, as demand increases and the climate changes. Policymakers will need to promote sustainable food production systems, and ensure the proper functioning of food markets and access to market information. One of the relevant areas for achieving this goal is the improvement of childhood nutrition and school meal systems.

School meal programmes are common throughout the world, and are used to promote healthy eating in children and improve learning outcomes (Morgan, Sonnino, 2008). In recent years, there has been an increasing emphasis on the possibility of improving school meals by including locally grown products, thus contributing to the development of local economic systems (Sumberg, Wheeler, 2011). This model has been called "Farm-to-school" in the practice of some countries, and, according to its proponents, emphasizes public procurement of locally grown food as a key market opportunity for farmers (Botkins, Roe, 2018).

Literature analysis (Joshi, 2014; Joshi et al., 2014) has identified essential components typically found in Farm-to-school programmes:

- Local food procurement. Schools collaborate with local farmers and producers to integrate fresh, seasonal and locally grown foods into their menus. This encompasses a wide range of items, including fruits, vegetables, dairy products, meat, and other agricultural products.
- Educational activities. Farm-to-school programmes often encompass educational elements designed to enhance students' understanding of food production, nutrition, and the significance of sustainable agriculture. Such activities may involve farm visits, gardening projects, cooking demonstrations, and classroom lessons about food systems.

- Community engagement. These programmes foster connections between schools, students, parents, farmers, and the broader community, encouraging dialogue about the benefits of local food and its implications for health, the economy, and the environment.
- Health and nutrition. Farm-to-school programmes prioritize the provision of nutritious meals crafted from fresh ingredients, which can contribute to the enhancement of students' dietary habits and overall health.
- Economic support. By purchasing local products, schools contribute to the local economy and provide support to local farmers and businesses.
- Sustainability. Sourcing food locally reduces the carbon footprint associated with long-distance food transport, thereby promoting environmental sustainability.
- Cafeteria experience. Schools often aim to enhance the cafeteria environment by emphasizing the sources of the food, and fostering a connection between students and the local food system.

Farm-to-school and similar programmes are common in developed and developing countries in South America, North America, Asia and Europe, e.g. "Farm Safe Schools" (Ireland), "Food for Life" (England), "From Farm to Cafeteria" (Canada), etc. (<https://foodtank.com/news/2017/10/national-farm-school-initiatives/>). They aim to connect schools with local farmers, food producers and distributors, to provide fresh, locally sourced food in school cafeterias. The programmes not only promote healthier eating habits among students, but also support local agriculture, strengthen communities, and educate students about where their food comes from. Programmes are typically implemented in collaboration with school districts, farmers, community organizations, parents and students. Overall, Farm-to-school programmes promote a holistic approach to education and nutrition, emphasizing the importance of fresh, locally sourced food for students' well-being and the well-being of their communities. Farm-to-school programmes aim to achieve several key objectives that benefit students, communities, local farmers and the environment. The specific goals of the programme may vary based on regional/national contexts, but the overarching aims generally include (Izumi et al., 2010):

- Farm-to-school programmes provide students with access to fresh, locally grown and nutritious foods, promoting healthier eating habits and reducing the prevalence of diet-related health issues.
- Farm-to-school programmes strengthen the local agricultural sector by creating a consistent demand for locally sourced foods, contributing to economic growth, and supporting farmers and food producers in the community.
- Farm-to-school programmes incorporate food and agriculture education into the curriculum, teaching students about where their food comes from, how it is grown, and the importance of sustainable food systems.
- Farm-to-school programmes foster community connections: they facilitate connections between schools, students, parents, farmers and the broader community, fostering a sense of community pride, engagement and cooperation.
- Farm-to-school programmes create positive school environments: a programme can contribute to a positive school atmosphere by enhancing the cafeteria experience, fostering pride in local foods, and promoting social interactions.

Although Farm-to-school programmes vary according to the place and the people who run them, they typically include one or more of the following programme components. They connect local farmers and food processors with school cafeterias in preschools (kindergartens), secondary schools (grades 1-12) and colleges. They serve and promote locally produced agricultural products on the lunch line, and they connect youth to food production and preparation through activities such as school gardens, field trips to farms, and chefs in the classroom. Farm-to-school programmes also include cross-promotion of schools' featured local foods in retail outlets, health-care facilities, and other institutions (Watts et al., 2005). Farm-to-school programmes align closely with the principles of sustainable development by addressing social, economic and environmental aspects. They contribute to achieving the United Nations Sustainable Development Goals (SDGs), by promoting healthier communities, supporting local economies, and fostering environmental sustainability.

1.2. The concept

On a broad level, Farm-to-school programmes share the goals of improving childhood nutrition and school meals, as well as supporting local markets (Joshi et al., 2014; Roche et al., 2012). However, there is a great deal of diversity in programme implementation strategies in various countries that are developed to meet these goals, and Farm-to-school is defined in different ways across the research and programme evaluation literature. A primary definition was clarified by a foundational document in Farm-to-school literature, "Evaluation for Transformation" (Joshi et al., 2014), which describes the potential outcomes of Farm-to-school, and provides a common language for researchers, programme evaluators and practitioners. This document describes Farm-to-school broadly as enriching "the connection communities have with local, healthy food and food producers by changing food purchasing and educational activities at schools and preschools" (Joshi et al., 2014, p. 2). Although Farm-to-school programmes are unique and vary by location and school resources, comprehensive programmes, according to this document, include three core elements: (a) the procurement of local and regional food products, (b) gardening based at schools and preschools, and (c) education that is food and farm-related. An additional definition that provides an organizing framework is the "3-C" approach embraced by leaders in the Farm-to-school movement, which defines three domains of intervention: the cafeteria, the classroom, and the community (Bagdonis et al., 2009).

The growing body of literature on Farm-to-school programmes across the countries defines their two main functions generally as:

- the procurement and preparation of locally produced foods for school meals, and
- experience-based educational activities addressing the agricultural, culinary and nutritional qualities of such foods (Schafft et al., 2010).

The procurement and preparation component accomplishes four distinct aims. These are to (Izumi et al., 2009; Meter, 2011):

- improve students' nutritional intake;
- create markets for small and medium-size farmers in the schools' own communities and regions;

- strengthen local economies by spending a greater percentage of school food services budgets on foods produced nearby; and
- enhance the natural environment by supporting sustainable agricultural practices.

The experiential educational component of most Farm-to-school programmes has been shown to increase students' appreciation and preference for healthy foods that are produced locally in an environmentally sound way, and is often portrayed as the overarching goal of Farm-to-school programmes. Farm-to-school is also described as decreasing the distance between food production and consumption, by fostering efforts which bring food to consumers with the farmer's face or story on it (Barlett, 2009).

Proponents believe that the combined application of both these components of Farm-to-school programme, local food procurement and experience-based education, is instrumental in encouraging students' consumption of healthy, locally produced food. Research on school gardens demonstrates that experience-based agricultural education increases students' willingness to eat fruit and vegetables (Kloppenburger, Hassanein, 2006; Morris et al., 2000).



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In the scope of this project, we define the idea of the Farm-to-school programme as activities that generally centre around the procurement of local or regional foods, agriculture or nutrition-based educational activities, such as but not limited to (Renting et al., 2003):

1. Serving local food products in school cafeterias, encompassing both regular meals and snacks.
2. Incorporating local food items in classroom settings, which may involve snacks, taste tests, and the use of educational materials.
3. Conducting educational programmes focusing on local foods. These programmes include bringing farmers into classrooms, offering culinary education centered on local food, arranging field trips to farms, farmers' markets, or food processing facilities, and conducting educational sessions for parents and community members.
4. Establishing and maintaining school gardens.

When adhering to this defined framework, Farm-to-school programmes typically incorporate the following key features:

1. Facilitating the connection between local farmers, food processors, and school cafeterias in institutions ranging from preschools (kindergartens) to secondary schools (grades 1-12) and colleges.
2. Promoting and utilizing locally produced agricultural products in school meals.
3. Engaging youth in food production and preparation, through initiatives such as school gardens, farm visits and classroom interactions with chefs.

Hence, the concept of the Farm-to-school programme revolves around connecting schools with local farmers, food producers and distributors, to integrate fresh, locally sourced food into school cafeterias and educational curricula. It is a multifaceted initiative that encompasses nutrition, education, community engagement and sustainability (Vallianatos et al., 2004; Berkenkamp, 2011). Overall, the Farm-to-school concept is about creating a dynamic and interconnected system that benefits students, communities, local farmers and the environment. It emphasizes the importance of understanding where food comes from, making healthier food choices, and supporting local economies.

