School Food Programs Around the World Lessons for Canada

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Executive Summary

The Project School Food Programs Around the World – Lessons for Canada represents four years of research into the best practices of school food programs around the world. This research is intended for Canadian policymakers and practitioners as they work to advance a nascent national school food program and expand and enhance existing ones.

This project's goals were to determine the best characteristics for a school food program (SFP) model in Canada. The characteristics we examined include policies, funding, food literacy education, nutrition standards, implementation, and oversight. Our insights are timely as the federal government, in 2024, committed funding for provincial, territorial, Indigenous partners, municipalities, and communities to deliver their national school food policy.

Through multiple webinars and extensive research of 12 countries' programs, we were able to extract a comprehensive list of best practices for Canada. We found the underlying reasons for instituting a school food program are critical. Across the globe, the rationale for SFPs include the human rights of students, their health and well-being, ability to succeed academically, and gain food literacy knowledge to live a long and healthy life. Program benefits should accrue to the community, economically, socially, and culturally. Programs should be sustainably funded, in Canada's case, cost-shared between federal, provincial, territorial, Indigenous, and municipal governments.

School food programs should be developed, managed, and overseen through crosssectoral collaborations. Responsibilities could be divided as follows: the federal government would fund food and beverages and provide overarching program policies and standards for nutrition and safety. Provincial, territorial, and Indigenous governments would fund labor and infrastructure, and oversee nutrition, food safety, and fiduciary matters. Indigenous governments should assume full responsibility for their programs. Municipalities would cover any budget shortfalls and manage foodservice operations and oversight. Parents and students should participate in local decision-making. It is crucial to prioritize program delivery and the benefits to students, the community, and the environment over cost control whenever possible.

Meals and snacks at school should be universal and free. They should be nutritious and healthy, incorporating as many locally and sustainably produced ingredients as possible. Foodservice should be self-catered if feasible, either by schools, municipalities, or local contract caterers that adhere to the principles of the National School Food Policy, the 8 Guiding Principles of the Coalition for Healthy School Food, and a detailed and well-considered tender.

Dining environments are also important. They should be clean, spacious, and inviting to promote socialization and opportunities for staff and guests to discuss food and food systems with students. Food literacy education should be incorporated into the curriculum and delivered through hands-on activities, such as field trips to local farms and student participation in school gardens. Marketing at schools should not be allowed.

Oversight should be accomplished at all levels, with schools, school boards, and municipalities taking responsibility for foodservice quality, quantity, waste, sustainability, and cost.

School food should be considered a critical opportunity to promote children's health and expand their knowledge. It will thrive through a collaborative effort of all participants, including students, their families, and the community.

Developing a successful, universal, and nationally harmonized School Food Program in Canada, and supporting and enriching existing programs, will lead to improved health, education, and career outcomes for students. It will reduce health costs and add significant economic, social, and cultural gains both immediately and in the long term.

Our recommendations represent the best characteristics of the exemplary programs we studied and avoid the pitfalls they experienced. They will inform and benefit policymakers and school food program practitioners as they create, expand, and enhance programs.

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Introduction and Context

Until 2024, Canada was the only G7 country without a harmonized national school food program. Practitioners and researchers in Canada have always been interested in other countries' school food programs to learn how those programs were implemented, how they function, and what lessons they offer.

Between 2021 and 2023, the Canadian Coalition for Healthy School Food (the "Coalition") partnered with Gary Hoyer of George Brown College and a team of researchers on several collaborative projects titled "School Food Programs Around the World: Lessons for Canada." This work investigated how the school food programs (SFP) of twelve different countries are planned, organized, and executed. The project reviewed models, policies, standards, implementation, uptake, and governance of SFPs through a series of webinars with country program experts and reports based on first- and second-hand research.

The goal of the project was to determine best practices of successful school food programs worldwide to inform policymakers on models that could be successfully implemented in Canada. In 2021, the project team conducted webinars for the first five of the twelve countries under review: Brazil, Scotland, Italy, Denmark, and Germany. From 2022 to 2023, webinars were completed for seven additional countries, including the United States, Japan, South Korea, Finland, France, England, and Kenya. The webinars included presentations by expert panelists explaining the details of their models.

Researchers for the Coalition also produced research reports on each country's SFP to highlight the various models and policies that countries have implemented. These reports can be found in the pages below, and summaries are available on the Coalition's <u>website</u>.

In April 2024, the Government of Canada announced a National School Food Program for Canada with a 1-billion-dollar investment over five years. The federal government committed to work with provincial, territorial, municipal, Indigenous partners and communities to determine allocation of funds beginning in the Fall of 2024. In June 2024, the federal government released the National School Food Policy that includes their vision for the new national school food program:

"That all children and youth in Canada have access to nutritious food at school, in an inclusive, non-stigmatizing environment that fosters healthy practices, while strengthening connections with local food systems, the environment and culture."

The policy closely follows the 8 Guiding Principles of the Coalition for Healthy School Food and includes the following tenets:

- Accessible for children and youth without stigma or barriers,
- Health promoting with guidance by the Canada Food Guide and the inclusion of food literacy education,

¹ Canada.ca 2024. National School Food Policy. Employment and Social Development Canada. From: 4624-National_School_Food_Policy-E.pdf (canada.ca)

- Inclusive, with culturally appropriate and relevant school programs that engage students and the broader community,
- Flexible, locally sourced and appropriate,
- Sustainable, environmentally and fiscally, and
- Accountable, with consistent and transparent monitoring, evaluation, and continuous improvement.²

The policy adds that the Government of Canada will "...explore ways to improve access to information on school food programming, report on progress, and share best practices" in collaboration with other orders of government, partners, and participants.³

The School Food Programs Around the World: Lessons for Canada project shared research and information to inform Canada's National School Food Policy through webinars, reports, and advocacy. The project, including advice and recommendations, is presented below, with the aim of further supporting participants to plan, develop, improve, or expand their programs.

The first section presents summarized research on each country's School Food Program model, including information derived from our webinars.⁴ The second section of this report presents best practices and lessons learned, from the twelve school food programs under review, that are relevant within a Canadian context. The third section concludes the report and lists important characteristics to consider as policymakers, school food providers, and other participants in Canada work to enhance, expand, and develop programs with the new federal funding.

We are pleased to announce that we are continuing our work with a grant provided by the College and Community Social Innovation Fund and the Natural Sciences and Engineering Research Council of Canada. With our partners, the Coalition for Healthy School Food (CHSF) and Sustain Ontario (SO), we hope to gain a deeper understanding of how SFPs align their implementation strategies and characteristics with their desired goals. Utilizing the methods of implementation science and drawing upon its well-established evaluation framework commonly applied in healthcare research, our research will effectively assess the implementation methods of the world's leading school food programs, including those across Canada. By facilitating a more effective alignment of implementation efforts with overarching goals, this framework will tangibly contribute to the enhancement of school food programs across Canada.

This approach addresses a significant knowledge gap, particularly in understanding how these programs achieve their goals. We hope our efforts will serve as a valuable tool for policymakers, guiding them in the creation of a new federal cost shared SFP. Moreover, it will offer practical insights for our partners, the Coalition for Healthy School Food and Sustain Ontario, and provide guidance to their members.

² Please see: Coalition for Healthy School Food, n.d., 'Our Guiding Principles' From: https://www.healthyschoolfood.ca/guiding-principles

³ See the full set of principles as well as the Policy's objectives here.

⁴ The full research report for each of the twelve countries we studied can be found on the Coalition's website along with written summaries of the webinars.

Background

There are a broad patchwork of programs across Canada that address school food and nutrition. Some of these will be eligible for federal funds. The federal government is currently negotiating three-year agreements terms with provinces and territories to disburse program funds. To date, five three provinces have agreed to participate: Newfoundland and Labrador, Manitoba, and Ontario, PEI and New Brunswick. As well, the Inuit Tapirit Kanatami (ITK) has signed a National School Food agreement with the federal government for funds to flow to help establish an Inuit-specific meal program in the 75 schools across the Inuit homeland.⁵

To ensure the effective utilization of these funds, a strong coalition of multigovernment agencies, Indigenous communities, community organizations, and experts are needed to develop policies and standards for all aspects of program implementation and delivery. Cooperation amongst all partners, including students, parents, and school staff, is critical. The importance of local autonomy for program implementation is essential to promote relevancy and buy-in.

Program funding must be ongoing and sustainable at every level. The Canadian Federal government has committed 1-billion dollars in funding over five years, commencing with a \$79,000,000 disbursement in the Fall of 2024. The Coalition for Healthy School Food and its members, active participants in school food programs across Canada, are dedicated to achieving long-term school food sustainability based on the Coalition's 8 Guiding Principles and the National School Food Policy (NSFP).⁶

The best practice recommendations from our research on exemplary school meal programs presented in this report will inform both participants and policymakers across Canada and help to maximize this opportunity. Benefiting from the diversity of exemplary global programs standards and implementation characteristics presented here, participants' will be able to better construct, expand, and enhance their models, leading to improved health, well-being, and academic achievement for students and youth, and more economic opportunities for our communities. Policymakers may use this research as a field-guide for designing models that incorporate both public and private cross-sector cooperation and guide efforts toward the achievement of enhanced policy, funding, and governance attributes.

⁵ D'Andrea, A. and Boynton, S., New federal funds boost Ontario school meals program by \$108M over 3 years. Global News. November 22, 2024. From: https://globalnews.ca/news/10883316/ontario-national-school-food-program/#:~:text=Want%20to%20discuss?-

[&]quot;New%20federal%20funds%20boost%20Ontario%20school%20meals,\$108M%20over%203%20year s&text=Prime%20Minister%20Justin%20Trudeau%20announced,province%20for%20160%2C000%2 0school%20children.

⁶ See <u>Appendix A</u> for the Coalition's 8 Guiding Principles and <u>Appendix B</u> for the National School Food Policy.

Part One: An Overview of School Food Programs in Twelve Nations

Finland's School Food Programs

Overview and Policy

Finland has maintained a free school meal program for more than 70 years, with approximately 850,000 school meals served each school day in the 2022-2023 school year. Finland refers to its comprehensive school food program as a 'school feeding system' called 'Kouluruokailu,' a social innovation that is considered an essential part of their education system. According to Finnish legislation, every child attending pre-primary (ages 5-7), compulsory basic education (ages 6-16), and compulsory upper secondary education (ages 15-19) in Finland has the right to a full, free-of-charge, meal every school day.

A legislative change to the Finnish Constitution on June 11, 1999-731/1999 outlined children's education and rights.⁷ The Constitution states: ⁸

Children shall be treated equally and as individuals and they shall be allowed to influence matters pertaining to themselves to a degree corresponding to their level of development (Section 6 Subsection 3)."

"Everyone has the right to basic education free of charge... public authorities shall, as provided in more detail by an Act, guarantee for everyone equal opportunity to receive other educational services in accordance with their ability and special needs, as well as the opportunity to develop themselves without being prevented by economic hardship (Section 16 - Educational rights).

School food programs are based on national recommendations and are regulated by national and local curricula legislation. The Finnish National Core Curriculum for Basic Education states the following regarding school food:

A pupil attending basic education must be provided with a balanced and appropriately organized and supervised meal on every school day. The lunch break is important for pupils. School meals support pupils' healthy growth and development. The health-related and social role of school meals, the objectives of nutritional education and learning of manners as well as the recreational aspect of lunch breaks will be considered when arranging school meals and any snacks that may be offered during the school day. Pupils will be provided with the opportunity to participate in planning and implementing school meals, which fosters involvement and community spirit. Organization of school

⁷ The Constitution of Finland. June 11, 1999. https://faolex.fao.org/docs/pdf/fin134323.pdf

⁸ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019). https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all. p.21

⁹ Ibid; Finnish National Agency for Education. "School Meals in Finland." Finnish National Agency for Education, 2022. https://www.oph.fi/en/education-and-qualifications/school-meals-finland.

meals requires cooperation between the school and personnel responsible for meals. Support needs and monitoring concerning pupils' individual nutritional and health issues or treatment of an illness are to be agreed in cooperation between the pupils concerned, their parents or guardians and school health care staff. 10

Students are given 30 to 60 minutes for lunch and schools provide a specific space where school meals are served and eaten such as a school cafeteria. 11 Students also receive snacks during before, in-school, and after-school club activities. Teachers who supervise school meals eat with students and receive meal benefits. 12

Funding

School food falls under the Ministry of Education who provides funding for programs. While there is no specific national budget attached to school meals, the Ministry of Education receives approximately 25% of costs to operate education-related activities from the national Ministry of Finance and the Ministry of Education and Culture. 13

Municipalities provide the remaining funds for education, obtained primarily through residential taxation. Municipalities are responsible for providing pre-primary and basic education to all municipal residents, which includes school meals.

Since education budgets are determined locally, resource allocation for school food programs is subject to decision-making by local municipal councils. Although there is no set budget value for school meals, funding must be sufficient to meet the criteria outlined in the legislation. Some funding for school food is also provided by the EU funded School Fruit, Vegetables and Milk scheme, which supports using healthy foodstuffs in school food programs. Finland was allocated €1.599.047 for fruit and vegetables and €3,824,689 for milk in 2018–2019.14

In 2016, the annual average cost of school food per student was between €442 (in municipalities with 100,000 people or more) to €704 (in municipalities with 20,000 people or less). The cost includes foodstuffs, personnel costs, equipment, transport, and any additional meals from other sources. In 2017, the national average cost of

¹⁰ Ibid

¹¹ National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all

¹² National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

¹³ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/schoolmeals-all. p.25

¹⁴ Ibid, p.26; Finland's cheapest school meal costs just 64 cents per day. YLE NEWS. 10.1.2020 19:45. (2020).

one school meal per day was €2.80, although costs varied widely among schools.

Appendix C provides a cost breakdown of the national average cost of school meals in 2017 as well as the division of costs in basic education.

Food Literacy Education

School meals became a part of the national core education curriculum in 2004. In addition to school food, the Finnish core curriculum includes basic education, before and after school activities, and student welfare services. 'School feeding' (referred to throughout as school food) in Finland includes the free-of-charge food served daily in schools, as well as the mealtime itself, and education related to the SFP.¹⁵

School food is considered vital to children's well-being and growth and food literacy education is a central component of Finnish SFPs, integrated throughout the school day, during school meals, and through content taught in various academic subjects. The aim of food education is to support students to become adept at understanding everyday food choices, diverse food alternatives and their significance. ¹⁶ Building food competence and developing 'food sense' which encourages personal and experience-based understanding of food choices, are also important objectives. Having food sense means that students recognize the diversity of food choices and eating habits, and understand food systems and the social, cultural and everyday significance of food including how food relates to well-being. ¹⁷ Attaining 'food sophistication' is another goal of SFPs. It encourages students to develop appreciation and gratitude for food, responsibility and care for oneself in food choices made, and caring for others and the environment. ¹⁸

Nutrition

Finland's school food program provides a balanced school meal to students each school day with the goals of ensuring adequate nutrition to sustain students' ability to study, enjoyability, providing renewed energy, and building awareness and knowledge of food and nutrition. ¹⁹ School meals and snacks are used as a pedagogical tool in teaching students about health and nutrition, as well as table manners, food culture, and the value of the recreational nature of lunch and snack breaks. ²⁰

¹⁵ Ibid.

¹⁶ National Nutrition Council. "Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9.

¹⁷ Janhonen K. et al., 2016 cited in National Nutritional Council. "Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9.

¹⁸ Lintukangas, S. (2014) cited in National Nutrition Council. "Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9.

¹⁹ National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9
²⁰ Ibid.