1.3 Best practices in the USA, Europe and elsewhere

Farm-to-school programmes have gained popularity in various countries around the world as a way to promote healthy eating habits, support local agriculture, and provide educational opportunities for students. While the scope and implementation of these programmes can vary from one country to another, there are some countries where Farm-to-school initiatives have been established (Chaves et al., 2023; Lineweaver, 2023):

- The United States: the Farm-to-school movement originated in the United States and spread across the country. Many states have their own Farm-to-school programmes that connect

schools with local farmers, incorporate local foods into school meals, and offer educational activities.

- Canada: Farm-to-school programmes are active in various provinces across Canada. These initiatives focus on sourcing local foods for school cafeterias, and integrating food and agriculture education into the curriculum.
- The United Kingdom: the UK has embraced the concept of Farm-to-school, often referred to as «Farm to Table» or «Farm to Fork». Schools collaborate with local farmers and producers to incorporate locally sourced foods into meals and educate students about food production.
- Australia: Farm-to-school programmes are gaining momentum in Australia, particularly in regions with a strong agricultural presence. These programmes aim to increase awareness of local food systems, and provide students with hands-on learning experience.
- New Zealand: in New Zealand, the «Garden to Table» programme focuses on teaching students about growing, harvesting and preparing food. It emphasizes the importance of connecting children with their food sources.
- France: the «Farm-to-school» concept is known as «La Ruche Qui Dit Oui» (The Hive that Says Yes) in France. This initiative connects local producers with schools and communities, encouraging the consumption of fresh, local and seasonal foods.
- Japan: some schools in Japan have adopted Farm-to-school practices, emphasizing the importance of local, seasonal foods in school meals, and involving students in gardening and farming activities.
- South Africa: Farm-to-school initiatives in South Africa aim to address nutrition challenges, and provide students with healthier food options, by sourcing produce from local farms.
- India: in India, schools have started integrating the concept of Farm-to-school to educate students about agriculture, encourage organic farming practices, and promote locally sourced foods.
- Kenya: Farm-to-school programmes in Kenya emphasize agricultural education and the benefits of consuming local foods. They often involve school gardens and hands-on learning experiences for students.

The National School Lunch Programme (NSLP) is the largest in the United States, serving more than 100,000 public and private schools and child-care centres. Consistent research is being conducted to reveal various aspects of this programme. According to researchers, the programme is an important link connecting school canteens and local farmers (Tropp, Olowolayemo, 2000). Studies show that this programme not only contributes to improving the quality of food for students in schools, but also creates added value for the rural economy (Espejo et al., 2009). By establishing direct links with schools, small and medium-size farmers can access a stable and reliable market that ensures a fair price for their products (Azuma, Fisher, 2001). Farm-to-school programmes in the United States include a wide variety of activities, such as harvest festivals, field trips, school gardens and farmer educational visits. The National School Lunch Programme plays a crucial role in providing students with access to nutritious meals that contribute to their overall well-being and academic success. It addresses food insecurity, promotes healthy eating habits, and supports families in need, while fostering a culture of wellness in educational settings.

Farm-to-school programmes, known by various names, are becoming increasingly popular in European countries as well. These initiatives aim to connect schools with local farmers, promote healthy eating habits, support local agriculture, and educate students about food systems and

sustainability. However, in Europe, the issue of school meals in cooperation with local farms has only recently begun to be addressed. In October 2022, the StratKit+ project, financed by Interreg Baltic Sea Region funds, started. The project aims to create guidelines for the public sector, food providers, and other institutions on the integration of sustainable public catering regulation in schools, day-care centres, hospitals and public sector institutions. Today, when faced with extremely rapid changes, public sector organizations are in great need of support, guidance and communication with the intended target groups, in order to enable consumers to receive meals that meet their nutritional needs. However, there is also a strong focus on the local network of suppliers, and, of course, sustainability, in order to achieve an increased amount, of sustainable products supplied by the catering sector (StratKIT+ project website. Access via internet: <https://interreg-baltic.eu/project/stratkitplus/>). In January 2022, the SchoolFood4Change project, funded by the European Union, was also launched, which consists of as many as 43 European partners, which include environmental, governmental and non-governmental organizations, scientists, scientific institutes, schools, chefs, and food and health professionals. The key aspects and goals of the project are:

1. To make the food served in schools innovative, climate-friendly, healthy, tasty, without waste, and, most importantly, with a local identity;
2. A holistic long-term approach to food provided in schools for a long-term period;
3. The creation of sustainable catering regulation.

This is only part of a long-term strategy enabling the study of universally important aspects on a broad European scale (Schoolfood4change project website. Access via internet: <https://schoolfood4change.eu/about/>).

Farm-to-school projects in Europe are initiatives that aim to promote local and sustainable food systems, improve students' access to nutritious meals, and provide educational opportunities related to food and agriculture.

The concept of Farm-to-school, which promotes locally sourced foods, agricultural education and community engagement, has been gaining attention in the Baltic countries. While the extent of its implementation may vary, there have been efforts to integrate Farm-to-school principles into educational systems and local communities.

Estonia currently does not have a widely known or established national Farm-to school programme similar to those in some other countries. However, there have been various localized efforts and initiatives in Estonia that align with the principles of Farm-to-school, focusing on connecting schools with local food producers, promoting sustainable agriculture, and educating students about food sources and nutrition. It is important to note that the status of such initiatives may have evolved since a lot of project initiatives have been implemented in Estonia in recent years.

In Latvia there might not be a widely known or comprehensive national Farm-to-school programme; however, there have been localized efforts and initiatives that align with the principles of Farm-to-school. These efforts focus on promoting locally sourced foods, agricultural education, and healthier eating habits among students.

School-related activities and initiatives in Lithuania. The Klaipėda region has a regional specialisation strategy for 2030, where different measures are dedicated to food topics under the “Bioeconomy” priority (Klaipėda Economic Development Strategy, 2021). One of them is the promotion of the application of green public procurement criteria on a municipal level; also, district municipalities are working actively on the creation of short food supply chains, and organizing catering services in the Klaipėda region in public institutions (schools, hospitals, etc). Also, on the regional level, the importance of educating society and informing about local food value is being emphasized. Small farms still predominate in the Klaipėda region, but it is becoming more and more difficult for them to operate in market conditions, especially during the Covid pandemic.

The biggest problem is the lack of the necessary infrastructure in the Klaipėda region for the successful cooperation of schools and local farms (Melnikova et al., 2023). Moreover, some other problems have been identified. Neither the heads of educational institutions nor the farmers have the time or ability to devote all their time to the paperwork and documents of public procurement, and then to the inspection of goods, logistics, etc. It is just that the system is not developed and does not work smoothly. It is difficult for small farmers to provide purchases and ensure large quantities of products needed (Melnikova et al., 2023). This requires to further improve the cooperation of regional food chains and farmers. Today there are legal options to buy food products from farmers, but that path is quite complicated, which is why few choose it. Anyway, the Klaipėda region sees its task to promote information and the education of the population on why local products and locally produced food are more useful, healthier and better for people.

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MODULE 2

RESEARCH ON THE PREREQUISITES FOR THE DEVELOPMENT OF THE “FARM-TO-SCHOOL” MODEL IN THE BALTIC STATES: RESEARCH STUDY DESIGN

2.1. Organisation of research

The current study is part of the BSR Food Coalition project, funded by the Interreg Baltic Sea Region Program under contract #S002. The primary objective of this project is to facilitate the establishment of the Farm-to-school model in the Baltic countries.

The overarching aim of this study was to conduct a comprehensive assessment of the existing school food systems in the project partner regions, namely Klaipėda, Kurzeme, Latgale, Tartu and Voru regions. The goal was to provide insights that would inform the development of a Farm-to-school program framework in alignment with sustainable development principles. This study's purpose was to identify the conditions and opportunities for integrating locally produced foods into general education schools within the regions. Additionally, it sought to pinpoint the educational efforts necessary to promote healthy nutrition, cultivate overall health habits, and enhance agricultural and food system literacy within schools and their communities. The study was designed to raise awareness among all relevant stakeholder groups and to align with global sustainability goals, including those outlined in Agenda 2030.

To fulfil the research objectives effectively, a mixed-method research methodology was employed, chosen for its suitability in exploring the multifaceted aspects contributing to the development of the “Farm-to-school” model (Trochim et al., 2016). This mixed-method approach integrates both quantitative and qualitative research methods.