School lunch menus are typically planned at the municipal level, often by the food service provider. The planning is mainly directed by established Finnish nutrition recommendations, the preferences of the consumers, and price. Catering services monitor the nutritional quality of the school meals with the aid of software that considers dietary intake and nutrient analysis. Caterers also follow standard recipes and nutrient content calculations based on the National Food Composition Database.²¹ Menu design often includes international foods, Finnish culture, local diet, and traditions.²²

The National Nutrition Council produces an illustrative guide that includes recommendations on portion sizes or 'model plates' for different ages as well as a food triangle guide to help inform meal design (see Figure 3 in Appendix C). Special dietary accommodations may be available if required in situations such as lactose intolerance, illnesses (celiac disease or Type 1 diabetes), athletic diets, or for religious dictates such as halal and kosher.²³ Sugary beverages and sweets are not regularly available in Finnish schools. Some schools offer vending machines or kiosks with healthy and nutritious products.²⁴ Parents and guardians have the right to decide if and what kind of marketing their children are exposed to and are consulted about the acquisition of vending machines or use of school kiosks.²⁵

Implementation

Municipalities and other education providers are primarily responsible for all practical matters of school food program implementation, including adequate allocation of resources for catering and other school food requirements. Successful execution of quality school catering typically requires multilateral cooperation between school management, directors, teachers, and staff. Per legislation, schools themselves may develop operations and evaluations of the school food program, which includes tools that allow students to participate in the planning, implementation, and evaluation of school meals.²⁶

Food service procurement: School meal catering services may be provided by the municipality or catering company (municipally owned or private). A transparent, open, and competitive procurement process is defined by the European Community directives on public procurement for any catering that is outsourced.²⁷ While

²¹ Ibid, p.26

²² Finnish National Agency for Education. "School Meals in Finland." Finnish National Agency for Education, 2022. https://www.oph.fi/en/education-and-qualifications/school-meals-finland.

²³ National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

²⁴ Finnish National Agency for Education. "School Meals in Finland."

²⁵ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/schoolmeals-all. p.18

²⁶ Finnish National Agency for Education. "School Meals in Finland."

²⁷ See EU procurement Policies: https://single-market-economy.ec.europa.eu/single-market/publicprocurement en ;https://commission.europa.eu/funding-tenders/tools-public-buyers/socialprocurement en ;https://green-business.ec.europa.eu/green-public-procurement en

municipalities aim to attain a stable and cost-effective food service provider, there is the flexibility for municipalities to make choices that make sense for their communities, such as using seasonal or local produce.²⁸ A grievance procedure exists for parents and school staff if they have a complaint about food quality or service.²⁹

Food Safety and hygiene: School kitchen staff require appropriate training and certification such as a 'hygiene passport,' which ensures staff have basic knowledge of food safety and hygiene. The Finnish Food Authority administers a publication system of food safety and hygiene inspections in facilities where food is prepared. Inspections are conducted by food inspectors and summary reports must be published in a highly visible place.³⁰

Food preparation: The method of food preparation may vary between municipalities and is based on what the schools need and prefer. Centralized kitchen systems are a more recent development, in which food is prepared in one kitchen and distributed to several nearby schools. Alternatively, schools may have their own kitchens and kitchen staff to prepare and serve meals (see <u>Appendix C</u> for more details on kitchen types).³¹

Community Participation in School Food Programs: The entire school community is considered an important participant in their school food program. Teachers and school staff are obliged and responsible for eating with students and guiding them during school meals. Principals and teachers work with caterers to organize and enhance the school food system. School food goals and practices are discussed with students' families to facilitate support for students' participation in school meals, which supports their development. Some schools have school food committees, which include teachers, students, school health care staff, and food service providers. They plan collaboratively through bi-annual meetings and brainstorm solutions to problems that may arise.³²

Oversight

Finnish municipalities have held responsibility for school food programs since the 1940s. The system has evolved in recent decades to the current model of joint responsibility with national guidance and local implementation at the municipal education authority level.³³ The school food system is considered decentralized, as responsibility for education, including school food programs, is held with municipalities and other education providers. No single institution oversees the entire

²⁸ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all. p.16

²⁹ For details, see: https://avi.fi/en/services/individuals/guidance-and-advice/food-control
³⁰ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all

³¹ Ibid.

³² Ibid, p.29

³³ Education Finland. "School Meals." Education Finland. n.d. https://www.educationfinland.fi/schoolmeals.

school food system; rather a horizontal governance structure based on cooperation across ministries and governmental agencies is practiced with shared responsibility for the well-being of the country's children.³⁴ The national core curriculum also recommends multilateral cooperation between school principals and management, teachers, food service staff, students, and families.

The responsibilities of ministries and governmental agencies can be summarized as follows:

- The Ministry of Education and The Finnish National Agency for Education coordinates and develops school food programs from a pedagogical perspective with the main responsibility for practical implementation on a national level.
- The Ministry of Social Affairs and Health and the National Institute for Health and Welfare oversees national monitoring and the nutritional content of the meals and general welfare in schools.
- The Ministry of Agriculture and Forestry has the responsibility for coordinating food policy.
- The Finnish Food Authority governs food safety issues.
- The National Nutrition Council develops, updates, and coordinates the implementation of the nutritional guidelines for school food. ^{35, 36}

Monitoring and evaluation of school food is also shared between local and national levels. At the local level, data on student participation in school meals and food waste is collected. Caterers monitor the nutritional quality of school meals using national guidelines. Data on costs is collected and monitored to allow for the planning of future budgets. Students are also involved in evaluation of their school meals through feedback forms. The Finnish system believes children have the right to be involved in decision-making that concerns their lives as the process facilitates learning about active citizenship and democratic participation.³⁷

Data collected locally is reported and monitored nationally by the Finnish Food Authority and the National Institute for Health and Welfare. In addition to monitoring food safety national SFP evaluation has occurred biannually since 2006 using the Local Health Promotion Capacity (TEA) survey as a benchmark. The survey includes questions on:

- Student participation in mealtimes,
- The timing of school meals and duration of breaks,
- The inclusion of school food in the local curriculum.
- Local monitoring and evaluation,
- Cooperation between program practitioners,

³⁴ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

³⁵ Ibid. p.22

³⁶ For information on institutional roles and activities in the Finnish school food system and a summary fact sheet, see: https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

³⁷ Ibid, p.26

 The involvement of students and their families in the planning, implementation and evaluation of the school food program.³⁸

Since 1996, a separate School Health Promotion survey was instituted biannually to research health and welfare issues such as smoking, alcohol use, exercise, social well-being in schools, and some questions related to school food. The data is used in the evaluation and development of guidelines for the school food program. In this survey questions include:

- How often do students eat all the components of the school meal?
- Which components do students eat and how often?
- How often do students eat fruit and vegetables, sweets, or sugary beverages?³⁹

Challenges and Benefits

Finland has one of the most comprehensive meal programs in the world, including the benefits of universal free meals, food literacy education, sustainable funding, and strong oversight. **Table 1** below outlines three main challenges identified in a report and offers proposed solutions. External relevant research is also included.⁴⁰

Table 1⁴¹
Challenges and Proposed Solutions of Finland's School Meal Program

Challenges **Proposed Solutions** School meals are taken for granted. Pellikka and colleagues (2019) suggest: "The Though food is available to all students. food must be tasty, and the school canteen 100% coverage is not achieved. While must be a pleasant space. The duration of the most 7-12-year-old students eat the break must allow students enough time to eat school meal every day, typically school and talk with friends. Also, families should lunch attendance is lower for 13-15have a positive and realistic view of school year-olds. They may not like the taste of meals and encourage their children to eat the school meal every day." (p.31) available food and social, emotional, and peer-related aspects of school Tikkanen (2009) shared students and parents' mealtimes may affect participation suggestions for improving school meal negatively. A 2016 study also found that uptake, including "additional 'favourite dishes'; up to 28% of cooked school meals are more alternatives to choose from; wider salad

³⁸ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all. p.27

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all. pp.31-32

wasted in the Finnish SFP.42

selection; alternative milk options, and additional bread options." (p. 475) 43

Ensuring sustainability as a course of action throughout the school food system.

School food should be environmentally, culturally, economically and socially sustainable. Well-implemented school food programs support these complementary aspects.

Pellikka and colleagues (2019) argue that: "Environmental sustainability can be achieved by avoiding food waste, using seasonal and domestic products, and through energy and general efficiency throughout the production chain. Social sustainability is strived for through cooperation and interaction between people involved in school meals. Cultural sustainability is achieved through serving traditional, Finnish food, but also considering cultural differences. Economic sustainability is crucial, because school meals are produced at a relatively low cost" (p.32). One example of environmental sustainability can be found in in Jyväskylä Finland, where a school has adopted the principles of Resource Wisdom as an operational guideline. This model aims to create a circular and carbon-neutral economy.44

Ensuring resources are available to meet all necessary criteria.

Resources are subject to political decision-making in municipalities, which impacts managing school food.

Balancing all necessary criteria — nutrition, tastiness, effectiveness, versatility and sustainability — on a single tray of food every school day is an identified challenge.

Pellikka and colleagues (2019) note: "Providing and following precise national guidelines and having educated food service staff plan and make the food offered in school canteens helps meet this challenge... The catering industry should be supported to promote this career pathway and help meet the shortage of qualified food service staff." (p.32)

As for benefits, in 2019, the Ministry for Foreign Affairs of Finland and Finnish National Agency for Education reviewed Finland's school food program. According to

⁴² Grivins, Mikelis, Talis Tisenkopfs, Ville Tikka, and Tiina Silvasti. "Maneuvering between Regulations to Achieve Locally Accepted Results: Analysis of School Meals in Latvia and Finland." Food Security 10, no. 6 (December 1, 2018): 1389–1400. https://doi.org/10.1007/s12571-018-0856-6.

⁴³ Tikkanen, Irma. "Pupils' and Parents' Suggestions for Developing School Meals in Finland." British Food Journal 111, no. 5 (2009): 475–85. https://doi.org/10.1108/00070700910957302 p.475 44 Grivins, M., Tisenkopfs, T., Tikka, V., Silvasti, T. 2018. "Manoeuvring between regulations to achieve locally accepted results: analysis of school meals in Latvia and Finland," Food Security: The Science, Sociology and Economics of Food Production and Access to Food, Springer. The International Society for Plant Pathology, vol. 10(6), pages 1389-1400, December." From: https://ideas.repec.org/a/spr/ssefpa/v10y2018i6d10.1007_s12571-018-0856-6.html

the report that emerged from the review, the key lessons and best practices from the Finish SFP include:

- Support for student health and welfare: Finnish SFPs "provide all students with nourishing, tasty and free-of-charge meals that maintain their ability to study, teach them proper nourishment and maintain their health. School feeding is also part of pupil welfare." Basic nutrition is ensured with balanced meals, food safety, and hygiene.
- Support for learning: The Finnish School Nutrition Program "is an integral part of their educational system and school operations. It is a versatile educational opportunity with food seen as more than just nutrition it is a pedagogical tool that can promote physical and social wellbeing. The mealtime offers a great opportunity, for not only nutrition and relaxation, but also learning-by-doing food and sustainability education."
- National guidance and local implementation: "(the) School feeding system is directed by national legislation, instructions and recommendations, but its implantation is decentralized. Decentralisation makes it possible to consider local features. Local operators are given the freedom and responsibility to implement school feeding in their area. It is important to recognise local strengths and food culture and use them as a starting point for implementing school feeding. Finnish school feeding offers food made mainly with Finnish, local ingredients, which can support local food production and teaches local food culture." 45
- Cross-institutional, multi-sectoral cooperation: "building and maintaining sustainable practices requires long-term commitment and cooperation. All collaborators need to work towards a common goal over political boundaries so that the basic public service provided by school feeding does not depend on political changes."

⁴⁵ Ibid.

Japan's School Food Programs

Overview and Policy

In 1954, *kyushoku* (school lunch) became an official part of the Japanese school system through the *School Lunch Act*. ⁴⁶ School lunches developed organically through grassroots networks across the country primarily to address hunger and malnutrition among impoverished school children. ⁴⁷ Since then, the Japanese school food program has evolved and school lunches are now viewed as a "living textbook" to introduce regional culture and cuisine, gratitude, and education on food production, distribution, and consumption. ⁴⁸ The Japanese SFP has been praised worldwide as an exemplary model with its focus on fresh scratch-made nutritious meals and a comprehensive food education program. ⁴⁹

Japan's SFP is part of a comprehensive, nation-wide promotion of food education called *shokuiku* (food and nutrition education), developed to address rising trends in unhealthy eating patterns across all ages.⁵⁰ The *Basic Law on Shokuiku*⁵¹ came into effect in 2005, which mandated the promotion of food education. Policies and programs target the promotion of *shokuiku* in schools, nurseries, at home, and in communities, and involves close coordination and collaboration across several levels of government, public and private sectors, and community participants (e.g., schools, nursery schools, workers in the agriculture, forestry, and fisheries industries, food-related businesses, and volunteers).

The Ministry of Agriculture, Forestry and Fisheries (MAFF)⁵² creates and releases the *Basic Plan for Shokuiku Promotion* every five years, including updated policy and targets for evaluation.⁵³ MAFF coordinates with relevant ministries and agencies including the Food Safety Commission of Japan (FSCJ), the Consumer Affairs Agency (CAA), the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Ministry of Health, Labour and Welfare. MAFF sets the direction of *shokuiku* and local governments are responsible for creating a detailed implementation plan which involves community members, while MEXT is the main

⁴⁶ School Lunch Support. 2015. School Lunch Act. https://school-lunch-support.jp/en/act/

⁴⁷ The Coalition for Healthy School Meals. 2022. Japan's School Food Program (Webinar). Available from: https://www.youtube.com/watch?v=6VyHE4vO12g

⁴⁸ Ministry of Education, Culture, Sports, Science and Technology. n.d. Japanese school lunches and shokuiku (food and nutrition education). https://www.mext.go.jp/content/20211012-mxt_kenshoku-000008678_2.pdf

⁴⁹ More than a meal: school lunch in Japan. n.d. From:

https://www.asianstudies.org/publications/eaa/archives/more-than-a-meal-school-lunch-in-japan/ ⁵⁰ Kurotani, K. & Shinsugi, C. 2019. Promotion of Shokuiku (food and nutrition education): Lessons learned from Japanese context. From:

https://www.nibiohn.go.jp/eiken/programs/shokuiku report.pdf

⁵¹ See Basic Act on Shokuiku (Food and Nutrition education). From: https://www.japaneselawtranslation.go.jp/en/laws/view/3419/en and What is "Shokuiku (Food Education)"? From: https://www.maff.go.jp/e/pdf/shokuiku.pdf

⁵² MAFF website includes information on the basic act and plan, evaluation, white papers, summaries, and dietary guidelines. n.d. From: https://www.maff.go.jp/e/policies/tech_res/shokuiku.html ⁵³ Ministry of Agriculture, Forestry and Fisheries. 2021.

national governing body overseeing the implementation of school lunch and *shokuiku* in schools.⁵⁴

The Health Promotion Act was issued by the Ministry of Health, Labour and Welfare in 2003, just prior to the introduction of the *Basic Law on Shokuiku*. It outlined the nutrition management policy for school lunch facilities. These two policies led to the significant amendments of the *School Lunch Act* in 2008 and changed the goal of the school lunch program from prioritizing feeding children to utilizing school lunch to change student tastes, increase knowledge of healthy eating, raise awareness of traditional foods, and support domestic agriculture.⁵⁵

These amendments led to the establishment of:56,57

- Food education goals in school curriculum aligned with school lunch programs,
- School lunch nutritional standards.
- School lunch hygiene safety control standards, and
- Diet and nutrition teachers in schools.

These legislative changes allowed the roles of government and school lunch administrators (e.g., school principals, central managers for school lunch preparation, diet, and nutrition teachers) to be established and responsibilities clarified. School lunches and food and nutrition education were now managed through local and prefectural Boards of Education which are overseen nationally by MEXT.

The school lunch program is guided by the School Lunch Act, School Lunch Nutritional Standards, and the School Education Act. ⁵⁸ MEXT also sets the National Curriculum Standard including food education and established the Diet and Nutrition Teacher system. ⁵⁹ The Dietitians Act sets the national licensing requirements for registered dietitians acting as school dietitians or diet and nutrition teachers. ⁶⁰ The National Curriculum standards were revised starting in 2017 to reflect further promotion and incorporation of *shokuiku* across all educational activities at school. ⁶¹

MEXT developed the following goals based on the Basic Act of Shokuiku: 62

⁵⁴ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

⁵⁵ Ibid.

⁵⁶ See https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S2/_article for tables on the School Lunch Act before and after amendments made in 2009

⁵⁷ For a list of SFP goals after the 2009 amendments to the School Lunch please see https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S2/_article

⁵⁸ Translation of School Lunch Act: https://school-lunch-support.jp/en/act/

⁵⁹ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

⁶⁰ Ibid.

⁶¹ Kurotani, K. & Shinsugi, C. 2019. Promotion of Shokuiku (food and nutrition education): Lessons learned from Japanese context. From:

https://www.nibiohn.go.jp/eiken/programs/shokuiku_report.pdf

⁶² Ministry of Education, Culture, Sports, Science and Technology. n.d. Japanese school lunches and shokuiku (food and nutrition education). From: https://www.mext.go.jp/content/20211012-mxt_kenshoku-000008678_2.pdf

- (1) Maintain and enhance the well-being of school children through appropriate nutritional intake,
- (2) Provide school children with opportunities to learn about appropriate diet, develop the ability to make sound judgements about a healthy diet, and to adopt positive dietary habits,
- (3) Foster a happier society and a spirit of cooperation in children,
- (4) Facilitate understanding of the gifts of the natural world, thereby fostering a respect for life and nature and a positive attitude toward environmental conservation,
- (5) Aid the understanding that a dietary practice is supported by many people engaging in food production, thereby fostering a sense of appreciation for the work of these people,
- (6) Facilitate better understanding of varied culinary cultures, and
- (7) Support appropriate understanding of production, distribution, and consumption of food.

Japan's SFP is designed with long-term benefits in mind: by educating children to have a better understanding of food, nutrition, and food systems, they will be supported to develop healthy habits throughout their lives.⁶³ Public elementary and junior high schools must endeavor to provide school lunch, and nearly all do.⁶⁴

In 2005, MEXT established the Diet and Nutrition Teacher System, which promotes the placement of Diet and Nutrition Teachers in public schools (elementary and junior high) to enhance the uptake of *shokuiku* in schools.⁶⁵

The duties of Diet and Nutrition teachers include:

- (1) Actively participate in developing the basic plans for school lunches (i.e., sits on School Lunch Committee),
- (2) Formulating balanced nutritious menus,
- (3) Ensure hygiene and sanitation standards are met,
- (4) Provide personal or group instruction to students on diets with the classroom teachers support,
- (5) Promote collaboration between parents and local communities through school lunches (e.g., invite local farmers into the classroom for lunch and learns, order local ingredients for lunches, meet with parents to discuss nutritional concerns of students such as allergies), ⁶⁶ and
- (6) Oversee concerns related to food allergies using "Guidance for Children with Food Allergies in School Lunch." ⁶⁷

https://www.nycfoodpolicy.org/food-policy-snapshot-japans-school-lunch-program/

⁶³ Ministry of Education, Culture, Sports, Science and Technology. 2021. Overview of Education, Culture, Sports, Science and Technology - Japan. From: https://www.mext.go.jp/en/content/20210325-mxt_kouhou02-200000029_1.pdf

⁶⁴ Appel, D. 2019. Japan's school lunch program serves nutritious meals with food education. Hunter College New York City Food Policy Center. From:

⁶⁵ Ministry of Education, Culture, Sports, Science and Technology. (n.d.)

⁶⁶ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

⁶⁷ Kurotani, K. & Shinsugi, C. 2019. Promotion of Shokuiku (food and nutrition education): Lessons learned from Japanese context.

https://www.nibiohn.go.jp/eiken/programs/shokuiku report.pdf

As of 2022 there are 6,843 school diet and nutrition teachers across Japan, although there are regional discrepancies which indicate the need for establishing a more effective placement system.⁶⁸

Funding

Japan's SFP is funded through a cost-shared agreement between the federal, prefectural (comparable to provincial in Canada), and municipal governments, with contributions from parents. ⁶⁹ See **Table 17** in <u>Appendix D</u> for the breakdown of school food operational expenses. Labour costs are covered by municipal tax (office workers wages) and prefectural tax (diet and nutrition teacher and school dietitian wages). Federal and municipal governments share costs for school lunch facility equipment and tableware, while utility costs are covered by municipal tax. To receive funding, the municipal government must apply each year through the national government. Prefectural governments may financially support school lunch promotion projects. Parents cover the cost of the ingredients through monthly direct billing, ⁷⁰ though many local governments provide subsidies to cover half of the original price of meals, with 4.4% of elementary and junior schools offering free meals. ⁷¹ The national average school lunch fee per meal in elementary school in 2021 is 256 yen or approximately \$2.39 CAD (as of July 25, 2023).

Federally, the national budget sets aside funding for SFPs under activities related to the "Promotion of *Shokuiku*". This operational funding helps ensure the stability and sustainability of the program and food literacy education.⁷²

Specific activities funded through MEXT include: 73

- Utilization of school meals to address social problems,
- Projects for *shokuiku* promotion through work with diet and nutrition teachers, nursing teachers, families, local producers, and other related groups,
- Improvement to school lunch fee collection and management duties,
- Research on contemporary issues of school lunch (e.g., investigation on hygiene management of school lunches during Covid-19 pandemic),
- School facility environment improvement grant (for facility maintenance and upgrade).

In addition, the Ministry of Environment funds the development of initiatives to promote the 3Rs (reduce, reuse, and recycle) to fight against waste from school lunch, (e.g., reduction of packaging and student recycling).

https://www.city.fuchu.tokyo.jp/kyoiku/gako/kyushoku/kyushoku.html

https://www.mext.go.jp/content/20211207-mxt_kenshoku-000018564_0007.pdf (Japanese)

⁶⁸ Ministry of Education, Culture, Sports, Science and Technology. n.d.

⁷⁰ Fuchu City. 2019. About school lunch. From:

⁷¹ Waida, Y., & Kawamura, M. 2022. Japanese school lunch and food education. In School Food, Equity and Social Justice. Taylor & Francis.

⁷² Ishida H. 2018. The history, current status, and future directions of the school lunch program in Japan. Jpn J Nutr Diet [Internet]. 2018;76(Supplement): S2–11. From:

https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76 S2/ article

⁷³ Ministry of Education, Culture, Sports, Science and Technology. From:

Food Literacy Education

Japan places very high priority on food literacy education⁷⁴ stating that food and nutrition plays the most important role in children's cultivation of humanity and acquisition of life skills.⁷⁵ Food education is introduced through school lunch (i.e., "living textbook") and school lunch *toban* (i.e., student school lunch duties as outlined below), as well as curriculum involving experiential learning such as cooking and gardening, and education coordinated with the local community (e.g., chefs, farmers, and producers).⁷⁶

School lunch toban: is a system where students are responsible for serving their classmates and teachers lunch, eaten together in the classroom.⁷⁷ Students' toban duties include retrieving the lunch cart which contains the meal components, gathering and distributing the serving and eating utensils and lunch trays from the on-site kitchen or the receiving area where meals from a school lunch center are delivered. ⁷⁸ In the classroom, the school lunch toban group serves each student and the teacher a portion of each menu item. Occasionally the school dietitian, cooks, farmers, or other guests may come and give lectures. Through these efforts, students gain an understanding of the value of food culture and gratitude for food while also enjoying a meal together.

Food education curriculum: food education is embedded within the national curriculum across living environment studies, social studies, science, and home economics in elementary schools. Article 10 of the *School Lunch Act* requires that schools prepare an annual plan for food and nutrition education, including when and what to teach throughout the year in line with the national curriculum.⁷⁹

Curriculum components include learning to grow vegetables (Living Environment Studies, Grades 1 and 2), learning about the domestic agriculture industry and how plants grow (Grade 3), and Home Economics education including practical lessons to gain cooking skills and how to become environmentally responsible and ethical consumers (Grades 5–12). Practical cooking lessons include a national culinary requirement for students to learn how to cook rice and miso soup as traditional dishes in Japan.

Community involvement: Some prefectures promote local agriculture through initiatives supporting local food production for local consumption.⁸⁰ For example, rural Yamagata's Prefectural Agriculture, Forestry, and Fisheries department

⁷⁴ Omori K., Kaneko K. 2021. International trends in food literacy studies, J. of Home Economics of Japan, 72(4), 206-217

⁷⁵ Kurotani, K. & Shinsugi, C. 2019. Promotion of Shokuiku (food and nutrition education): Lessons learned from Japanese context. From:

https://www.nibiohn.go.jp/eiken/programs/shokuiku_report.pdf

⁷⁶ Ministry of Education, Culture, Sports, Science and Technology. n.d.; The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world ⁷⁷ Ibid.

 ⁷⁸ Izumi BT, Akamatsu R, Byker Shanks C, Fujisaki K. An ethnographic study exploring factors that minimize lunch waste in Tokyo elementary schools. Public Health Nutr. 2020 Apr;23(6):1142-1151. doi: 10.1017/S136898001900380X. Epub 2020 Jan 30. PMID: 31996278; PMCID: PMC10200582.
 ⁷⁹ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world
 ⁸⁰ Ibid.

promotes local food production to students and the broader community, through their educational websites and local food labelling on packages (e.g., "Perorin", a mountain shaped character which can be found on locally produced food products; see **Figure 4** in Appendix D).

The agricultural department also provides subsidies to schools for activities which invite local farmers into the classroom to eat lunch and interact with the students using locally grown food in the school lunch. The subsidy covers 150 yen (approximately \$1.40 CAD) for each student meal during the lunch and learn event, after which the school can then apply for additional subsidy towards the costs of ordering local vegetables, processed foods, and rice bread. While there is no mandated requirement to use local ingredients, MAFF set the goal for 30% of ingredients to be procured from locally or domestically grown products. This has been challenging to achieve given Japan's low levels of food self-sufficiency and dependence on imports.⁸¹

Nutrition

Article 8 of the *School Lunch Act* establishes School Lunch Nutritional Standards which are adjusted each time the national Dietary Reference Intakes (DRI) are updated.⁸² The Council of Collaborators in Studies and Research on School Lunch Nutrition Standards established by MEXT uses the results from the Survey on the Meal Situation of Children conducted by the Ministry of Health, Labour and Welfare to set the Nutritional Standards in schools.⁸³ Japan's standards recommend that one-third of the Recommended Daily Allowance (RDA) of most nutrients should be supplied through lunch, although nutrients that students tend to be deficient in are supplied at higher levels.⁸⁴ These standards are meant to be applied in a flexible manner with consideration of the individual health and life activities of students in the school and in the local and regional context.⁸⁵

Diet and nutrition teachers or school dietitians create menus based on these standards but do not use cycle menus. The meals vary greatly from day to day but typically include rice bread or noodles as a main dish with milk and soup. 86 Menus consider holidays by including specialty menu items (e.g., roasted soybeans for *Setsubun*, a traditional Japanese event in February) and local ingredients (e.g., *Tsuyahime*, Yamagata's local rice with fish and vegetable side dishes). A monthly school lunch menu is distributed to the parents and homeroom teacher to ensure

⁸¹ Sanborn, A. A. 2021. Lunch Interrupted! COVID-19 and Japan's School Meals. Gastronomica, 21(1), 92–96. From: https://doi.org/10.1525/gfc.2021.21.1.92

⁸² The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

⁸³ School Lunch Act. 2015. From: https://school-lunch-support.jp/en/act/

⁸⁴ Ishida H. The history, current status, and future directions of the school lunch program in Japan. Jpn J Nutr Diet [Internet]. 2018;76(Supplement):S2–11. Available from:

https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76 S2/ article

⁸⁵ Kurotani, K. & Shinsugi, C. 2019. Promotion of Shokuiku (food and nutrition education): Lessons learned from Japanese context.

https://www.nibiohn.go.jp/eiken/programs/shokuiku report.pdf

⁸⁶ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

they are aware of ingredients and to encourage their involvement in food education.^{87, 88}

See Figure 5 and Figure 6 in Appendix D for sample meals.

Implementation

Food service delivery: School lunch programs offer a uniform menu five days per week to all students in every school with a program.⁸⁹ There are three types of meal programs: full meals including bread/rice, milk, and side dishes; supplemental meals of only milk and side dishes; and a program where only milk is offered (see **Figure 5** and **Figure 6** in Appendix D).⁹⁰ As of 2019, full meals are provided to 98.8% of elementary schools, 79.9% of junior high, and 87.3% special support education schools.⁹¹ Implementation of supplemental meal and milk only programs are rare with implementation rates of 0.6% and 1.1% respectively across all school types. If schools lack capacity to offer full meal service students may bring in their own meals or schools may contract a company that provides students with bento (lunch boxes).⁹² Alternate full meals are offered to students who have food allergies (doctor's note required), religious food restrictions, or are vegetarian, and if it is not possible to accommodate, a student can bring in their own meal.⁹³

Food preparation: 55% of school lunches in Japan are prepared at school lunch centers using central kitchen facilities, while 42% are prepared at on-site kitchens, employing a total of approximately 45,000 cooking staff across the country. 94 School lunch centres serve at minimum two schools (approx. 1500 students), preparing scratch made meals with an average of 28% locally sourced ingredients. 95, 96 On-site kitchens provide scratch made meals internally but may also be shared with a nearby school. 97 They generally provide meals for fewer than 550 students and on average procure 24% of their ingredients locally. One advantage of this model is that

⁸⁷ For a sample of monthly school lunch newsletter sent to the homeroom teacher and parents, see https://yattatachi.com/japanese-school-lunches (note columns include the name of dish, ingredients organized into food groups, and calories).

⁸⁸ For the Japanese food guide "Spinning Top", see: https://www.mhlw.go.jp/bunya/kenkou/pdf/eiyou-syokuji5.pdf

⁸⁹ Miyawaki, A., Lee, J. S., & Kobayashi, Y. 2019. Impact of the school lunch program on overweight and obesity among junior high school students: A nationwide study in Japan. Journal of Public Health, 41(2), 362–370. https://doi.org/10.1093/pubmed/fdy095

⁹⁰ https://www.pref.fukushima.lg.jp/sec/70059a/kenkokyoiku07.html

⁹¹ Ministry of Education, Culture, Sports, Science and Technology (MEXT). 2019. Heisei-30-nendo gakkoukyushoku jisshi-jyoukyou-tou chousa no kekka nitsuite [About the result of the 2018 school lunch implementation status survey]. https://www.mext.go.jp/content/1413836_001_001.pdf

⁹² https://www.town.samukawa.kanagawa.jp/material/files/group/34/kawaraban1gou.pdf

⁹³ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world ⁹⁴ Ibid.

⁹⁵ Locally is defined as having been produced, harvested, or raised within the geographic boundaries of the prefecture in which it is consumed.

 ⁹⁶ For an organizational chart on school lunch operations for a single school, visit
 https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S12/_pdf/-char/ja
 ⁹⁷ For an organizational chart on school lunch operations for central kitchen facilities, visit:
 https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S12/_pdf/-char/ja

students have more food literacy opportunities to engage with the school Dietitian and cooks.⁹⁸

Oversight

As the main governing body, MEXT evaluates school food programs by conducting surveys such as the "Nutrition Report of School Lunches", "School Lunch Implementation Survey", and "Survey on School Lunch Expenses" (see **Table 18** in Appendix D for a sample MEXT survey, and the repot by Kojima et al.⁹⁹). Assessment of school lunch menus is based on the Nutrition Standards outlined in the School Lunch Act, as well as by proper portioning, taste, colors (visual appeal), texture, temperature, sanitation, and safety.