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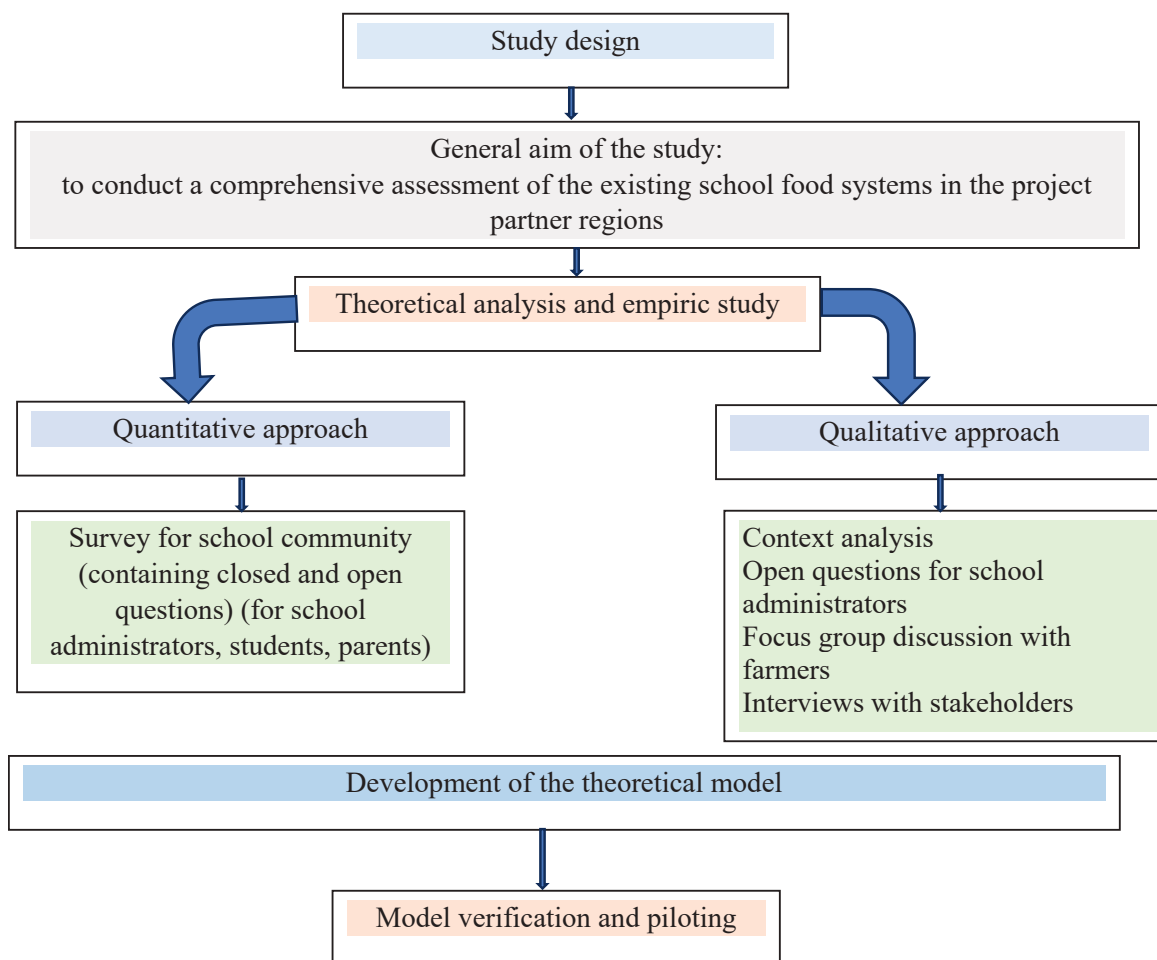


Fig. 1. Organisation of research

To collect quantitative data, a written survey, facilitated by a questionnaire, was selected as the research method. For qualitative research, methods such as content analysis of documents, open questions, focus group discussion, and interviews were employed. Each of these methods serves to gather a comprehensive range of data that contributes to a holistic understanding of the “Farm-to-school” model.

The research was guided by research ethics’ principles:

- The principle of benevolence. Respondents are guaranteed that they are not at risk of any harm related to the process or results of the study, that participation in the study will not cause increased anxiety or fear.
- The principle of respect for the dignity of the person. The respondents were given the right to decide on voluntary participation in the research, the objectives of the research, the progress of the research process, the benefits of the results and their possible applicability were explained.
- The principle of justice. Respondents are guaranteed confidentiality. It is stated that the data will be used for aggregated, research purposes. Research procedures are explained using everyday language terminology.

In addition, it was explained how the selection for the study took place, informed about the ways in which information is collected from various sources.

2.1.1. Qualitative context analysis

A qualitative context analysis, in accordance with methodologies outlined by Myers et al., (2013) and Cohen, Crabtree (2006), was executed. The central objective of this contextual analysis was to unveil the legal dimensions that govern school food procurement systems in the project partner regions.

The guiding questions for the context analysis were elaborated by the team of researchers on the basis of the carried theoretical analysis (see Annex 1). The ultimate aim was to provide a succinct and comprehensive portrayal of the phenomenon under scrutiny.

2.1.2. Survey

The objective of the survey was to gather data pertaining to the perceptions of target groups regarding local school food procurement, along with collecting operational information encompassing purchasing practices and preferences. The survey engaged project target groups comprising three key categories: 1. Representatives of school administration (responsible for matters relating to food, catering, and procurement); 2. Students; and 3. Parents.

The data collection instrument, in the form of a questionnaire (see Annex 2 and 3), was thoughtfully devised and incorporated distinct sections of inquiry:

- Interrogations concerning the quality of school meals.
- An exploration into the potential contributions of local farms to the enhancement of meal quality.
- The degree of participation and support from parents and students in relation to the promotion of healthier food.
- The feasibility of educational activities conducted in collaboration with local farms.
- The perceived impact of these initiatives on the promotion of healthy nutrition, the development of health-conscious habits, and fostering agricultural and food system literacy.

The school administrators were presented with open-ended questions, necessitating elaborative responses.

The survey was executed across schools situated within the project partner regions, encompassing urban and rural areas, to ensure a representative sample.

2.1.3. Focus group discussion with farmers and related social partners

The questions of the focus group discussion were structured in order to discuss several relevant situations: whether farmers are interested in production, provision of services to educational institutions, how they evaluate the public procurement system, whether they cooperate with

educational institutions in order to develop a culture of healthy nutrition, etc. (see Annex 4). The questionnaire was developed by the project researchers on the basis of the theoretical analysis.

The involvement of key stakeholders was a pivotal aspect of this focus group discussion. Their participation was indispensable for shedding light on the regulatory procedures governed by legal acts, among other critical aspects. This diverse composition of focus group participants was carefully curated to ensure a well-rounded and informed discussion on the chosen problem. The qualitative content analysis method was used to analyze the qualitative research data.

2.1.4. The open-question interviews with stakeholders (municipality specialists)

The aim of the open-question interviews with Klaipeda region stakeholders was to disclose the opinion/expectations/needs/wishes of representatives of target groups.

Open-question interviews, also known as open-ended interviews, were chosen as a qualitative data collection research method, as interviewers ask participants broad, open-ended questions to gather in-depth information, insights, and narratives. Unlike closed-ended questions that elicit specific responses, open questions encourage participants to provide detailed, unrestricted responses (Žydzūnaitė, 2006).

The instrument for qualitative data collection was elaborated by project researchers on the basis of theoretical analysis of research publications (Conner et al., 2011). It included 7 open questions for stakeholders (see Annex 5). To analyze the responses provided by the informants, the researchers adopted an interpretative qualitative data analysis method. This approach allowed for the in-depth examination of participant responses, elucidating the nuances, themes, and insights within the qualitative data (Pietkiewicz, Smith, 2014).

2.2. Prerequisites for the development of the “farm-to-school” model in the project partner regions: research results and implementations

The empirical study is part of the BSR Food Coalition project, aimed at establishing the Farm-to-school model in the Baltic countries, specifically focusing on the Klaipeda, Latgale, Kurzeme, Tartu, and Voru regions. This study assesses school food systems in these regions and seeks to develop a Farm-to-school program aligned with sustainable development principles. The goals are to integrate locally produced foods into schools, promote healthy nutrition and agricultural literacy, and align with global sustainability objectives. A mixed-method research approach is employed, combining quantitative and qualitative methods, including surveys, questionnaires, and focus group discussions.

Research in the project partner regions of Klaipeda, Latgale, Kurzeme, Tartu, and Voru reveals diverse school food systems, making generalizations challenging due to the unique contexts and varying conditions in each region. However, some commonalities emerge across these regions. Despite differences in local agricultural practices, economic conditions, and regulatory environments, all regions face challenges in integrating locally produced foods into school meals, managing effective procurement and logistics systems, and involving students and parents in menu planning. Additionally, there is a shared recognition of the importance of promoting healthy

nutrition and agricultural literacy, alongside a collective interest in fostering stronger cooperation between educational institutions and local farmers. While each region's specific circumstances shape their respective approaches, these shared themes highlight the potential for collaborative solutions and unified efforts to enhance the Farm-to-school model across the Baltic countries.

Key findings from the survey of school administrators, students, and parents in the project partner regions indicate several challenges:

- There is no coherent system for procuring food directly from local farmers and logistics are inefficient.
- The quality of school food in some cases was claimed as not really satisfactory, but students and parents are not usually involved in menu planning.
- There is a lack of knowledge about local ecological production.
- School communities support changes to include more organic, ecological, and healthy products in school meals and advocate for cooperation with farmers.

However, the public procurement system is complicated, and local farmers lack knowledge about administering school food purchases. Larger schools face restrictions in requiring local food due to EU common market principles. Despite these challenges, there is consensus that cooperation with farmers could provide economic and social benefits, including promoting healthy eating habits and enhancing agricultural literacy through educational activities.

In summary, respondents emphasized that collaboration with local farms contributes to healthy nutrition, fosters good dietary habits, and promotes agricultural and food system literacy within the school community. They suggested various forms of collaboration, including ordering local products for the kitchen and engaging students in farm-related activities such as learning various farm jobs, visiting farms on open farm days, and having local farmers present their products at the school. This multi-faceted approach highlights the potential for enhancing the connection between schools and local agricultural communities while fostering a more sustainable and informed food system.

Focus group discussions highlight several themes regarding farmer-education institution interactions in the project partner regions:

- Farmers emphasize the importance of product and service quality for their economic success and the nutrition and safety of school food.
- Current cooperation between farmers and educational institutions is limited but some farmers have contracts with schools.
- Farmers are interested in partnering with educational institutions but seek more support from local municipalities.
- Economic and social motives drive farmers to cooperate, promoting healthy eating habits and contributing to community goals.
- Small-scale procurement by educational institutions is effective for quality control, but there is concern about centralizing public procurement, which may prioritize price over quality.
- Educating children about food origins and promoting healthy eating habits is essential, with some farmers offering educational programs.

Interviews provide insights into Farm-to-school programs in the project partner regions, driven by Green Public Procurement rules emphasizing local-sourced food. These programs support local agriculture and provide fresh, locally sourced food but face challenges related to quantity, cost, administration, and procurement policies. Decisions are influenced by municipal bodies and the broader community, balancing regulatory requirements with the desire to promote local food sourcing.

The study recommends developing a theoretical model to align stakeholders and program components with a common vision. This model focuses on the impact of Farm-to-school activities on the learning environment, students' personal development, academic achievement, and community-level factors. The "Farm-to-school" model enhances the curriculum, learning environment, social learning, knowledge acquisition, life skills, and academic performance. The model outlines how resources, materials, and support (inputs) lead to tangible results (outputs) and various short-term, intermediate, and long-term outcomes. Collaboration among stakeholders is crucial to achieving the multifaceted benefits and broader social changes that Farm-to-school programs can bring.

Interested parties can find more detailed information about the study on the partners' websites. Each partner region—Klaipeda, Latgale, Kurzeme, Tartu, and Voru—provides access to comprehensive data and findings specific to their local contexts. These websites offer insights into the research methodologies, survey results, focus group discussions, and key conclusions drawn from each region. Additionally, they feature resources and updates on ongoing efforts to develop and implement the Farm-to-school model, as well as information on upcoming events and opportunities for community involvement. For those looking to delve deeper into the study and explore the nuances of each region's school food systems, the partners' websites serve as valuable repositories of knowledge and engagement.

Annex 1

Context analysis questionnaire

1. What legal documents regulate procurement of food services in general education schools in your country?
2. How foods / foods services / related facilities are purchased by schools? Are there any models of public procurement of locally grown foods in your countries?
3. How are local foods promoted? Is it possible for farmers to supply schools with local foods directly? Are there any intermediary distributors that help supplying produce from local farmers to schools?
4. Are there any national /regional documents / programs that raise the schools' interest to purchase a variety of fresh local produce form local farmers?
5. What are possible logistical procedures for buying food directly from farmers?
6. Are there any promotional activities or experiential learning in schools to support nutrition education, including integrating food-related education into the curriculum?
7. What are the roles of municipalities in the implementation of food strategies?
8. Other important issues to be considered.

Annex 2

Questionnaire for school administration

1. What is the type of your school in your country's educational system?
2. Where is the school located? (urban, rural school)
3. How big is your school? (amount of students)
4. What are the main documents that regulate school meals?
5. Who is responsible for food supply and menu creation at the school?
6. What organizations provide food and catering services for your school?
7. Do you cooperate with municipalities in planning school's food services procurement?
8. Do you get food (vegetables and fruits or other) directly from local farms?
9. Is there a system of food procurement directly from local farmers?
10. Are there barriers to purchasing food from local farmers? (e.g. country / region food procurement regulations, institution purchasing policies, food safety concerns, lack of local farmers from whom to purchase, lack of support from school community etc.). Please comment.
11. What are the major concerns regarding purchasing the food from local farmers? (e.g. cost, quality, safety, delivery, packaging, storage, school labour concerns, threat to current vendor relations etc.). Please comment.
12. What do you think - could the cooperation with local farmers contribute to more sustainable and healthier meals? Why?
13. Would there be a need to create/have a farm at the disposal of the school, the production of which would supplement the school's meals?
14. Would you like to try a cooperation with local farmers as a training base for students through direct work skills lessons and/or extracurricular activities?
15. Would the cooperation with local farmers contribute to educational curricular? Please comment.
16. Would the cooperation with local farms contribute to healthy nutrition, develop general health habits, and agricultural and food system literacy within your school community? Please comment.

Annex 3

Questionnaire for Students\ Parents

In your opinion:

1. Are there enough vegetables and fruit in the school meals service?
2. Do you know who provides food and catering services at school?
3. Are you satisfied with school meals? Please comment.
4. Are you involved in making meal menus?
5. Would you like to have more organic products (vegetables, fruit etc.) in your school meals? Please comment.
6. Are you aware of local farmers that could provide your school with organic products? Please comment.

7. Would you support the idea of buying food from local farmers even though this could require additional money? Please comment.
8. Would there be a need to create/have a farm at the disposal of the school, the production of which would supplement the school's meals?
9. Would you like to have cooperation with local farmers as a training base for students through direct work skills lessons and/or extracurricular activities?
10. What do you think - could the cooperation with local farmers contribute to health education and more sustainable consumption? Please comment.
11. Would the cooperation with local farmers contribute to healthy nutrition, develop general health habits, and agricultural and food system literacy? Please comment.

Annex 4

Questionnaire for Focus group discussion

- What kind of produce do you grow / supply?
- Would you be interested in growing for your local schools? Please explain.
- Have you already supplied food to any local schools? Please explain.
- What were/would be your main motivation:
 - Economic reasons: revenue generated through school food service sales will have impact on your incomes;
 - Mainly for social reasons: serving children healthy foods and educating children about agriculture.
- Do you have concerns about the existing procurement system in schools when purchasing food services / facilities? Would it be a barrier for you?
- As far as you know, would requirements for hygiene, insurance etc. applied for schools be a barrier for you?
- What are possible logistical procedures for buying food directly from farmers? Do you have the resources to pack or process your product according to food service specifications?
- Are you able to be flexible in working out a payment schedule to work with a school/food service providers?
- Are there any intermediary distributors that could help you to get your product from the farm to a local school?
- What kind of support from local municipalities would be important? What could be the role of local municipalities in implementing food chains and strategies?
- If you could diversify or expand your production, what would you add to what you're currently doing with regards to school's needs?
- Would you be interested in organizing / participating in events related to healthy nutrition, develop general health habits, and agricultural and food system literacy. Please explain.
- Could you guarantee products and quantities if you know in advance that will be needed by local schools the next year?
- Are you interested in joining cooperatives that would have a greater opportunity to offer a variety of products and a larger quantity of them? If not, explain the problem in more detail.
- Is there anything that you would like to add or ask? Thank you!

Annex 5

Questions for Stakeholders (food specialists, people in charge of decisions....)