Under the direction of MEXT, local Boards of Education manage the school lunches by providing guidance to School Lunch Committees at each school. School Lunch Committees are led by the principal and include the school diet and nutrition teachers or school dietitians, school lunch teachers, and sometimes a school lunch chief for schools with central kitchen facilities. ¹⁰⁰ The day-to-day operations of the school food program is overseen by School Lunch Committee members.

Schools are required to conduct nutritional assessments (e.g., physical condition, nutritional status, and lifestyle habits) of students regularly and to ensure the quality of school lunches using the Plan-Do-Check-Act cycle (PDCA). 101, 102

Challenges and Benefits

Japan's national SFP faces several challenges, including difficulties in hiring diet and nutrition educators in certain regions, limited local agricultural capacity to meet domestic procurement goals, and the escalating cost of ingredients due to climate change, rising oil prices, and a weakened yen make it challenging for staff to keep meal prices within budget for parents (as 70% of regions require parents to pay the full cost of ingredients there are increasing issues with unpaid school lunch fees). Recruiting private food service contractors and consolidation are being considered to save costs, however concerns related to decreases in food quality have been raised and the issue is currently under debate. Japan's decreasing population is also

⁹⁸ To see an overview of the cooking and delivery system for operating school lunches in Japan, visit: https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S12/_pdf/-char/ja.

⁹⁹ Kojima Y, Nakanishi A, Ishida H. 2018. Monitoring and evaluation systems for the school lunch program in Japan: Organizing items with reference to acts and surveys. Jpn J Nutr Diet ;76(Supplement):S74–85. Available from:

https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S74/_article lold lold.

¹⁰¹ Nagura H, Takahashi S. 2018. Survey of a Japanese elementary school lunch program menu planning, quality control, and nutrition management: A case study. Jpn J Nutr Diet ;76(Supplement):S38–49. Available from:

https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S38/_article/-char/en ¹⁰² For information on the monitoring and evaluation items for Japanese school lunch related to "healthy development of children" and "operation of school lunch program", see: https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S74/_pdf/-char/en ¹⁰³ Schools in Japan struggle to serve affordable lunches as food prices surge. 2022, June 6. The

Japan struggle to serve affordable lunches as food prices surge. 2022, June 6. The Japan Times. From: https://www.japantimes.co.jp/news/2022/06/06/national/school-lunch-affordability/

104 The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

resulting in higher costs of on-site cooking, causing more financial concerns for the program.¹⁰⁵

There are notable benefits to Japan's extensive programming such as stringent nutrition standards and a robust school food education program that garners significant public trust and support. National policies, such as the School Lunch Act and the *Basic Act of Shokuiku*, provide a comprehensive framework for the program. establishing food education as a central component of the national SFP. 106 The program's nutrition standards are more rigorous than those of many other countries. and there is a high degree of parental and caregiver confidence in its ability to support children's development. ¹⁰⁷ Additionally, the program enjoys high participation rates at the national level, alleviating families from the burden of lunch preparation. Teacher involvement during mealtimes contributes to the reduction of food waste as nationally, less than 7% percent of school food served is wasted compared to more than 30% of waste from the food served in the U.S. national school lunch program. 108 A teacher's presence during lunch may also help to provide students with food education and social support, as they impart knowledge of ingredients and Japanese food traditions, encourage mindful eating. and practicing gratitude. 109

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Maruyama S, Kurokawa A. 2018. The operation of school lunches in Japan: Construction of a system considering sustainability. Jpn J Nutr Diet; 76(Supplement):S12–22. Available from: https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S12/_pd
 School Lunches: The Key to Children's Health and Prosperity. 2021, November 18. Kizuna. The Government of Japan. From: https://www.japan.go.jp/kizuna/2021/11/school_lunches.html
 The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/schoolfood-programs-around-the-world
 Ibid.

¹⁰⁹ Izumi, B.T., Akamatsu, R., Byker Shanks, C., Fujisaki, K. (2020). An ethnographic study exploring factors that minimize lunch waste in Tokyo elementary schools. Public Health Nutrition, 23(6), 1142-1151; In Finland the school food system is led by a collaboration of ministries and governmental agencies who take shared responsibility for the well-being of the country's children, a a horizontal governance structure based on cooperation. The national core curriculum also recommends multilateral cooperation between school principals and management, teachers, food service staff, students, and families.

South Korea's School Food Programs

Overview and Policy

School meals were introduced in South Korea after the Korean War and have undergone three main phases: ¹¹⁰

- Introduction and early stage (1953 1980).
- Expansion of school lunch meal program (1981 2005) and the creation of the *School Meals Act*.
- Enhancement of the SFP including transition from contracted to mandatory self-operated food service (2006 present day).

As of 2011, South Korea has moved to a universal free, eco-friendly (UFEF) school lunch program for all students. The term "eco-friendly" in the South Korean context denotes healthy and traditional foods that are either organic or pesticide-free.

The purpose of South Korea's SFP, stated within the *School Meals Act*, is to "elevate the quality of school meal services and to contribute to the sound mental and physical development of students and the improvement of the nation's diet by prescribing matters on the school meal services". According to Woo (2015), the school meal and school-based nutrition education objectives include improvement of the health of students, promotion of the traditional South Korean diet, and extension of opportunities for a healthier diet and life. 113

It is important to note the Korean school day is much different than ours in Canada. Students attend class during the day, then participate in sports or club-related activities, then attend private academies in the evening, so many students are away from home and at school from 8am to 10pm each day. 114 Such daily structure makes it necessary for meals and snacks to be readily available.

First Phase of the SFP: Economic Crisis (1953-1980)

The purpose of the first phase of South Korea's SFP was poverty relief. After the Korean War (1950-1953), South Korea experienced an economic crisis. Public schools were a critical distribution channel to ensure children were fed, particularly as attendance was high given that education has significant cultural value. During this time the national school lunch program depended on international aid from

¹¹⁰ Korean Institute of Public Administration. (2017). Contracting Out or Contracting Back In: School Food Service Contracts in South Korea. Retrieved from:

https://www.kipa.re.kr/synap/skin/doc.html?fn=1864_3&rs=/convert/result/board/311/

¹¹¹ Gaddis, J. E., & Jeon, J. (2020). Sustainability transitions in agri-food systems: insights from South Korea's universal free, eco-friendly school lunch program. Agriculture and Human Values, 37(4), 1055–1071. https://doi.org/10.1007/s10460-020-10137-2

¹¹² Ministry of Education. 2013. Korean school meals act and enforcement [Internet]. Seoul: Ministry of Government Legislation. Retrieved from:

https://www.law.go.kr./LSW/eng/engLsSc.do?menuId=2§ion=lawNm&query=school+meal+act&x=0&y=0

¹¹³ Woo, T. (2015). The School Meal System and School-Based Nutrition Education in Korea. Journal of nutritional science and vitaminology, 61 Suppl, S23–S24. https://doi.org/10.3177/jnsv.61.S23 ¹¹⁴ Gabrielle, N. 2016. School Lunches in South Korea. HuffPost. From:

https://www.huffpost.com/entry/school-lunches-in-south-k b 9449058

June Jeon. South Korea's School Food Program. The Coalition for Healthy School Meals. March 31, 2023. (2023). (Webinar, unpublished)

United Nations countries who supplied the program with milk powder, wheat, and corn powder.

In 1977, the SFP was involved in a significant scandal due to a massive outbreak of food poisoning in Seoul schools. Approximately 8,000 students were affected after consuming cream bread made from ingredients supplied by the Korean government but produced and distributed by a private firm. The firm, which was thought to be corrupt, benefited from a monopoly on school food provision and supplied the bread without meeting food regulations. Despite the scandal, the SFP continued to expand with the support of Korean public health experts who looked to emulate the school policies of other developed countries. While the company was punished for their actions, the incident did not lead to any major SFP policy change. This resulted in wealthier families refusing school lunches and supplying their children with their own homemade lunchbox meal called a *dosirak*.

Second Phase: Expansion (1981- 2005)

The second phase of South Korea's SFP occurred when the *School Meals Act* was introduced in 1981 (see **Table 19** in <u>Appendix E</u>). The law outlined the government's responsibility to feed students and improve their dietary life in school to encourage healthy mental and physical growth. Although not directly stated in the law, the intent was for the government to take responsibility for the SFP by investing in its students who in turn will make the country more prosperous as they become adults. Although the development of the S*chool Meals Act* was significant, it did not have any enforcement mechanisms until it was amended in 1996. 119

The 1990s saw rapid expansion of the national SFP for two reasons. First, all candidates during the first democratic presidential campaign ran on platforms to expand the SFP to support mothers who had shifted from the home to the workforce. Second, following the election, the Korean government approved a controversial policy that permitted the outsourcing of school food production to private firms, known as the "K Train" model. This policy resulted in a rapid expansion of school food programs (SFPs), increasing their availability from 11% of schools in 1992 to 99% by 1998. However, the meals were not well received by children and parents opted out in favour of making their children's meals. This privatized model remained in place for 10 years until 2006 when the third phase came into effect.

Third Phase: Enhancement (2006 - present)

In 2006, the *School Meals Act* was significantly revised after another outbreak of food-borne illness among students caused by a private corporate contract-caterer. The amendment redefined the responsibilities of state and local governments to include providing administrative and financial support for the provision of safe,

¹¹⁶ June Jeon. South Korea's School Food Program. The Coalition for Healthy School Meals. March 31, 2023. (2023). (Webinar, unpublished)¹¹⁷ Ibid.

¹¹⁸ June Jeon. South Korea's School Food Program. The Coalition for Healthy School Meals. March 31, 2023. (2023). (Webinar, unpublished)

¹²⁰ Korean Institute of Public Administration. (2017). Contracting Out or Contracting Back In: School Food Service Contracts in South Korea. Retrieved from: https://www.kipa.re.kr/synap/skin/doc.html?fn=1864_3&rs=/convert/result/board/311/

wholesome, and good quality meals. 121 To achieve this, the Act outlined SFP standards, including quality control, nutrition management, sanitation and food safety, and the quality of school meal services. Traditional Korean food culture was embedded in meals, but not directly into the curriculum. 122

Amendments to the *School Lunch Act* created laws to further improve the school nutrition environment and food safety practices, including the 2008 *Special Act on Children's Dietary Life Safety Management* (Special Act) and *Dietary Life Education Support Act* of 2009.¹²³ The Special Act outlines the responsibilities of the Korea Food and Drug Administration (KFDA) and local governments for the education and promotion of food safety and nutrition in children, and created the largest budget ever assigned for research and initiatives on improving children's diet and school-based nutrition education.¹²⁴

Articles included in the Special Act which pertain to schools include:

- Designation of Children's Food Safety Zone (Article 5) Children's Food Safety Zones, also called Green Food Zones, designated within 200 meters around the school, where nutrient-poor foods and beverages cannot be sold, as identified by Article 8 below.¹²⁵
- Prohibition of High Calorie and Nutrient Poor Value Foods for Sale (Article 8)

 KFDA establishes the standards for high calorie and nutrient poor value foods and may limit or prohibit the sale of these foods in schools and Green Food Zones.^{126, 127} See Appendix-South Korea 2 for the scope of foods covered by the Special Act and the nutritional standards for meals and snacks set by the KFDA.
- Limitation or prohibition of the advertisement of high calorie, nutrient poor foods; the requirement for nutrition labelling, color-coding of nutritional values (Traffic Light Labeling); and quality certification standards for children's foods which are safe and nutritionally balanced.¹²⁸

The 2009 *Dietary Life Education Support Act* gave the Ministry for Food, Agriculture, Forestry and Fisheries the responsibility for creating a five-year plan for local governments to:

¹²¹ See Table 19 in Appendix E for a comparison of the amendments before and after 2006.

¹²² Lee, Y., Kim, O., Lee, U., & Kwon, S. (2017). Evaluation of educational school meal programs in Gyeonggi province, South Korea. Journal of Nutrition and Health. The Korean Nutrition Society. https://doi.org/10.4163/jnh.2017.50.1.111

¹²³ Special Act on Safety Control of Children's Dietary Life. South Korean Law (2008). https://www.mfds.go.kr/eng/brd/m_15/down.do?brd_id=eng0001&seq=70002&data_tp=A&file_seq=1 (English translation)

¹²⁴ Yoon, J., Kwon, S., & Shim, J. E. (2012)

¹²⁵ Ting, J. (2020) School Lunches. Retrieved from:

https://storymaps.arcgis.com/stories/0e789380136b4e8a85d3dfde04026412

¹²⁶ Ministry of food and drug safety. (n.d.). Mfds.go.kr. [cited 2023 Jan 28]. Retrieved from: https://www.mfds.go.kr/eng/wpge/m_13/de011004l001.do

¹²⁷ For information on Nutritional Standards for Snacks and Meals related to Special Act on Children's Dietary Life Safety Management and Scope of Children's Preferred Foods, see Choi, S. K. (2016). Implementation processes and impacts of school store policies in South Korea (Order No. 10165164). Available from ProQuest Dissertations & Theses Global. (1831454046). (Doctoral dissertation). From https://scholarcommons.sc.edu/etd/3841

¹²⁸ Ministry of food and drug safety. (n.d.)

...promote improvement in people's dietary living, and drive innovative development of traditional diet culture, agriculture, fisheries, and the food industry, and to contribute to the improvement in the quality of life of the people by prescribing matters necessary for raising national awareness of diet. 129

Policy components outlined in the plan include:

- (1) Construction of infrastructure to support nutrition education.
- (2) Development of an environmentally friendly dietary life.
- (3) Promotion of Korean traditional meal and nutrition education through family, school, and community involvement.
- (4) Extension of experiential learning opportunities. 130

This policy led to programs such as eco-friendly dietary guidelines, increased empowerment for food and nutrition practitioners, and the development of nutrition education standards and resources through collaboration by local governments and non-governmental institutions.

Also during the early 2000s, amidst the concerns of food safety, Sang-gon Kim, the candidate for the Superintendent of Education of the largest province in South Korea (Gyeonggi Province), launched a campaign for a universal no-cost all organic SFP. 131 His campaign built on previous advocacy by women farmers as part of the Korean Women Peasants Association during the 1970s and 80s, who advocated for a socially and economically just SFP which emphasized locally sourced food provided free to all students.

Kim's campaign comprised two platforms: (1) to reduce stigma for students receiving the free meal by extending the meal to all students, and (2) to address concerns of food safety through locally grown food that was also more environmentally friendly. His platform was well received, and he was elected with high public support. However, opposition from the conservative government at the time delayed the implementation of Kim's vision until 2011 when Seoul first adopted a universal free eco-friendly (UFEF) lunch program which was eventually adopted by almost all provinces. The adoption of UFEF also led to the development of social SFP infrastructure, for example Seoul's Agro-Fisheries and Food Cooperation department called *Orbon* which oversees the certification and distribution of eco-friendly foods.

Funding

The program is funded by a cost-sharing agreement through national, district, and local contributions with the Korean Office of Education covering 50% of the cost, the District Office of Education contributing 20%, and the City Office of Education covering 30%. 132 Local offices of education serve as conduits through which

https://elaw.klri.re.kr/eng_service/lawView.do?hseq=49622&lang=ENG (English translation) ¹³⁰ Support for Diet Education Act. South Korean Law. (2018).

¹²⁹ Support for Diet Education Act. South Korean Law. (2018).

https://elaw.klri.re.kr/eng_service/lawView.do?hseg=49622&lang=ENG (English translation) 131 June Jeon. South Korea's School Food Program. The Coalition for Healthy School Meals. March 31, 2023. (2023). (Webinar, unpublished)

¹³² Gaddis, J. E., & Jeon, J. (2020). Sustainability transitions in agri-food systems: insights from South Korea's universal free, eco-friendly school lunch program. Agriculture and Human Values, 37(4), 1055-1071. https://doi.org/10.1007/s10460-020-10137-2

individual schools receive educational funds from the Ministry of Education (MOE), regional, and municipal governments. 133

From 2010 to 2014 the school food program funding sources were as follows:

- The MOE budget accounted for 16–21% of the national budget (93 369 trillion KRW or 94 370 billion CAD) between 2000 and 2018.
- Education subsidies and categorical grants from MOE accounted for 67% to 72% of school budgets.
- 16–21% of school revenues were tax transfers from local governments.
- School development funds (SDFs) are a supplementary resource combined with public funds from education offices in the school accounting system. SDFs are raised from parents' gifts and donations. The school operation council at each school manages the SDF so that budgets can be autonomously drafted and enforced. SDFs can be used to offset additional costs from the SFP. ¹³⁴

Rising public support of the universal free school meal program since 2011 has allowed for increases to school food budgets. This support has improved with the decreasing birthrate, meaning children are becoming even more prized creating more incentive to invest in their health and future. For example, Seoul has tripled the city's school lunch budget in 2021 to allow for a 2022 expansion of the free lunch program to all students in elementary, middle, and high schools including Kindergarten. To accommodate program growth and rising food costs the Seoul Education Office had to expand its budget for free school lunch in July 2022 by 4.6% (9.8 billion won or \$10 million CAD). The 2022 meal cost per student per day was between 3,912 won and 6,791 won (i.e., \$3.96 to \$6.87 CAD), depending on the number of students and classes.

In 2022, Seoul's program included 1,352 schools (825 thousand students) with a total budget for school meal expenses of 752.5 billion won (802 million CAD); the Seoul Office of Education provided 30% of costs which was 218.3 billion won (233 million CAD).¹⁴⁰

¹³³ Baek, D., Choi, Y., & Lee, H. (2019). Universal welfare may be costly: Evidence from school meal programs and student fitness in South Korea. Sustainability, 11(5), 1290. https://doi.org/10.3390/su11051290

Gaddis, J. E., & Jeon, J. (2020). Sustainability transitions in agri-food systems: insights from South Korea's universal free, eco-friendly school lunch program. Agriculture and Human Values, 37(4), 1055–1071. https://doi.org/10.1007/s10460-020-10137-2

¹³⁶ The Coalition for Healthy School Meals. (2023)

¹³⁷ Chung, E. (2021). Free lunches for all grade students in Seoul starting this spring. Korea JoongAng Daily. Retrieved June 19, 2022, from

https://koreajoongangdaily.joins.com/2021/02/15/national/socialAffairs/free-lunches-across-schools-seoul/20210215185000454.html; Yonhap. (2021). Lunch will be free for all Seoul kindergartners from March. The Korea Herald. Retrieved June 19, 2022, from: http://www.koreaherald.com/view.php?ud=20211208000721

¹³⁸ Eun-byel, I. (2022, July 13). Seoul to raise extra budget for free meal program. Retrieved February 8, 2023, from The Korea Herald website:

https://www.koreaherald.com/view.php?ud=20220713000611 li39 lbid.

 $^{^{140}}$ Seoul Office of Education. (2022). Eco-friendly school meal plan. Retrieved from https://opengov.seoul.go.kr/public/25661473 (in Korean)

Food Literacy Education

The promotion of dietary education is broadly outlined in the *Dietary Life Education Support Act* (2009) and covers families, schools, and communities.¹⁴¹ Articles 10 and 12 of the Act outline the promotion of school's dietary education which includes teaching students about food production, food distribution, cooking courses, student diet guidance, and expansion of food education programs in schools.¹⁴² Article 12 specifically requires schools to teach diet education at least twice a year with a focus on:

- Information on nutritional ingredients of foods or food additives frequently ingested by children and juveniles, including children's favorite foods.
- Information about chemical additives used in the procedures for production, manufacturing, processing, etc. of foods and agricultural and fishery products.
- Other matters which the Minister of Agriculture, Food and Rural Affairs deems necessary for the dissemination of proper diet. 143

Article 12 also suggests the State and local governments develop teaching materials for education; support diet education, study, and training of the persons involved in education, including farmers and fishermen, persons engaged in food-related business who participate in diet education in schools, and subsidize the cost to use eco-friendly agricultural in food education in schools.¹⁴⁴

While the Act provides important language and direction, food education is not embedded in the curriculum. When implemented, nutrition education is delivered through optional or club activity periods. Increasingly, however, schools are incorporating experience-based learning through cooking classes, school gardens, farm visits, nutrition education in the classroom, and traditional Korean food culture lessons (e. g., *jangdokdae* - traditional Korean outdoor food storage and Kimjang - kimchi-making for winter). 145

Food education is increasingly seen as an important part of student's development, Hee-yeon Cho, superintendent of education in Seoul stated in 2022 that "It is important for Seoul students to grow as citizens who actively participate in the formation of the food system, not passive consumers who accept the food system as it is. We will support them so that they can grow as citizens of agriculture who can think by connecting consumption with producers." ¹⁴⁶

¹⁴¹ Support for Diet Education Act. South Korean Law. (2018).

¹⁴² Policy analysis on implementing food agriculture education and promoting domestic agricultural products consumption in South Korea. (2018). FFTC Agricultural Policy Platform (FFTC-AP). Retrieved from: https://ap.fftc.org.tw/article/1333

Support for Diet Education Act. South Korean Law. (2018).Ibid.

¹⁴⁵ WOO, T. 2015. The School Meal System and School-Based Nutrition Education in Korea. Journal of Nutritional Science and Vitaminology, 2015, Vol. 61, Supplement, p. S23-S24. From: https://doi.org/10.3177/jnsv.61.S23

¹⁴⁶ Buxton, A. (2022, March 13). Seoul Office of Education pledges to teach food ecology in response to worsening climate crisis. Retrieved February 8, 2023, from Green Queen website: https://www.greenqueen.com.hk/seoul-climate-crisis-education/

Nutrition

School nutrition standards were introduced in the 1981 *School Meals Act*, and were revised in 1993, 1997, and 2007. They include "reference values for energy; percentage of energy from carbohydrate, protein, and fat; protein; vitamin A; thiamin; riboflavin; vitamin C; calcium; and iron" by age and gender. The standards are based on 2005 Dietary Reference Intakes for Koreans (KDRIs), which were updated in 2010 and 2015. School standards have not been updated to reflect the changes in the school nutrition standards. The mandatory nutritional standards apply to school lunch programs, but do not apply to breakfast or dinner programs.¹⁴⁷

In addition to nutrition standards, the following is considered in the process of menu planning of school lunches:

- Succession and development of traditional dietary culture.
- Inclusion of a variety of foods such as grains and starches, vegetables and fruits, fish, meat and beans, milk, and dairy products.
- Salt, oil and fats, simple sugar or food additives should not be overused.
- Natural and seasonal foods should be used as much as possible.
- A variety of cooking methods should be utilized.
- The food is grown locally and almost never frozen. 148

In 2007 the Nutrition Teacher System went into effect, giving teachers the responsibility of providing nutrition education, nutrition counseling, and managing school foodservice operations. In 2014, the Ministry of Education (MOE) established a regulation which required nutrition teachers, not school dietitians, to deliver nutrition education at least twice a month. The new nutrition teacher qualifications required having both a dietetic and teaching license, both of which are now available through accredited graduate dietetic programs. As of 2015, 50% of school dietitians had been replaced by nutrition teachers.

Implementation

Food service delivery for South Korea's UFEF program began in 2011. By 2016, 95.6% of elementary schools, 78.3% of middle schools, and 14.3% of high schools adopted the universal free lunch which provides students with a meal consisting of rice, soup, kimchi, vegetables, and fish or meat. Along with this, the distribution of eco-friendly agriculture products for use in school meals rose from 16.2% in 2014 to 31.5% in 2015. By participating in the UFEF, parents save approximately \$940 in

¹⁴⁷ Kim M, Kim D, Yoon J. (2019). Selection of target nutrients for the nutritional standards of school lunches in Korea. Nutrients, 11(11):2578. http://dx.doi.org/10.3390/nu11112578

¹⁴⁸ Huang, Y. (2013). Introduction of school lunch program in Japan and Korea. Retrieved from: https://unicefeaproinasactoolkit.files.wordpress.com/2017/09/school-lunch-programme-in-japan-and-korea.pdf

¹⁴⁹ Lee, Y., Kim, O., Lee, U., & Kwon, S. (2017). Evaluation of educational school meal programs in Gyeonggi province, South Korea. Journal of Nutrition and Health. The Korean Nutrition Society. https://doi.org/10.4163/inh.2017.50.1.111

 ¹⁵⁰ Yu, B., Lim, H., & Kelly, S. (2019). Does receiving a school free lunch lead to a stigma effect?
 Evidence from a longitudinal analysis in South Korea. Social Psychology of Education: An International Journal, 22(2), 291–319. https://doi.org/10.1007/s11218-019-09485-7
 151 Yoon, B. S., & Song, W. (2021). Addressing the Agri-Food Crisis in Korea. Communicating Food in Korea, 47. (pg. 55)

school meal fees per year. ¹⁵² In 2019, 100% of schools were serving school meals (11, 818 elementary, middle, high, and special needs schools) with 99.9% of the 5,612,000 students attending these schools participating in the program. ¹⁵³ See **Table 20** in Appendix E for more information on the school lunch process and menus.

Food preparation: Under the guidance of the MOE and Office of Education, school principals have the flexibility to select whether food service management is selfoperated or contracted. 154 Self-operation involves school employees (e.g., nutrition education teachers and cooks) managing all food preparation procedures including serving and cleaning. Contracted food service can be partial or fully contracted out. Partial contracts have nutrition education teachers involved in food ingredient purchasing and storage management whereas the contractor is responsible for cooking, serving, and cleaning. A full food service contract indicates the school is equipped with food service facilities and the contractor is expected to directly manage all aspects of food services. In a few schools the contractor functions as a vendor only and provides prepackaged or pre-plated meals. Data collected in 2013 demonstrated 97.7% of elementary and middle schools were self-catered with only 2.3% contracting their meal service with management companies. 155 In 47.9% of self-operated schools, schools employed nutrition teachers to manage foodservice operations as well as teaching and counseling on nutrition. The distribution of selfoperated versus contract differs based on school type. By 2015 the Seoul Metropolitan Office of Education reported 100% of elementary and middle schools were self-operated compared to the 53.5% for high schools, with the remaining 46.5% being self-operated. 156

The shift to the UFEF program led to the creation of a new school meal public procurement system involving central School Meal Support Centres, also called Ecofriendly Distribution Centres, which provide a supply of safe and stable eco-friendly foodservice materials to schools in that region. ¹⁵⁷ As a result, local governments experienced increased convenience and purchasing efficiency with a higher satisfaction of the food ingredient quality. ¹⁵⁸ Seoul, for example, has three distribution centers with a capacity to supply 600 to 700 schools with 90 tons of food

¹⁵² Kim, Y. (2021) The Effects of Universal Free Lunch Provision on Student Achievement: Evidence from South Korea. Retrieved from

https://www.economics.uci.edu/files/docs/2021/gradjobmarket/kim_yoonjung.pdf ¹⁵³ lbid.

¹⁵⁴ Korean Institute of Public Administration. (2017). Contracting Out or Contracting Back In: School Food Service Contracts in South Korea. Retrieved from:

https://www.kipa.re.kr/synap/skin/doc.html?fn=1864_3&rs=/convert/result/board/311/

¹⁵⁵ Woo, Taejung. The School Meal System and School-Based Nutrition Education in Korea, Journal of Nutritional Science and Vitaminology, 2015, 61 巻, Supplement 号, p. S23-S24, 公開日 2015/11/24, Online ISSN 1881-7742. Retrieved from:

https://doi.org/10.3177/jnsv.61.S23; https://www.jstage.jst.go.jp/article/jnsv/61/Supplement/61_S23/_a rticle/-char/ja

¹⁵⁶Yoon, Jihyun et al. "Present status and issues of school nutrition programs in Korea." Asia Pacific journal of clinical nutrition vol. 21,1 (2012): 128-33.

¹⁵⁷ Eun-byel, I. (2022, July 13). Seoul to raise extra budget for free meal program. Retrieved February 8, 2023, from The Korea Herald website:

https://www.koreaherald.com/view.php?ud=20220713000611

¹⁵⁸ Lee, J.-H., Kim, B., & Joo, N. (2020). Efficiency of Purchase Management as Determined by the Adoption of School Meal Service Support Center in Gyeonggi Area. Journal of the Korean Dietetic Association, 26 (3), 196–207. https://doi.org/10.14373/JKDA.2020.26.3.196

per day. ¹⁵⁹ A sample meal, which is served in an environmentally friendly manner, includes oatmeal and multigrain rice, a bowl of seolleongtang (ox bone soup), steamed dumplings, and buckwheat noodles with vegetables, jeobokbakji (radish kimchi) and hallabong (Korean mandarin orange). ¹⁶⁰ See **Figure 7** in Appendix E for more details.

Oversight

The Ministry of Education (MOE) sets nation-wide policies, while the Office of Education in each metropolitan area and province implement and administer school meal and nutrition programs. The superintendent of the Offices of Education of the Seoul Special Metropolitan City, the six Metropolitan Cities, and the nine Do (i.e., provinces) are required to create and execute yearly plans for self-catered school meal service. To support the transition to self-operated food services, Article 7 outlines the hiring of cooks under Article 53 (1) of the *Food Sanitation Act* and nutrition teachers under Article 21 (2) of the *Elementary and Secondary Education Act* which also outlined school nutrition services. ¹⁶¹

The National Agricultural Products Quality Management (NAQS) oversees the UFEF lunch program eco-friendly certification. They assess factors such as location of production, antibiotic usage, hazard analysis and critical control points (HACCP), and pesticide residue. While there is no policy establishing requirements for the use of local food, assistant professor Jeon estimates approximately 60% of SFP food is locally sourced, with variation from province to province depending on access and types of food available. ¹⁶²

With the 2006 School Lunch Act amendments, principals were given more responsibility, including the management and operation of school meal services, with elementary and middle schools required to have self-operated food services. ¹⁶³ The principal's responsibilities also include proper guidance of eating habits for students (Article 13) and conducting a nutrition consultation (Article 14). ¹⁶⁴

Challenges and Benefits

While other areas for Korean school food policy are strong, the food education policy remains a gap due to a seeming reluctance to embed school food education into the curriculum and into the responsibilities of the school food nutrition teacher or school

¹⁵⁹ Seoul Office of Education. (2022)

¹⁶⁰ Lee, J.-H., Kim, B., & Joo, N. (2020). Efficiency of Purchase Management as Determined by the Adoption of School Meal Service Support Center in Gyeonggi Area. Journal of the Korean Dietetic Association, 26 (3), 196–207. https://doi.org/10.14373/JKDA.2020.26.3.196

¹⁶¹ School Meals Act, South Korean Law (1981).

https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=53071&type=sogan&key=2 (English translation); Snyder, N., Hernandez, E., Maxwell, L., Hester, S., & Kapucu, N. (2016). Metropolitan governance reforms: The case of Seoul metropolitan government. European Journal of Economic and Political Studies, 1(1), 107-129.