- There has been recent publicity about locally grown food. How do you define “locally grown”?
 - Probes: Same city, region or country? Within a specific radius? Within a day’s drive?
- Can you tell me about your food service operation in general education schools? How do your efforts to buy locally grown food fit into the goals of your food service operation?
- Can you walk me through your procurement procedure for commercial foods?
 - Probes: Who are your vendors (e.g. commercial distributors, shippers, wholesalers, and farmers)? What do they offer in terms of products, services, or financial incentives? Is there a link between the needs of schools and actual local farmers in your county? Are the needs of farmers before procurement taken into consideration?
- What factors do you consider when buying locally grown food?
 - Probes: How important is price? Do you consider product attributes such as organic, quality, and local? Does your relationship with your vendor (including farmers) come into play?
- Can you tell me about your farm to school collaboration (if any)?
 - Probes: How did it get started? How has it changed over the years? Do you have an educational component? Which vendors do you go to for locally grown food? Have you requested locally grown food from your broadline distributor?
- What could motivate you to begin buying locally grown food? What motivates you to continue buying locally grown food?
 - Probes: What are the benefits of buying locally grown food?
- How has local food procurement impacted your budget, if at all?
 - Probes: How much do you pay for locally grown apples (or other farm-fresh product) versus non-locally grown apples (or other farm-fresh product)?
- What are the challenges, if any, to buying locally grown food?
 - Probes: How do state, or local procurement policies impact your ability to buy locally grown food, if at all? What influence, if any, does the school board or municipal education department have on your procurement decisions? What about students, and parents?

MODULE 3

DESIGNING AND IMPLEMENTING THE FARM-TO-SCHOOL PROGRAMME

3.1 Problematics in school catering, food waste, and infrastructure problems

Food waste has a huge economic, social and environmental impact. Nearly 59 million tonnes of food waste (131 kg/inhabitant) are generated in the EU each year. This represents an estimated loss of €132 billion.

Around 10% of all food supplied to retail, restaurants, food services (e.g. school and corporate canteens, hospitals, etc) and households is wasted. At the same time, some 32.6 million people cannot afford a quality meal (including meat, chicken, fish or vegetarian equivalent) every second day.

Food waste has a huge environmental impact, accounting for 252 million tonnes of CO₂ equivalents, or about 16% of the total greenhouse gas emissions from the EU food system. If food waste were a Member State, it would be the fifth largest emitter of GHG emissions. Wasting food also puts an unnecessary burden on limited natural resources, such as land and water use (European Commission official website. Access via internet: https://food.ec.europa.eu/safety/food-waste_en#about-food-waste).



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No school food programme can address all the identified needs of a population in the Baltic region. The objectives of a programme clarify the needs it will address, which of the multiple potential benefits of Farm-to-school it will focus on, and, for example, the order of priority. Achieving clarity and agreement among all programme stakeholders on programme objectives is fundamental for:

- rallying cross-sectoral support by clearly showing the potential benefits that the programme will generate for each sector;
- justifying requests for the potential amendment of existing policies, strategies and programmes;
- justifying the allocation of adequate resources to the programme;
- identifying adequate indicators to be monitored, in order to ensure credible documentation of the extent to which assumed benefits of the programme are in fact generated.

The mission-oriented Farm-to-school strategy will provide the ingredients, templates for developing interventions, guides for how to get started, and examples of cross-cutting projects, which the municipalities can use to create their own recipes for change. By examining the fundamental aspects of school nutrition in Lithuania, Latvia and Estonia, a mission-oriented strategy can determine to what extent the programme is:

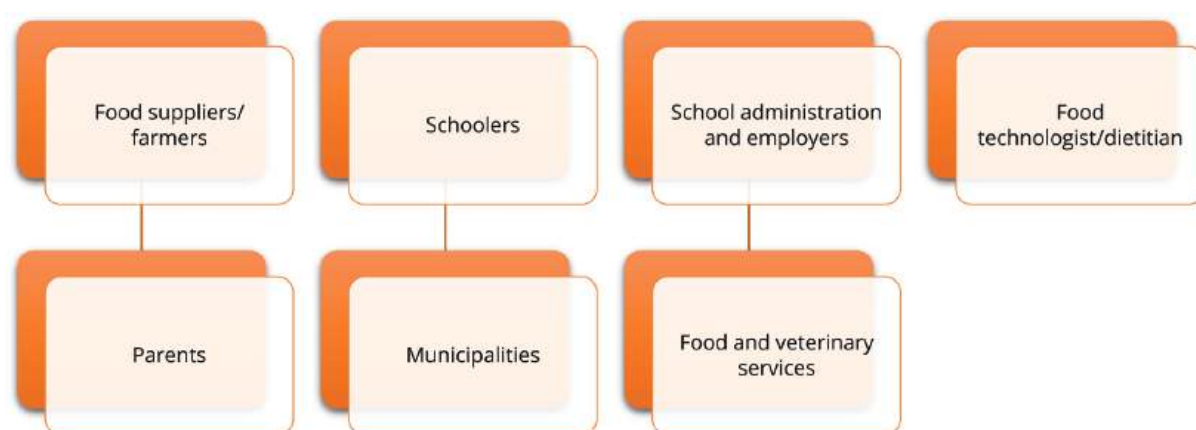
- responsive to the needs of the population;
- feasible in terms of capacities and resources;
- aligned with the policy directions and strategies of the government, in particular, in the areas of education, social protection, health and nutrition, and agriculture;
- implemented in an efficient way, with a realistic view of how to obtain adequate financial resources in the short and long term, and how to involve (and build) robust operations.

3.2 Menu design according to health standards

Findings from the OECD's Education Directorate indicated that providing healthy and nutritious options for students can be a cost-effective way of boosting academic performance. Healthy and balanced school meals can target nutrient deficiencies that, if left untreated, can impair students' ability to focus and retain information. Eating lunch at school has been positively associated with diet quality, food security and academic performance. These effects can be more pronounced as school meal programmes incorporate healthier options on their menus, moving away from low-budget and highly processed foods. Well-designed and strategically implemented government procurement programmes, consistent with the OECD Recommendation on Public Procurement, can play an important role in ensuring the quality and sustainability of the food for school meals. The livelihoods of farmers, food producers and those working along the food supply chain can be enhanced by school meal programmes, which generate demand and employment. Country experts from Chile, Finland and Japan intervened during the webinar to highlight how the curriculum in their countries incorporates presentations by farmers to students to enhance their knowledge of how food is produced. Environmental and health outcomes can also be enhanced with school meals via repeated exposure to unfamiliar foods. Many families tend to choose "safe" foods, which are often highly palatable and processed. Even in developed countries, many people do not eat the recommended five-a-day servings of fruit and vegetables for optimal nutritional outcomes. Early food experiences are predictive of nutrition and eating behaviour later in life. Exposing children to healthy options at school can especially help the most disadvantaged, and increase

their consumption of healthy food in childhood and later on. This is particularly important as countries grapple with worrying trends in obesity, which has significant economic consequences (OECD Recommendation of the Council on Public Procurement. Access via internet: <https://www.oecd.org/gov/public-procurement/OECD-Recommendation-on-Public-Procurement.pdf>).

One of the key points is to include recommendations for the catering process in schools, and the involvement of cooperation between stakeholders.



Broadly speaking, the planning process involves assessing the nutritional requirements of the target group, setting recommended nutrient targets (or limits) to be covered by the school meals, and developing patterns or food combinations that can achieve these targets as a basis for defining the menus.

In addition to the criteria mentioned, when determining the possible food combinations to cover the set nutrient targets for menu planning, dietary diversity considerations should also be prioritised, by aiming to ensure a variety of foods from key food groups.

Key point recommendations:

- Ensure that schools can choose at least a few dishes for the main course, or apply Swedish table catering principles.
- Apply the possibilities of Swedish table and different main courses, and process recommendations such as (frequency, selection possibilities) into the procurement.
- Determine that during the public procurement the prepared menu by the suppliers would be reviewed by experts (dietician or food technologist).
- Try to achieve national menu and technology card creation, usage and review guidance.
- Try to achieve that municipalities do not buy catering services, but that schools are responsible for the catering in the schools. In this case, parents would need to pay only for the food products (seeking good experience from other municipalities).
- Recommendations would include that teachers have to pay at least a 20% higher price than students.

3.3 Food safety and quality

Food safety and quality are crucial for any school meal programme, and not only for Farm-to-school. Food safety is a non-negotiable aspect, since unsafe food will prevent the full achievement of goals to improve food security and nutrition. The provision of nutritious and fresh food increases the need for good food hygiene, which comprises conditions and measures necessary for the production, processing, storage and distribution/preparation of food, to ensure a safe and wholesome product fit for human consumption. Smallholder farmers typically produce mainly for themselves, or for sale in more or less informal markets. Therefore, they are often not used to prioritising food quality and safety issues. However, when food is procured from smallholder farmers for Farm-to-school programmes (or other institutional food programmes), it is crucial that food quality and standards are observed. Food safety and quality have to be ensured in all elements of the supply chain:

- on the farm;
- during transport;
- during processing;
- at school (on delivery, during storage, and during meal preparation).