¹⁶² June Jeon. South Korea's School Food Program. The Coalition for Healthy School Meals. March 31, 2023, (2023), (Webinar, unpublished)

¹⁶³ Korean Institute of Public Administration. (2017). Contracting Out or Contracting Back In: School Food Service Contracts in South Korea. Retrieved from:

https://www.kipa.re.kr/synap/skin/doc.html?fn=1864_3&rs=/convert/result/board/311/164 lbid.

dietitian. ¹⁶⁵ Budget constraints have limited schools' ability to hire nutrition teachers, resorting to filling the roles with part time dietitians instead. ¹⁶⁶ Even with a nutrition teacher's placement, the lack of school-based nutrition education standards mean implementation is up to the discretion of principals and nutrition teachers. The wage difference between school nutrition teachers and school dietitians is a source of tension as the latter feel they are not adequately compensated for their workload The result is poor implementation of food education including lack of experiential opportunities owing to lack of buy in from school principals and teachers and subsequently low levels of support in funding and human resources towards food literacy. ¹⁶⁷

More policies to support the placement of nutrition teachers and to enforce the educational role of school meal programs has been suggested to address this issue. Specifically, Lee and Hong (2015) outlined the following recommendations:

- (1) Create a systematic and automated workflow to reduce the workload burden nutrition teachers and school dietitians experience, particularly related to managing the food service components (i.e., accounting, and administrative tasks).
- (2) Develop a systematic curriculum for nutrition education from elementary to high school, including key nutrition issues and knowledge (e.g., minimum hours of classroom instruction).
- (3) Increase the perceived level of importance of nutrition education from school administrators and teachers.
- (4) Provide continued education to support nutrition teachers in building their capacity for nutrition counselling and nutrition education skills.
- (5) Narrow the wage gap between school nutrition teachers and school dietitians. 168

Rising food prices have created challenges for the Seoul Office of Education when setting budgets. There are no measures in place to fill the gap when funding is insufficient to fund the free school meals, which has created concerns for food quality and directing school development funds away from other areas (e.g., physical education and student fitness). 169

Precarious work of food service workers: Similar to school dietitians, the majority of kitchen and cafeteria staff are part-time workers with only 2,100 working full-time among the 74,079 employed in 2018. In 2019, non-permanent cafeteria workers held

¹⁶⁸ Ibid.

¹⁶⁵ Lee, J., & Hong, Y. (2015). Identifying barriers to the implementation of nutrition education in South Korea. Asia Pacific Journal of Clinical Nutrition, 24(3), 533–539. doi:10.6133/apjcn.2015.24.3.21 loid.

¹⁶⁷ Ibid.

¹⁶⁹ Baek, D., Choi, Y., & Lee, H. (2019). Universal welfare may be costly: Evidence from school meal programs and student fitness in South Korea. Sustainability, 11(5), 1290. https://doi.org/10.3390/su11051290; Eun-byel, I. (2022, July 13). Seoul to raise extra budget for free meal program. Retrieved February 8, 2023, from The Korea Herald website: https://www.koreaherald.com/view.php?ud=20220713000611; Gaddis, J. E., & Jeon, J. (2020). Sustainability transitions in agri-food systems: insights from South Korea's universal free, eco-friendly school lunch program. Agriculture and Human Values, 37(4), 1055–1071. https://doi.org/10.1007/s10460-020-10137-2

a nationwide protest which paused school meal service for several days in 4,601 schools ¹⁷⁰

Food Safety: Amendments to the *School Meals Act* helped to overcome the threat of contamination from contract caterers by giving state and local governments the responsibility of providing administrative and financial support and outlined standards for nutrition management, sanitation and safety control, and the quality of school meal services (see **Table 19** in <u>Appendix E</u> for a comparison of the amendments before and after 2006.¹⁷¹ Traditional Korean food culture was also embedded in meals. In addition, 2019 participation rates in school meals were excellent as 100% of schools were serving school meals with 99.9% of students attending these schools participating in programs, as mentioned. ¹⁷²

¹⁷⁰ Ibid.

¹⁷¹ See Table 19 in Appendix E for a comparison of the amendments before and after 2006.

¹⁷² Kim, Y. (2021) The Effects of Universal Free Lunch Provision on Student Achievement: Evidence from South Korea. Retrieved from

https://www.economics.uci.edu/files/docs/2021/gradjobmarket/kim_yoonjung.pdf

Brazil's School Food Programs

Overview and Policy

Brazil's National School Nourishment Program, the *Programa Nacional de Alimentação Escolar* (PNAE) was established in 1955. It is Brazil's longest-standing public policy initiative for promoting food and nutrition security and is considered one of the world's most extensive school meal programs. Its purpose is to supplement the daily nutritional needs of students to ensure their food and nutritional security, to improve their performance in school by providing healthy meals, and to contribute to the formation of long-term healthy eating habits. The program also strengthens the local economy by working with local family farms as mandated SFP suppliers.

The program's beneficiaries are students from public schools, philanthropic schools, and some community entities.¹⁷⁵ The PNAE supports families by providing meals for over 44 million public-school students at no cost to parents.¹⁷⁶

Government leadership, strong legislation, civil participation, and intersectoral decision-making and execution are crucial to the success of Brazil's SFP. The national system combines an integrated food and nutritional security agenda through local food production, procurement and use, school meals, and nutritional education. They are linked through highly regulated and integrated programs and policies which help to improve access to healthier foods. ¹⁷⁷ A governing 'intersectoral collaborative' body manages the PNAE due to the integration of linked federal, state, and local laws, policies, and programs. Significant policy changes were made in 2009 as the PNAE is an evolving program. ¹⁷⁸

Funding

The PNAE is managed by the National Fund for the Development of Education (FNDE), which transfers financial resources to the states, the Federal District, and municipalities. In addition to the resources from the FNDE, other federal entities must participate by funding maintenance of school structures, human resources, and

¹⁷³ Kitaoka, Kaori. The National School Meal Program in Brazil: A Literature Review. Department of Welfare and Nutrition, Faculty of Health Welfare, Kansai University of Welfare Sciences. Jpn. J. Nutr. Diet., Vol.76 Supplement 1, 2018. S115-S125. doi:10.5264/eiyogakuzashi.76.S115

¹⁷⁴ Rocha, Naruna Pereira, Mariana De Santis Filgueiras, Fernanda Martins de Albuquerque, Luana Cupertino Milagres, Ana Paula Pereira Castro, Mariane Alves Silva, Glauce Dias da Costa, Silvia Eloiza Priore, and Juliana Farias de Novaes. Analysis of the National School Feeding Program in the Municipality of Viçosa, State of Minas Gerais. Revista De Saúde Pública 52 (February):16, 2018. From:. https://doi.org/10.11606/S1518-8787.2018052007090

¹⁷⁵Sidaner, E., Balaban, D., Burlandy, L. The Brazilian school feeding programme: An example of an integrated programme in support of food and nutrition security, Public Health Nutr., 16, 2013. 989–994. From: https://pubmed.ncbi.nlm.nih.gov/23218237/; Brazil's National School Nourishment Program, the Programa Nacional de Alimentação Escolar (PNAE). From: https://www.gov.br/fnde/pt-br/acesso-a-informacao/acoes-e-programas/programas/pnae

¹⁷⁶ Gov.Br. Fundo Nacional de Desenvolvimento da Educação. n.d. From: https://www.gov.br/fnde/pt-br/acesso-a-informacao/acoes-e-programas/programas/pnae
¹⁷⁷ Ibid

¹⁷⁸ Brazil's National School Nourishment Program, the Programa Nacional de Alimentação Escolar (PNAE). From: https://www.gov.br/fnde/pt-br/acesso-a-informacao/acoes-e-programas/programas/pnae

initiatives on food and nutrition education (EAN). 179 Their cost-shared model combines federal funding for meals with state and local funding for infrastructure and supplemental initiatives. At the outset of PNAE, many schools did not have sufficient infrastructure or funding, so states and municipalities contributed funds for kitchen and equipment infrastructure as well as personnel to prepare meals to complement the amount the federal government transfers for food purchases. 180

The federal government transfers funds to states, municipalities, and federal schools in 10 monthly installments, from February to November, covering 200 school days with costs based on student enrollment. 181 With the aim of providing balanced and healthy meals to students, federal funding per child/day cost for food varies from \$0.32 Brazilian Real (BRL/R\$) for youth to R\$1.07 for day-care centres and R\$0.64 (R\$1 = CDN\$0.23) for Indigenous and Quilombola school children. 182

Although the federal government transfers money to each municipality, communities add extra funds according to need. Greater group vulnerability, remote locations and difficult to reach areas, and unique food culture contribute to the increased cost for some Indigenous and Quilombola residents.

Food Literacy Education

Food literacy is not specifically mandated, but according to a revision in PNAE legislation in 2009, they recommend...the inclusion of food and nutrition education in the teaching and learning process that moves through the school curriculum, addressing themes of nutrition and development of healthy lifestyle practices from the perspective of food security and nutrition. 183

Nutrition

Nutritionists oversee program delivery in cooperation with state and local government, and each school unit (called a UEx in Brazil) is required to staff this role. 184 Nutritionists have a strategic position and are essential to the delivery of meal programs, providing advice on nutrition for meals, and assisting individuals and legal entities in planning, implementing, and evaluating programs and projects. They also

¹⁷⁹ Ibid.

¹⁸⁰ Policy Brief #1. Financing of the Brazilian School Feeding Programme. n.d. From: https://centrodeexcelencia.org.br/wp-content/uploads/2019/07/PolicyBrief1EN-1.pdf

¹⁸¹ Brazil's National School Nourishment Program, the Programa Nacional de Alimentação Escolar (PNAE). From: https://www.gov.br/fnde/pt-br/acesso-a-informacao/acoes-eprogramas/programas/pnae

¹⁸² The Coalition for Healthy School Meals. 2021. Brazil's National School Food Program: PNAE (Webinar).

¹⁸³ Food and Agriculture Organization of the United Nations. FAOLEX Database. n.d. From: http://www.fao.org/faolex/results/details/en/c/LEX-FAOC132080/

Also, see: Sidaner E, Balaban D, Burlandy L. 2013. The Brazilian school feeding programme: an example of an integrated programme in support of food and nutrition security. Public Health Nutr. 2013 June; 16(6):989-94. DOI: 10.1017/S1368980012005101.

¹⁸⁴ Executing units are agencies (municipalities and State Secretariats of Education) who are responsible for receiving and supplementing the resources of the federal government for the implementation of the programme. See: Sidaner, E., Balaban, D., Burlandy, L. The Brazilian school feeding programme: An example of an integrated programme in support of food and nutrition security, Public Health Nutr., 16, 2013. 989–994. From: https://pubmed.ncbi.nlm.nih.gov/23218237/

offer advice and solutions for situations related to their specialty. ¹⁸⁵ The PNAE has approximately 6,000 Dietitians and 80,000 School Meal Counsellors, an investment of 4 billion Brazilian Real. ¹⁸⁶

A strong legal framework includes legislative amendments such as the LEGISLATIVE DECREE No. 6, of March 20, 2020, Amendments to Law No. 11,947 which describes the responsibility of nutritionists: ¹⁸⁷

Art. 11. The technical responsibility for school feeding in the States, the Federal District, municipalities, and federal schools will be left to the responsible nutritionist, who must comply with the guidelines provided for in this Law and in the relevant legislation, in which it falls, within its specific attributions.

Art. 12. School meals should be prepared by the nutritionist responsible for using basic foodstuffs, respecting nutritional references, eating habits, culture, and the food tradition of the locality, based on the sustainability and agricultural diversification of the region, healthy and adequate eating. 12.1. For this Law, basic foodstuffs are indispensable to promoting a healthy diet in compliance with the applicable regulations. (Renumbered from the sole paragraph Included by Law No. 12,982, 2014). 12.2. According to regulations, a special menu for students who require individualized nutritional care due to state or specific health conditions will be prepared based on medical and nutritional recommendations, nutritional assessment, and differentiated nutritional demands. (Included in Law No. 12,982, 2014).

Art. 13. Within the scope of the PNAE, the acquisition of foodstuffs must comply with the menu planned by the nutritionist. It will be carried out, whenever possible, in the same federative area in which the schools are located, observing the guidelines that article 2 of this Law is treated.

Implementation

Food service delivery: The PNAE serves 100% of public-school students and includes early childhood, elementary, secondary, and adult literacy students as well as students from Indigenous and Quilombola communities.

The School Feeding Council or CAE is a local collegiate body of a supervisory, permanent, deliberative, and advisory nature that is responsible for monitoring the use of resources passed on by the National School Feeding Program (PNAE), ensuring the quality of school feeding at all stages of the program's implementation

Guide to Support Technical Activities of PNAE Nutritionists (2018). National Fund for the Development of Education. Ministry of Education. From: https://centrodeexcelencia.org.br/wp-content/uploads/2019/07/Guide-to-Support-Technical-Activities-of-PNAE-Nutritionists.pdf
 The technical responsibility for school feeding in the States, the Federal District, municipalities, and federal schools is the responsibility of nutritionists, who must comply with the guidelines provided for by Law and in the relevant legislation. From:

https://www.fnde.gov.br/index.php/programas/pnae/pnae-area-gestores/pnae-manuais-cartilhas/item/12094-caderno-de-legisla%C3%A7%C3%A3o-2021. Also see the Guide to Support Technical Activities of PNAE Nutritionists (2018). National Fund for the Development of Education. Ministry of Education. From: https://centrodeexcelencia.org.br/wp-content/uploads/2019/07/Guide-to-Support-Technical-Activities-of-PNAE-Nutritionists.pdf

¹⁸⁷ Translated from: LEGISLATIVE DECREE No. 6, OF MARCH 20, 2020. Amendments to Law No. 11,947. Art. 14.

process.¹⁸⁸ A typical school lunch may include rice, beans, stewed beef, corn, salads and fresh strawberries.¹⁸⁹

Existing legislation enables adjustments for students with special dietary needs such as special menus designed for students with specific health conditions. ¹⁹⁰ Special diet eligibility requires documentation from a doctor.

Food procurement: Since 2009, the PNAE has institutionalized linkages with family farming by requiring that at least 30% of federal SFP funding is used to purchase products directly from local family farms (Law No. 11.947/2009) with specific guidelines on the distance between farms and schools and well-established procedures to ensure compliance with local food procurement requirements. ¹⁹¹

Brazil's SFP procurement from family farming is a far-reaching initiative in terms of concept, execution, and results. Education, agriculture, planning, procurement, and civil society sectors collaborate at national, state, and local levels to ensure the program's success. Integrating family farming and nutrition into a legal framework develops a link between local farmers and diet quality. ¹⁹² This is a central component of Brazil's SFP, part of an essential food and nutrition security strategy that centres the human right to adequate food and promotes long-term sustainable development. ¹⁹³

The 30% local procurement mandate is tracked through an online reporting system that every municipality must use to self-report information about the number of participating children. The system includes details of purchases from family farmers, and information about the family farms (which are defined by size and income). The

188 IDIO

¹⁸⁸ Ibid.

¹⁸⁹ Kimmett, C. 2016. The Tyee. From: https://thetyee.ca/News/2016/05/11/Brazil-School-Meal-Program/

¹⁹⁰ Caderno de Legislação 2023. From: Cadernodelegislao PNAE 2023.pdf (www.gov.br)

¹⁹¹ According to a translation of the LEGISLATIVE DECREE No. 6, OF MARCH 20, 2020. Amendments to Law No. 11,947, the definition of a family farmer and rural family entrepreneur are: the one who practices activities in the rural environment, meeting, simultaneously, the following requirements: I – do not have, in any way, an area greater than 4 (four) fiscal modules; II – predominantly use the family's own workforce in the economic activities of your establishment or enterprise; III – have family income predominantly originated from economic activities linked to the establishment or enterprise itself; IV - direct your establishment or business with your family. See: Brasil, and Brasil. "Lei nº 11.947, de 16 de junho de 2009. Dispõe sobre o atendimento da alimentação escolar e do Programa Dinheiro Direto na Escola aos alunos da educação básica." Diário Oficial da União (2009): 24-24.;

https://www.scielo.br/j/rn/a/n4jPvSyNzwJ4qBnP7NP4yVJ/; Cadernodelegislao_PNAE_2023.pdf (www.gov.br); Rebrae – Rede Brasileira de Alimentação e Nutrição Escolar; Of the total financial resources passed on by the FNDE under the PNAE, at least 30% (thirty percent) should be used in the acquisition of foodstuffs directly from family farming and the family entrepreneur rural communities or their organizations, prioritizing the settlements of agrarian reform, traditional indigenous communities and Quilombola communities. Translated from: LEGISLATIVE DECREE No. 6, OF MARCH 20, 2020. Amendments to Law No. 11,947. Art. 14. From: Caderno de Legislação do Programa Nacional de Alimentação Escolar passa por atualizações — Ministério da Educação (www.gov.br)

Hawkes et. al., 2016. How to engage across sectors: lessons from agriculture and nutrition in the Brazilian School Feeding Program. From:

https://www.scielo.br/j/rsp/a/7qRs7bdtkSNhYbMgSgbrSTv/?lang=en

¹⁹³ Schwartzman, Flavia, Mora, Claudia Andrea Rodriguez, Bogus, Claudia Maria, Villar, Betzabeth Slater.. Background and elements of the linkage between the Brazilian school feeding program and family farming. Cadernos de saúde pública, 2017. From: https://core.ac.uk/download/pdf/192698885.pdf

size of farms vary depending on the region, but to participate the farmer's primary source of income must come from the farm. In addition, legislation amendments from 2020 limited the purchase of processed and ultra-processed food by SFPs to a maximum of 20% of expenditures, while 75% of purchases must be spent on minimally processed foods. 194

Food preparation: Many school kitchens are fully equipped, and meals are prepared fresh-from-scratch for immediate consumption (**Figure 8** in Appendix F illustrates a typical school lunch from Presidente Costa E Silva high school in Irati, a town in Paraná). ¹⁹⁵

Oversight

As mentioned, program oversight is partially ensured by the Conselhos de Alimentação Escolar or School Meals Councils, responsible for assessing the use of resources passed on by the National School Feeding Program and ensuring the quality of school feeding at all stages of the program's implementation process. ¹⁹⁶ The Councils are responsible to the PNAE for monitoring the purchase of products, the quality of the food offered to students, the hygienic and sanitary conditions in which food is stored, prepared, and served, the distribution and the consumption, financial execution, and the task of evaluating the rendering of accounts.

Challenges and Benefits

Brazil's PNAE has many strengths including strong policies, sustainable funding, well supported and organized implementation, and robust and consistent oversight, making it one of the leading school food programs in the world.

One of the major challenges of the PNAE is the lack of guidelines and funding to incorporate food literacy education, which would considerably strengthen program outcomes if more attention was given. This could be accomplished with few additional resources in many cases. For example, students could do short 'apprenticeships' in their school kitchen and learn about nutrition, menu planning, diet, cooking, safety, and sanitation.

Another shortcoming to be addressed is to increase the level of sustainable and organic food procurement in SFPs, which would benefit the environment, producers, and students.

¹⁹⁴ Caderno de Legislação-PNAE/2021. n.d. From: https://www.fnde.gov.br/index.php/programas/pnae/pnae-area-gestores/pnae-manuais-cartilhas/item/12094-caderno-de-legisla%C3%A7%C3%A3o-2021

¹⁹⁵ The Coalition for Healthy School Meals. 2021. Brazil's National School Food Program: PNAE (Webinar). From: https://www.youtube.com/watch?v=bGKkhttypxY

¹⁹⁶ Ceccareli, Marcelo & Assis, Ana Elisa & Main, Gill. (2023). Law 11.947/2009. The National School Food Program Revisited. Direito Público. 19. 10.11117/rdp.v19i104.6960. From: Download citation of Law 11.947/2009. The National School Food Program Revisited (researchgate.net)

Scotland's School Food Programs

Overview and Policy

Scotland's school food program is part of the country's national strategy to combat poverty offering free school meals to reduce the cost of living for families. ¹⁹⁷ Free school lunches are provided to all children in primary school (Gr. 1 to 5), universally, regardless of their household's income. Older children can access free school meals based on parents' income and social security status. In 2022, around 76.8% of primary school pupils registered for free school meals. ¹⁹⁸

Legislation for a national school food program was part of *The Education (School Meals Scotland) Bill*, passed in 2003. 199 It gave powers to Scottish Ministers to prescribe circumstances in which education authorities must ensure that pupils receive meals, milk, or other refreshments for free. Support for delivering healthy, fresh, sustainably produced local foods is provided by the Scottish Government and partner organizations, such as the Food for Life Scotland, Scotland Excel, Scottish Local Authorities, Scotland Food and Drink, and the Convention of Scottish Local Authorities, who also worked together to make school meal delivery possible during the pandemic. 200 Scotland has some of the world's strongest national policies for nutrition in school food and beverages, offering clear guidelines and standards.

Funding

The Scottish government allocates funding directly to Scotland's 32 local councils each responsible for providing food service infrastructure, catering services, procurement processes, and food education to 2,500 schools across the country. ²⁰¹ The Scottish investment is supplemented by the United Kingdom, who sends funding to Scotland which is then distributed to local authorities. The funding is part of a general grant allocation from the Scottish Government to local authorities to pay for many things including education and school costs, school meals, road, bridge repairs, and more. ²⁰² It is up to local authorities to decide how they distribute funds,

¹⁹⁷ Hungry for Success. 2002. A Whole School Approach to School Meals in Scotland. From: https://www.fabresearch.org/uploads/itemUploads/6987/hfs.pdf; The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2008. Scottish Government. From: https://www.legislation.gov.uk/sdsi/2008/9780110816456/contents; Recipe For Success Scotland's national food and drink policy. 2009. Scottish Government. From:

https://www.gov.scot/publications/recipe-success-scotlands-national-food-drink-policy/; ¹⁹⁸ Scottish Government. 2022. "Free school meals anticipated uptake and funding: FOI release".

From: https://www.gov.scot/publications/foi-202200277797/

199 The Education (School Meals) (Scotland) Bill. 2003. From:

https://archive2021.parliament.scot/parliamentarybusiness/Bills/25277.aspx

²⁰⁰ Better Eating, Better Learning: a new context for school food. 2014. Agriculture and Rural Economy Directorate. Scottish Government. From: https://www.gov.scot/publications/better-eating-better-learning-new-context-school-food/; Soil Association Scotland, n.d. From: https://www.soilassociation.org/our-work-in-scotland/food-for-life-scotland/what-is-food-for-life-

https://www.soilassociation.org/our-work-in-scotland/food-for-life-scotland/what-is-food-for-life-scotland/

²⁰¹ The Coalition for Healthy School Meals. 2021. Scotland's School Food Program (Webinar). From: https://www.youtube.com/watch?v=jQhtU0bUddg

²⁰² Education Secretary Shirley-Anne Somerville said: "Free school meals are a vital support to thousands of children and young people across the country - ensuring that children have access to a

resulting in different spending on school meals depending on how much budget they allocate. The local authority must subsidize any funding shortfall.

In 2021, the Scottish Government committed to extending universal school meal provisions to all children in primary schools, from Grades (Gr). 1-4 to Gr. 1-7. Grade 5 was added in January of 2022 and Gr. 6 & 7 promised for summer 2022, however as of 2024 the program has still not been implemented in Gr. 6-7. Students above Gr. 7 up to the age of 18 who qualify based on the parents' eligibility to receive benefits and social security can also receive free school meals. Pre-pandemic, in total, 75% of children and youth were entitled to free school meals before the pandemic, including students in Gr. 1-5 and Gr. 7-12 students covered by social assistance programs. ²⁰⁴

Other students who are not eligible for free school meals can purchase them at a price determined by each local authority. The purchases are made in a way that protects the identity of free and reduced-price school meal entitled pupils.

Food Literacy Education

Scotland views food literacy as a critical component of improving student food and their health and well-being. Curriculum includes teaching about food, nutrition, cooking, agriculture, physical activity, and the environment. Initiatives include:

- Funding Education Scotland supports effective teaching about food as part of the school curriculum and its Food for Thought Education Fund supports food literacy education projects such as developing school gardens.²⁰⁵
- The Keep Scotland Beautiful charity funds <u>Food and the Environment</u> <u>teaching programmes</u> at Scottish schools participating in the international Eco-Schools programme for food and environment activities.
- <u>Curriculum for Excellence</u> is an initiative providing children and young people
 with the knowledge and skills they need to help them make better lifestyle
 choices. The aim is to get food literacy in schools recognized and understood
 as a substantial financial and ethical investment that supports young people
 into adulthood.
- <u>Better eating, better learning guides</u> offer improvements for school food and food education for school personnel, local authorities, caterers, procurement departments, and parents. ²⁰⁶

free, healthy, and nutritious meal every day they are in school and are ready to engage in learning. " From: https://www.gov.scot/news/free-school-meals-1/

²⁰³ Kenealy, E. 2021. All Pupils to get free school meals by 2022. Daily Record. 11 JUN 2021. From: https://www.dailyrecord.co.uk/news/local-news/pupils-free-school-meals-2022-24296713

²⁰⁴ The Coalition for Healthy School Meals. 2021. Scotland's School Food Program (Webinar). From: https://www.youtube.com/watch?v=jQhtU0bUddg

²⁰⁵ Education Scotland - Food for Thought Education Fund. n.d. From:

https://funding.scot/funds/a0Rb000000GKb6IEAT/education-scotland-food-for-thought-education-fund?page=1

²⁰⁶ What is Curriculum for Excellence? 2021. Education Scotland. From: https://education.gov.scot/education-

scotland/scottish-education-system/policy-for-scottish-education/policy-drivers/cfe-building-from-the-statement-appendix-incl-btc1-5/what-is-curriculum-for-excellence; See also Achieving Excellence and

Nutrition

There is comprehensive national legislation around nutritional requirements, their governance, and local control.²⁰⁷ The Schools (Health Promotion and Nutrition) Scotland Act, provides guidelines for local authorities to promote health in schools, including requiring Scottish Ministers, education authorities, and school managers to ensure that meals served in schools meet the nutritional requirements set by the government. In addition, the quality of meals provided in schools is governed by the Nutritional Requirements for Food and Drink in Schools [Scotland] Regulations, 2020.²⁰⁸

School meals and food policies are often written into local government policies as well. In addition, some local government policies have created climate change plans that reference school meals.

Implementation

There is a formal concordat that sets out the terms of a relationship between the federal and local governments, based on mutual respect and partnership. Governance is shared between the Government of Scotland, who ensures statutory compliance of the SFP at the national level, while local authorities establish their implementation policies (e.g., how to manage children with special diets). ²⁰⁹ Local authorities in Scotland are responsible for the caterers who provide food services in schools, including employing school SFP staff. Some concerns have been raised about remuneration for school food service workers as some may be receiving minimum wage rather than a more *national living wage*.

Sustainable procurement is a local responsibility. 2014 national procurement legislation set a regulation requiring all local authorities to develop a responsible and sustainable procurement strategy, including specific standards for animal welfare. Hence, there is variation among procurement strategies of local authorities, including relevance to school meals and procurement approaches to address climate change. Many local authorities champion fresh, seasonal, local, and sustainable produce, and celebrate provenance and ethical sourcing, others less so. There are potential environmental and economic gains that might lend themselves to more local food purchasing due to procurement strategies.

Excel, a public agency that assists procurement, reported in 2018, that:

Equity. 2020. Scottish Government. Retrieved from: https://www.gov.scot/publications/2021-national-improvement-framework-improvement-plan/documents/

²⁰⁷ See Healthy eating in schools: guidance 2020. 2021. Scottish Government. From: https://www.gov.scot/publications/healthy-eating-schools-guidance-2020/pages/2/

²⁰⁸ Scottish Government. 2021. "Healthy Eating in Schools: Guidance 2020." From: https://www.gov.scot/publications/healthy-eating-schools-guidance-2020/

²⁰⁹ COSLA (n.d.). The 2011 concordat set out the terms of a new relationship between the Scottish Government and local government, based on mutual respect and partnership. It underpins the funding to be provided to local governments. n.d. From: http://www.evoc.org.uk/wordpress/wp-content/media/2011/06/concordat.pdf

²¹⁰ The Coalition for Healthy School Meals. 2021. Scotland's School Food Program (Webinar). From: https://www.youtube.com/watch?v=jQhtU0bUddg

Almost 31% of the money spent by local authorities through their frameworks goes toward food that has been produced or manufactured in Scotland. Over the past three years, the value of this procurement has increased by 48% because of their efforts to create opportunities for Scotlish food companies to bid for contracts.²¹²

Scotland is also bound by EU regulations around procurement, which poses challenges around how much you can specify as local and how to ensure local sourcing. Programs operate under the Scottish Government policy which are aligned with the EU.²¹³

The Soil Association Scotland - Food For Life Scotland (FFLS) is a non-profit organization funded by the Scottish Government to help local authorities source and serve more fresh, healthy, and environmentally sustainable products in their school meals. They work closely with local authorities and suppliers across Scotland as well as with public and private sector caterers, growers and producers, cooks, and communities to transform food culture by serving local, sustainable food.²¹⁴ One-third of primary schools serve FFLS meals. In addition, ASSIST FM is a non-profit association tasked with connecting suppliers and local authorities for procurement. They work with all 32 Local Authorities.²¹⁵

Oversight

The Soil Association's Food for Life Scotland, funded by the Government of Scotland since 2012, provides step-by-step frameworks, for use by local institutions and organizations, for increasing sustainable food procurement by SFPs. They provide annual independent inspections that guarantee food served meets significant standards across three principal areas: championing local producers, sourcing environmentally friendly and ethical food, and making healthy eating easier for everyone. The programs work alongside Scottish nutritional regulations to address healthy, sustainable food's environmental and economic benefits.²¹⁶

Food for Life measures and identifies trends in food sourcing, then maps the route to build relationships between local authorities, local food procurement departments, and local suppliers within Scotland to bring more Scottish local produce on the table.

The <u>Food for Life Served Here Award</u> (FFLSH) recognizes and rewards caterers who take steps to increase their sourcing of local produce. FFLSH also provides staff training, menu planning, data analysis, and sustainable local supply chain alignment without pressuring budgets.

²¹² Smith, Craig. 2018. Call for action over lack of school food being sourced from Scotland. The Courier. From: https://www.thecourier.co.uk/fp/news/local/fife/765266/call-for-action-over-lack-of-school-food-being-sourced-from-scotland/

²¹³ The Coalition for Healthy School Meals. 2021. Scotland's School Food Program (Webinar). From: https://www.youtube.com/watch?v=jQhtU0bUddg

²¹⁴ See National Food Strategy and Food for Life. n.d. From: https://www.foodforlife.org.uk/; Food for Life Scotland. n.d. From: https://www.soilassociation.org/our-work-in-scotland/food-for-life-scotland/ Food for Life Scotland: Transforming Food Culture. n.d. From: https://www.foodforlife.org.uk/about-us/ffl-scotland

²¹⁵ Assist Facilities Management (n.d.). From: https://www.assistfm.com/

²¹⁶ Food for Life Scotland. n.d. Soil Association Scotland. From: https://www.soilassociation.org/our-work-in-scotland/food-for-life-scotland/

By working toward FFLSH awards, local authorities and organizations contribute to 6 of the Scottish Government's National Performance Framework's Outcomes and 11 of the United Nations' Sustainable Development Goals by investing in the local economy, supporting local businesses, sourcing sustainable food, and serving seasonal produce.²¹⁷ Procurement oversight, cost, sustainability, and (local) provenance are considered critical factors for successful programs.