This will often mean interventions to strengthen the capacities of schools, farmers and other stakeholders in the supply chains to manage, transport, store, use and handle fresh products properly and safely in order to guarantee the quality and safety of the food to be distributed in schools.

Farmers, aggregators and other actors along the supply chain should be trained in best practices for safe post-harvest handling, storage and food management. They may also need help in making certain investments, e.g. by facilitating their access to affordable credit.

Schools require an adequate infrastructure and adequately trained staff or service providers to store food and prepare meals, while respecting hygiene and safe food handling, to guarantee that children consume good-quality and safe food.

The combination of good hygienic practice during food preparation with systematic training on and supervision of hygienic food consumption (such as washing hands, eating from clean plates and with clean cutlery) is a crucial part of promoting the healthy eating habits of schoolchildren, which they will take with them after their schooling.

Another important consideration is that national and local capacities to control food safety and quality may need to be strengthened.



Ensure that there would be created local small chains, ecological food product list and created the technical specifications for these products (according the guidance how to prepare the food so that it would not lose the nutrition and vitamins).



Ensure that most of the food products would be bought from local farmers and local producers, include the logistics to ensure the better prices (ordering bigger amounts for different schools of the same products).



Determine to create statistical manners about the ecological product involvement into schools catering process, analyze data and give the conclusions. Try to reach that until 2030 not less that 20% of supplies would be from ecological farms and producers.



Ensure the quality of the ecological products using the certification, which could be done with the help of municipalities.

3.4 Linking smallholder farmers and processors to schools

The link between school meals and local production is the defining element of Farm-to-school. To ensure that a programme makes this link effectively, programme planners should establish:

- the target group of smallholders that the programme wants to link to its market;
- how institutional procurement ensures that this target group participates effectively in the farm-to-school market;
- the operating model most conducive in the specific context to facilitating the link between Farm-to-school and local production;
- how reliable transport from smallholders to schools can be ensured;
- the potential complementary (supply side) support to be given to smallholders.

While all these measures are necessary, in many cases they may not be sufficient to enable smallholders to participate actively in a Farm-to-school programme because of other underlying social, market, rural and agricultural development constraints, such as limited market information, limited liquidity, poor storage, limited processing and logistic infrastructure, and little access to technology and knowledge. Such constraints are common for farmers in the Baltic countries, also because of a broader spectrum of family farms in terms of human and economic development, labour productivity, agricultural surplus production, and marketing.

Transport and logistics requirements often prevent smallholder producers from participating in a school food programme, since they may have limited capacity to transport their products. This represents a significant operational barrier for smallholder producers in accessing government food procurement schemes. Therefore, it may be necessary to adapt delivery conditions for the supply of food from smallholder producers at least until their transport capacity is strengthened, either through complementary support, or as an effect of their increased market participation and income opportunities. Ways of promoting the chances of smallholders to fulfil transport and logistics requirements include:

- the use of short supply chains (SSCs), thus reducing quantities, delivery frequency, and the transport and logistics capacities required;
- the use of separate contracts between Farm-to-school and transport operators, relieving smallholders of off-farm logistics capacities, but increasing the administrative burden of the programme;
- systematising and training in good practice, making it easier for smallholders to understand and adhere to what is expected and required;
- further capacity support for smallholders, through complementary programmes, such as the establishment of temporary storage and aggregation facilities, and access to credit to acquire means of transport.

Recommendations on how to increase knowledge about cooperation between schools and farmers:

- Invite local farmers, suppliers and public health centres into schools, where the students can learn about the local product growth and nutrition students get from these products.
- Use local farmers' products in food technology classes, so that students learn about the products they learn to cook.
- Create possibilities to invite students to local farms, and see the local farmers' products and growing processes.
- Include parents and students in the creation of the school menu, so that they are involved in tasting sessions and decide which recipes are most suitable.
- Present sustainable aspects of food literacy, and describe the circular economy, sustainability goals and effects on the environment (lectures for students, teachers and catering specialists).
- Include professional chefs in the preparation of the school menu and guidance for school caterers (preparation temperature, the amount of the product, product quality assurance).



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3.5 Gender

Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. There has been progress over the last decades, but the world is not on track to achieve gender equality by 2030.

Women and girls represent half of the world's population, and therefore also half of its potential. But gender inequality persists everywhere and holds back social progress. On average, women in the labour market still earn 23% less than men globally, and women spend about three times as many hours in unpaid domestic and care work as men.

One of the global goals of gender equality is equal rights to economic resources, property ownership and financial services. This can be reached by undertaking reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws (What is goal 5 – Gender Equality. Access via internet: https://www.un.org/sustainabledevelopment/wp-content/uploads/2023/09/Goal-5_Fast-Facts.pdf).

The contribution of women to agriculture and food production is significant. They are crucial actors in primary production along the food value chain and in the marketing of food products. However, in many parts of the world, women face specific constraints, putting them at a disadvantage from men. These constraints are mainly structural, and grounded in unequal gender dynamics at a household, community and market level. The constraints may often reinforce one another, creating a vicious circle of women's subordination.

A Farm-to-school programme can address the effect of women's underprivileged position in several ways, for example by:

- supporting the capacity of farmers' organizations to mainstream gender, or have gender quotas, ensuring that women actually benefit from their membership, and have a voice in decision-making processes in the organization;
- supporting gender-sensitive capacity development, such as training adapted to women's needs, by being conducted at times and in ways that are compatible with women's typical chores;
- increasing access to capital to invest in women's productive activities (for input, technology and additional labour on their farms, etc), preferably on a revolving fund basis.

The governments of Lithuania, Latvia and Estonia can also use Farm-to-school to address specific structural constraints for the empowerment of women at a local or national level, such as improving access to land and water, and other farming inputs for women. In these cases, the Farm-to-school programme should form part of an enhanced approach and a wider effort, and include explicit goals for gender equality transformation.



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3.6 Gardening (edible school yards)

One of the ideas that could be implemented and recommended for future project development is the edible school yards. The mission of the Edible Schoolyard is “to create and sustain an organic garden and landscape that is wholly integrated into the school’s curriculum, culture, and food programme”. ESY aims to involve students in the experience of growing, harvesting, preparing and sharing food, as a means of fostering knowledge of food and food systems, improving students’ food choices, and connecting students to the land, the environment and their community. It also aims to engage students and enhance their educational experience through activities in the garden and the kitchen classrooms. By these goals, all students can participate in kitchen and garden programmes. Garden lessons are linked to science and maths curricula and standards, while kitchen lessons are linked to humanities curricula and standards. Also, it is important that farmers during the focus groups indicate that they are keen to help students to create, and educate them about farming processes. These examples are taken from the Edible Schoolyard at the Dr Martin Luther King, Jr. Middle School in the USA (the Edible Schoolyard Project. Access via internet: <https://edibleschoolyard.org/content/contact-us>).

3.7 Synergies with other programmes



The four-year EU-funded project sets out to redefine what it means to eat healthily and sustainably at school, while also addressing food education at several levels. SchoolFood4Change sees schools as catalysts for systemic and multi-actor change, including, but not limited to, school curricula. It involves training cooks, caterers and public procurers at a city level, and aims to create a true ripple effect, impacting up to two million citizens in the 12 participating EU countries.



BSR Food Coalition

The BSR Food Coalition (#S002) project connects local farmers and public authorities, to ensure regular access to organic food meals at schools, and thus continuous demand for healthy food supply.



StratKIT+

The StratKIT+ project guides public authorities, catering providers and others on sustainable procurement for schools, day-care, hospitals and other public institutions.



The communication and synergy with other programmes and projects can be seen in various dissemination aspects during the project period, including virtual, physical meetings, participation in organized joint events like conferences, and meetings with important stakeholders.

MODULE 4

MONITORING, EVALUATION AND REPORTING

4.1 The Farm-to-school model or value for school and farms

An analysis of the experiences of foreign countries implementing Farm-to-school and similar programmes (Ratcliffe, 2012) suggests that a distinctive feature of these programmes is their multi-component nature. The programmes involve schools and farms and many other social actors, such as nutrition services, hygiene services, public health centres, food manufacturers, etc. These social actors traditionally have different goals and objectives, not necessarily focusing on school meals. Therefore, the need to participate together in creating new school food markets poses certain challenges to local producers.

According to researchers analyzing the effectiveness of Farm-to-school programmes (Joshi, Ratcliffe, 2012), countries seeking to initiate similar programmes should start with the development of a theoretical model. The theoretical model is an effective tool that allows you to quickly formulate the overall vision of the programme, aligning it with the goals and objectives of the social stakeholders. The theoretical model helps to combine and explain complex, fundamentally different programme components and results, which in turn can increase the effectiveness of the participation of relevant social actors in the development and integration of programme components, and increase the likelihood of achieving the desired results.

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Theoretical implications as well as the results of the empirical study allow the design of the theoretical model. The main idea and the vision of the model is that Farm-to-school activities directly affect a school's learning environments in ways that may directly and indirectly affect students' personal characteristics and improve their academic achievement and health-promoting and environmentally responsible behaviour. It may also affect broader community-level factors, such as public health, social capital, economic development, and environmental quality, leading to the development of the concept of the bio-region.

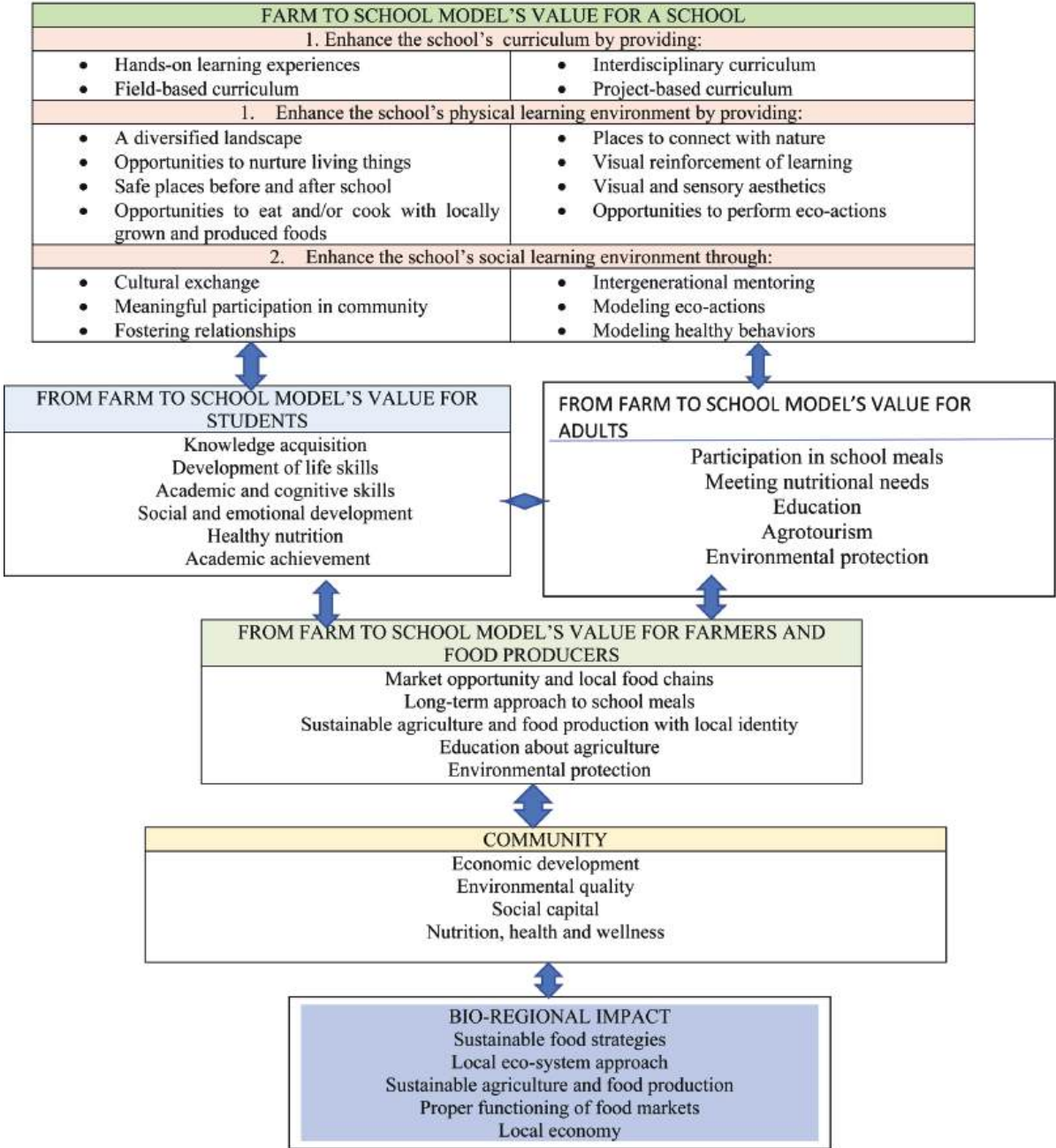


Fig. 1. The theoretical "Farm-to-school" model (adapted and modified from Ratcliffe, M (2012)).

The theoretical model presented may be used to design specific instances of Farm-to-school programmes, by describing how specific activities and inputs may result in a range of desired outcomes.

Table 2 illustrates a sample logic framework for the design and implementation of Farm-to-school programmes and/or activities with the objective of influencing long-term improvements in students' academic achievement and enhancing market competitiveness for farmers. This logic framework encompasses four distinct categories: Inputs, Activities, Outputs and Outcomes. Notably, the Outcomes category is further divided into short-term outcomes, intermediate outcomes, and long-term outcomes.

Inputs encompass the individuals and resources that are typically essential for executing the programme's activities. Activities represent the various components within a Farm-to-school programme. Outputs correspond to the tangible results derived from these activities. Meanwhile, Outcomes encompass the anticipated effects at short, medium and long-term intervals, which are informed by theoretical, empirical and anecdotal evidence stemming from the programme's activities and outputs.

For instance, Inputs can encompass products or labour that are vital for the implementation of Activities. For instance, within the context of partner countries, a notable challenge may be the need to revise the system of public procurement to accommodate the procurement of healthy, locally produced foods for students. Additionally, promotional materials are essential for disseminating information about local procurement efforts and programme components to target groups, such as schools, farmers, students and their families. Effective communication support is indispensable for informing the wider community about the programme's initiatives, often necessitating coordinated efforts from municipalities, such as the development of databases of local farmers. Evaluation support is vital for tracking a programme's implementation, progress, and its impact on desired outcomes effectively and efficiently. Furthermore, programme management is highlighted as a distinct function, since it plays a pivotal role in the overall effectiveness and sustainability of Farm-to-school programmes.

Activities, within the framework, represent the specific programme components and actions that measure progress towards achieving the desired Outputs and Outcomes. The sample logic framework outlines various potential Outputs that are expected to result from these programme Activities.

The anticipated Outcomes span a spectrum of short, intermediate, and long-term effects, encompassing impacts on various levels of analysis, from individual students to schools, communities and even entire regions. These Outcomes are rooted in theoretical and empirical evidence, aiming to capture the multifaceted benefits and broader social changes that Farm-to-school programmes can engender.

Based on the proposed conceptual framework, the project of the BSR Food Coalition partners is tasked with executing pilot initiatives aligned with the outlined theoretical model.

Table 2. A sample logic framework for designing and implementing a Farm-to-school programme

INPUT <i>(What we need)</i>	ACTIVITIES <i>(What we do)</i>	OUTPUTS <i>(Our activities will lead to the results)</i>	SHORT-TERM OUTCOMES <i>(because of our results these changes will occur)</i>	LONG-TERM OUTCOMES <i>(Changes in a longer perspective)</i>
Clear procurement system of locally grown and produced food	Raise awareness of target groups about public procurement opportunities for developing local (short) food chains, promote cooperation between farmers	X schools and N students receiving local food N farmers participate in public procurement	Improved students' food literacy	Healthy nutrition habits Academic achievement
Promotional efforts of local food and possibilities of cooperation with farms	Promote local foods within schools and wider communities, foster cooperation with farms	Enhanced school curriculum, learning and social environment Educational activities provided by farms	Developing life skills, academic and cognitive skills	Economic development and local food chains, eco standards, educational activities
Communication support	Develop mapping and marketing strategies	Farmers database, info points in schools, community events	Social engagement and emotional development (self-efficacy, engagement, motivation)	Sustainable food strategies
Evaluation support	Evaluate processes and outcomes, receive feedback from target groups	Dissemination of outcomes to the variety of target groups	Create statistical manners about the ecological product involvement into schools catering process, analyse data and give the conclusions	Ensure the quality of the ecological products using the certification procedure
Program coordination	Responsible departments at municipalities with clear functions and responsibilities	Responsibilities and monitoring of processes and results	Coherent and coordinated system meeting the needs	Proper functioning of food markets and local economy, sustainable circle economy
Competences of relevant stakeholders	Develop skills of project target groups in procurement and other support	Developed competences within stakeholders' groups	Active participation	Social capital

4.2. Guidance how to start and develop Farm-to School initiative

Farm to school offers multiple strategies to improve the health of children and communities. This list provides some simple first steps to develop a lasting farm to school program in your community.

1. **Assess where you are and where you'd like to be.** First give yourself a question to which aspects your goals centred on:
 - Procurement of local foods to be served in school?
 - Establishing a school garden?
 - Integration of farm to school within the curriculum?
 - All of the above?
2. **Form a team and collaborate.** School food service staff, teachers, administrators, local farmers, students, parents, and community organizations each have an important role in establishing a sustainable farm to school program.
3. **Establish one or two attainable goals to get started.** Some ideas include:
 - Identify menu items that you would like to transition to local products.
 - Find a farmer or distributor to connect you to local items.
 - Plan a local meal event.
 - Determine training needs to assist food service staff with incorporating farm fresh items in meals.
 - Bring a school garden planning team together.
 - Identify curricular opportunities to connect to a school garden.
 - Bring a chef into the classroom.
 - Plan a farm field trip or host a tasting event featuring local produce (<https://www.farmentoschool.org/resources-main/getting-started-with-farm-to-school>).

KEYS TO FARM TO SCHOOL SUCCESS IN ACTION

Association Klaipeda Region

The investigation conducted during the project revealed a crucial challenge: the lack of communication and collaboration among local stakeholders. In response, the chosen pilot method for the Klaipeda region involved the creation of a networking platform to foster long-term cooperative relations, addressing the fundamental impediment to the successful implementation of the Farm-to-School initiative. These results were achieved: kickstarted talks about the school food system at the regional level for the first time, clearly pinpointed existing problems and challenges, an action plan is ready to tackle minor problems and make improvements, identified areas needing bigger changes and started a conversation with relevant institutions, the first Farm-to-School Forum in the Klaipeda region was successfully organized, laid the foundation for a regional cooperation platform, setting the stage for ongoing collaboration, the regional platform was adopted as the preferred model to enhance communication and cooperation among regional partners.

Latgale Planning Region

During the project, the Latgale Planning Region focused on testing the following elements of this program to determine if they are feasible and effective in the Latgale region: educational field trips for students to organic farms to improve students' knowledge of healthy foods, measures to improve the skills of school cooks by including new recipes in school menus that make greater use of locally grown organic produce, promoting the purchase of locally grown organic products for school supplies (Green public procurement), international experience-sharing events with the aim of increasing the interest and involvement of those responsible for feeding students in the Latgale region in initiating the necessary changes that would allow greater use of locally grown organic food in school catering. To achieve this goal, a working group was formed. For the testing of each selected "Farm to School" element, only appropriate activities were planned and organized, which made it possible to get an idea of the usefulness and sustainability of the specific element of the program and the necessity in the context of the Latgale region. These results were achieved: children learn about healthy eating and organic farming in fun and understandable way, the child is also able to make a better food choice, it brings classmates together, it gives students an insight into the farming profession in terms of a career choice, for organic farmers opens another business niche, children tell parents about the organic farm experience and products. Also, it was seen that would be useful if training for school cooks became a compulsory annual event, giving school cooks the opportunity to acquire new, practical knowledge, share experiences and be inspired to incorporate new recipes, preparation and serving methods into their daily work, thereby reducing food waste, and rationalising the use of organic food in food preparation. Educational events, the exchange of international experiences and the opportunity to ask unclear questions to high-level specialists at national level in the field of green procurement can significantly improve the use of locally grown organic products in school meals.

Kurzeme Planning Region

The key problems that had been highlighted in surveys and discussions with target groups relate to complicated public procurement system in the country, insufficient capacity of municipalities to compose the procurement according to actual school needs and local farmers' offer and possibilities, need to increase state financial support for school meals, standards and regulations to be observed by farmers in terms of requirements for food packaging, delivery, storage, quality etc., lack of efficient dialogue between the involved ministries. As a result, it has been agreed to implemented the pilot as a set of following activities: master classes for school chefs, experience exchange visits between schools, sharing of school menus, training on nutrition and green public procurement for municipalities, mapping and promotion of local farmers and their production. To keep efficient regular dialogue between the involved parties and find and agree on common, efficient solutions that will facilitate the presence of local food on school meals. The joint "Food Group" has been informally created by the organization "Latvian Rural Forum", which consists of representatives of involved ministries, Public Procurement Bureau, sector associations of food producers and farmers etc., therefore there are efforts being taken to develop a constructive dialogue and improve the system with joint efforts.

Association of Municipalities of Tartu County

Various activities on the topic have been carried out, such as conducting educational programs, involving local food growers and producers, but they are not dealt with comprehensively. We focus on building the BSR Food Coalition as a whole. We carry out activities to raise the awareness of target groups and increase cooperation. The role of the Association of Municipalities of Tartu County is to fill the missing

gaps in the implementation of the “Farm to School” program with the project “BSR Food Coalition”, which are: lack of awareness of how to procure local foodstuffs within the framework of public procurement, lack of mutual cooperation and cooperative activity of small producers, lack of awareness of local food growers and producers by the support staff of educational institutions and local government food procurement specialists, lack of caterers and kitchen staff willingness to use more local, including organic, seasonal vegetables and fruits, lack of willingness of educational institutions to support caterers and kitchen staff of educational institutions in their daily work, lack of willingness of managements of educational institutions to establish vegetable gardens near kindergartens and schools and to participate in educational programs. So far, we can see that these results were achieved: Preparation of the study “Mapping of the organization of catering and raw material volumes of educational institutions in Tartu County and a study of the availability of local food products” in cooperation with Elen Peetsmann, head of the Research Centre of Organic Farming of the Estonian University of Life Sciences of Estonia. The preparation of the study increased the cooperation between procurement specialists of municipalities and raised mutual awareness of various problems. The preparation has strengthened the relations between the urban and rural regions of Tartu County in this area. The importance and necessity of dealing with the topic has come out clearly. Stakeholders are motivated to think along and actively participate in meetings, activities strengthened cooperation between development organizations and food networks in Southern Estonia, development of local and organic food agreement in cooperation with partners, made a connected focus on transnational cooperation.

Development Centre of Võru County

The goal of region strategy is to have municipalities by 2024 the use of organic raw materials of educational institutions in the food offered by at least 20 percent. In 2020, we started two projects initiated by the Setomaa Union with 10 children’s institutions with activities introducing organic catering in Võru County with the support of Leader funding. So far, by the end of October 2023, 28 educational institutions used local organic raw materials for at least 20% of all raw materials. 12 educational institutions are involved in organic activities, 3 schools managed by the state have questions about the organisation of public procurement and the possibility of its change. The implementation of the “Farm to School” program has not been implemented in Estonia before. The challenge is to solve the problem of organic raw materials. The main goals of the pilot according to the agreement between Võru county municipalities and development organisations: organisation of healthy meals in public sector-managed institutions of Võru county, raising awareness of the necessity and possibilities of a healthy living environment in Võru county, motivating and creating prerequisites for organic and environmentally friendly food and agricultural production in Võru County, reducing the generation of food waste in the catering of institutions managed by the public sector, exchange of experiences and cooperation between the parties. We are open and inclusive in planning, implementing, and evaluating the results of activities. So far, we can see that these results were achieved: currently achieved 19 of 45 educational institutions in Võru County, mapping the current situation in ten pilot schools with school cooks in terms of prices and volumes of raw materials, introduction of organic producers and products and to promote cooperation, fairs and study trips to producers take place, communication with the chef and the management revealed interest in the topic and possible next steps, schools and kindergartens are in the information network, through which presentations are made about the planned activities for different target groups, menu book with 30 organic food recipes, spring season menu recipes, and etc., family days to introduce organic food, The Organic Center of the Estonian University of Life Sciences did the research and analysis for the implementation of the organic agreement get an overview of the current situation and bottlenecks overview of the volumes of organic raw materials and potential producers, and etc.

4.3 Proposed Farm-to-school programme-specific outcomes

REZOLIUCIJA



DĖL MOKINIŲ MAITINIMO ORGANIZAVIMO GERINIMO MOKYKLOSE

Klaipėda University pilot and result as a signed resolution -

<https://sc.bns.lt/view/item/457996>

Review and supplement	Review and supplement food catalog with increased amount of ecological, local, products, increasing the small chain product supply, and detail the product purchase methods and real needs of the institution.
Ensure	Ensure the quality of the fruit and vegetables supplied to schools, regulate the certification system.
Invest	Invest into renew process of the canteens in the schools, modernize the kitchen equipment, include Swedish buffet.
Ensure	Ensure the ecological product certification control and ensure the requirements in the school catering.
Include	Include the data collection about the ecological products in school catering and set the goal to reach up to 20% of these products in 2030.
Ensure	Ensure that there would be created a list of local small chain supply product list with technical specifications, use good practices from other municipalities and include ideas for logistic and storage solutions.

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