In addition, Scotland assesses progress in the uptake of free school meals (FSM) for children who are entitled to that opportunity to gauge the extent to which these children avail themselves of FSM.²¹⁸ Primary school student participation in school meals was 72.1% in 2024, secondary schools had a 62.7% participation rate.²¹⁹

Challenges and Benefits

Data illustrates that a considerable number of students do not participate in school programs, paid or free, across Scotland, although participation rates increase incrementally year by year. In 2024, the uptake for all school meals (free and paid for) was highest among pupils with universal entitlement to free school meals (P1 to P5, 72.4% and Special schools 78.0%) and lowest among pupils where access to free meals is means-tested (P6 to P7, 43.7% and Secondary schools 42.1%). 220 The attraction of fast-food restaurants are powerful and present challenges to student participation in school meals as students eat outside food rather than that served in the SFP (especially beyond P7). Adding a breakfast cart/club into schools is one idea that has been discussed to increase participation. Providing nutritious free school meals to secondary school students in the third and fourth (S1 to S3); and senior (S4 to S6) levels and for post-secondary students would add continuity and additional benefits for students and the community. 221

As to benefits, making healthy meals universally free for grades 1-5 with 6 and 7, establishing strong nutrition standards, and facilitating local food procurement improves student participation, assists family budgets, educational attainment, student health and well-being, addresses inequality and removes the stigma of means testing for children from low-income families.²²²

²¹⁷ The Coalition for Healthy School Meals. 2021. Scotland's School Food Program (Webinar). From: https://www.youtube.com/watch?v=jQhtU0bUddg
²¹⁸ Ibid.

²¹⁹ Scottish Government, 2024. School healthy living survey: school meal uptake statistics 2024. Statistics. September 17, 2024. From: https://www.gov.scot/publications/school-healthy-living-survey-school-meal-uptake-statistics-2024/pages/section-1-school-meal-uptake/

²²⁰ Ibid.; The school levels in Scotland are: Early level: Pre-school and Primary 1 (P1); First level: Primary 2–4 (P2–P4); Second level: Primary 5–7 (P5–P7); Third/fourth level: Secondary 1–3 (S1–S3); Senior phase: Secondary 4–6 (S4–S6)

²²¹ The school levels in Scotland are: Early level: Pre-school and Primary 1 (P1); First level: Primary 2–4 (P2–P4); Second level: Primary 5–7 (P5–P7); Third/fourth level: Secondary 1–3 (S1–S3); Senior phase: Secondary 4–6 (S4–S6)

²²² Scottish Council for Voluntary Organisations (SCVO). 2024. Free School Meals. From: https://scvo.scot/about/work/campaigns/archive/20-years-delivering-change/free-school-meals#:~:text=The%20universal%20provision%20of%20free,children%20from%20low%20income%2 Ofamilies.

England's School Food Programs

Overview and Policy

Schools in England have been providing food to children since 1906 though the programs and policies involved have changed significantly through the years.²²³ The most recent school food standards (School Food Regulations 2014) came into effect in January 2015. **Table 21** in <u>Appendix G</u> provides a brief overview of the policy developments relevant to school food over the last century.

The government provides several resource documents that offer practical guidance on how to apply their School Food Standards²²⁴ including guidance documents for headteachers and governors on program implementation; menu planning, portion sizes, and allergy guides; and guides for lunch, logistics, and healthy eating.²²⁵ School Food Standards apply to all food and beverages that are provided to students both on and off school premises until 6:00pm. This includes breakfast clubs, lunch, snacks, tuck shops, and after-school clubs. School governors are responsible for compliance with the School Food Standards.²²⁶ There are some exceptions to the School Food Regulations, which do not apply to food provided. Examples are at parties or celebrations to mark religious or cultural occasions or hands-on cooking classes.²²⁷

As of 2024, there are two free school meal schemes in England. The first relates to family income. Eligible students may apply for free school meals throughout their education (see **Figure 9** in <u>Appendix G</u>). The second, the Universal Infant Free School Meal (UIFSM) scheme, is a free school meal program for students in the first three-years of school, typically for ages 4-7. The School Food Regulations (2014) requires that all students in Reception, Year 1, and Year 2²²⁸ in state-funded schools receive a free lunch.²²⁹ Support for the free lunch program from policy makers exists for the first three years of school, however, it has not been extended to additional

²²³ Holland, Fiona. "The History of Free School Meals in the UK and the Changes Ahead." Food Matters Live, January 4, 2022. https://foodmatterslive.com/article/the-history-of-free-school-meals-in-the-uk-and-the-changes-needed/

²²⁴ See http://www.schoolfoodplan.com/wp-

content/uploads/2015/05/School_Food_Standards_140911-V2e-tea-towel.pdf

²²⁵ The resources include School Food Standards Practical Guide; Checklist for Headteachers; School Food: Guidance for Governors; Preparing Tasty and varied menus; Portion Sizes and Food Guides; Allergy Guidance for Schools; Preparing for Food Supply Chain Changes; Checklist for School Lunches; Checklist for School Food other than Lunch; and Creating a Culture and Ethos of Healthy Eating; GOV.UK. "School Food Standards: Resources for Schools." GOV.UK, May 2022. https://www.gov.uk/government/publications/school-food-standards-resources-for-schools; School Food Plan. "Resources - School Food Plan." The Independent School Food Plan, 2016. http://www.schoolfoodplan.com/resources/

²²⁶ Department of Education. "School Food in England." GOV.UK, August 26, 2021. https://www.gov.uk/government/publications/standards-for-school-food-in-england/school-food-in-england

²²⁷ Department of Education. "School Food in England." GOV.UK, August 26, 2021. https://www.gov.uk/government/publications/standards-for-school-food-in-england/school-food-in-england

²²⁸ Reception is equivalent to Pre-Kindergarten in Canada, Year 1 to Kindergarten, and Year 2 to 1st Grade 229 lbid.

years.²³⁰ In response, a range of diverse organisations (civil society, non-profit organisations, academics, and other participants) have unified under the 'School Food Review Working Group' to advocate for school meal reform in England. ²³¹ The Working Group focuses on five interconnected pillars that address the whole school food system:

Table 2Five Pillars of the School Food System that require reform²³²

Pillar	Change Required
Entitlement of School Meals	Increasing the eligibility criteria. A third of school-age children in England (900,000) living in poverty miss out on free school meals. The main causes are a lack of universal provision and restrictive eligibility criteria for the means-tested provision that does exist. ²³³
Procurement and Operations	Improve the procurement, operations, and contract management, to deliver consistently nutritious, sustainable and enjoyable food. ²³⁴
Accountability Mechanisms	Provide accountability and quality assurance, to support quality provision, and ensure that children receive nutritionally balanced food

²³⁰ Bremner, Myles. "England's School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA

²³² Slater, Stephanie. "School Food Matters." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.voutube.com/watch?v=4d8fPd7f7xA

²³³ In England, all children in Reception, Year 1 and Year 2 currently receive a free meal each day (this is referred to as universal infant free school meals or UIFSM). This is more restrictive than in Scotland or Wales, who have committed to rolling out free school meals to all children in primary education. The Mayor of London has also committed to this provision for the next academic year. From Year 3 onwards, provision of free school meals is means-tested, with the threshold to get free school meals for families in receipt of universal credit being a combined household income of £7,400 or less before benefits.3 This is a more restrictive income threshold than in Scotland and Northern Ireland. This restrictive provision means that many children from working families in poverty are not entitled to free school meals, despite struggling financially, and they miss out on all the benefits of free school meal provisions; Child Poverty action Group. 2023. FREE SCHOOL MEALS: THIRD OF KIDS IN POVERTY MISS OUT. From: https://cpag.org.uk/sites/default/files/2023-

^{08/}Free%20school%20meals-%20third%20of%20kids%20in%20poverty%20miss%20out.pdf ²³⁴ A CEO of a private catering company in England who has contracts in school feeding stressed in an interview: Can we introduce organic food into schools at current pricing? No, as simple as that, the price model doesn't match, unless an organic producer wants to essentially change their pricing structure to fit with ours. This study indicates, however, that local producers are keen on winning a share of school food business, but are just not invited to, and kitchen staff are not trusted to enact sustainable change. These unbalanced power dynamics are significant within the school food system, firstly, because powerful actors end up shaping quality to their advantage which then determines who has access to the market, who dominates it, and who ends up being pushed out. School food procurement practices and priorities must be changed. Food for Life and Scotland Excel offer good models; F. Sabet. 2022. Transforming food systems: ethics, innovation and responsibility. 2022, 76-81. From: https://www.wageningenacademic.com/doi/epdf/10.3920/978-90-8686-939-8_10?role=tab

	at school.
Uptake	Revise the administrative and stigmatic barriers to children accessing school food. Universally free school meals should improve uptake.
Funding	Revise the current funding system to guarantee delivery of good nutrition.

Levelling Up (2022), a supplementary policy report, additionally includes several important clauses: 235

- To increase accountability, schools are required to publish reports on arrangements for their 'whole school approach'
- Funding worth £200,000 for training and supporting school governors in their role is to be provided to create a whole school approach to food.²³⁶
- Funding worth £5 million is to be provided to support food teachers
- Collaboration between schools, the Department of Education and Food Standards agency are recommended to ensure greater compliance with the School Food Standards. 237

An exception is the City of London which has offered primary school students' free meals since 2023 with plans for four more years of funding. The meals help families with the spiralling cost of living by making sure that children in state-funded London schools will receive at least one free nutritious meal per day.²³⁸

In July 2021, a National Food Strategy led by Henry Dimbleby, the author of the School Food Plan, presented additional recommendations to reinstate food A-level courses and require a cookery subject lead in every school, double funding for fruits

²³⁵ Slater, Stephanie. "School Food Matters." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

²³⁶ According to the Levelling Up the United Kingdom white paper, "Too many young people are still leaving education without the skills and knowledge to cook and live healthily. Adopting Henry Dimbleby's recommendations around eating and learning, the UK Government will invest up to £5m to launch a school cooking revolution, including the development of brand new content for the curriculum and providing bursaries for teacher training and leadership. To support this, the UK Government will invest up to £200,000 to pilot new training for school governors and academy trusts on a whole school approach to food. Through these interventions, the UK Government will aim for every child leaving secondary school to know at least six basic recipes that will support healthy living into adulthood.". Levelling Up. 2022. Levelling Up the United Kingdom White Paper. ISBN 978-1-5286-3017-7 E02694177 02/22. From:

https://assets.publishing.service.gov.uk/media/61fd3c71d3bf7f78df30b3c2/Levelling_Up_WP_HRES.p

²³⁷ Levelling Up. 2022. Levelling Up the United Kingdom White Paper. ISBN 978-1-5286-3017-7 E02694177 02/22. From:

https://assets.publishing.service.gov.uk/media/61fd3c71d3bf7f78df30b3c2/Levelling Up WP HRES.p

²³⁸ London,gov.uk. n.d. Free School Meals. From: https://www.london.gov.uk/who-we-are/what-mayordoes/priorities-london/free-school-

meals#:~:text=No%20child%20should%20go%20to,the%20cost%20of%20living%20crisis.

and vegetables, and more. ²³⁹ To date there has been minimal uptake of the recommendations by the government although the School Food Review Working Group continues to advocate for reform. ²⁴⁰

Funding

An estimated £4 billion is spent for the school food system annually (not including universal infant free school meals which are funded by a separate grant) with the Ministry of Education providing £1.5 billion, approximately £2.3 billion by separate grants, and the monies paid by students' families. The total amount contributed by communities, non-profit organisations, local authorities, and businesses is unknown. The movement of funds through their school food system is illustrated in **Figure 9** in Appendix G.

School Food Programs is funded by a 'Dedicated School Grant' and provides students with a family household income of less than £7,400 with opportunities to apply for free school meals throughout the duration of their education. Each year, the number of students eligible continues to increase, with 22.5% of students in 2022 qualifying compared to 20.8% the year prior.²⁴¹ Despite this initiative, an estimated one-third of children experiencing poverty in England are restricted from accessing school meals under this program.²⁴²

Funding for school meals is complicated as different funds and grants are involved as well as means-tested schemes. Funds are available through a complex system of policy and nutrition avenues resulting in some schools being unaware of potential funds available. Subsidy programs, such as the one related to household income, has allowed some school meal rates to remain consistent since 2014 at £2.47 per meal despite the rising costs of food and labour. Other schools elect to use the rate

²³⁹ Henry Dimbleby was an award-winning chef and restaurant owner before writing both the School Food Plan (2013) and National Food Strategy (2021), an independent review for the government. He founded the charity Chefs in Schools in 2018. In July 2021, he led a National Food Strategy and presented additional recommendations that included encouraging food-standard accreditation schemes within schools, reinstating food A-level courses, requiring a cookery lead in every school, provide funding for the ingredients required for student recipes, and more. See Dimbleby, H. 2021. The Plan. National Food Strategy. From: https://www.nationalfoodstrategy.org/; Ofsted, or the Office for Standards in Education, Children's Services and Skills, is a non-ministerial government department that inspects and regulates services for children and young people in England. When they inspect schools, they dive into four to six subjects. Dimbleby recommends that they inspect food and nutrition classes as well, with the same rigour.; Dimbleby, H. 2021. The Plan. National Food Strategy. From: https://www.nationalfoodstrategy.org/

²⁴⁰ Slater, S. "School Food Matters."

 ²⁴¹ Bremner, Myles. "England's School Food Program." Presented at the England's School Food
 Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.
 ²⁴² Slater, S. "School Food Matters."

²⁴³ Bremner, Myles. "England's School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.; Bremner, M. "England's School Food Program."; GOV.UK. "Universal Infant Free School Meals (UIFSM): 2022 to 2023." GOV.UK, June 2022. https://www.gov.uk/government/publications/universal-infant-free-school-meals-uifsm-2022-to-2023.

of £2.41 per meal as set by the government.²⁴⁴ No formal guidelines for the cost of a school meal however currently exist, leading to discrepancies in the cost charged which ranged from £1.60 - £3.00 in primary schools and £1.80-£3.05 in secondary school in 2021.²⁴⁵

To assist with the standardization of costs, programs such as the National School Milk Subsidy Scheme assists with the cost of providing milk in schools by offering free milk to children under the age of 5 in participating schools and childcare settings. Similarly, the Department of Health's School Fruit and Vegetable Scheme provides children ages 4-6 years in state-funded infant, primary, and special schools with a free piece of fruit or vegetable each school day in addition to their meal.²⁴⁶

Food Literacy Education

Learning to cook and grow food is a key recommendation in the *School Food Plan* (2013) and a mandatory part of the educational curriculum. The Levelling Up policy paper allocates £5 million to school food teachers and £200,000 to school governors to support their development of a whole school food approach, whereas guidance documents by Public Health England provide additional direction for Food Teachers in secondary schools to facilitate exemplary food teaching through the School Food Plan. The plan mentions that the government has accepted the report's recommendation that cooking lessons should be made a part of the national curriculum for all children up to the age of 14. The new curriculum emphasizes the importance of cooking nutritious, savoury dishes, understanding where food comes from, and taking pleasure in the creative arts of the kitchen.²⁴⁷

Prior to the School Food Plan, food literacy education was primarily delivered by the charity sector. For 16 years the charity *School Food Matters* has been educating children about healthy and sustainable food while also advocating for government policy change. Their approaches to food education included lessons on cooking, pollinators, and food enterprise, in addition to providing funding and education for growing edible gardens at schools.²⁴⁸ *Chefs in Schools*, another initiative, was a national charity co-founded by Henry Dimbleby, which acknowledged the link

²⁴⁴ Bremner, Myles. "England's School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.; Bremner, M. "England's School Food Program."; GOV.UK. "Universal Infant Free School Meals (UIFSM): 2022 to 2023." GOV.UK, June 2022. https://www.gov.uk/government/publications/universal-infant-free-school-meals-uifsm-2022-to-2023.

²⁴⁵ Ibid.

²⁴⁶ Department of Education. "School Food in England." GOV.UK, August 26, 2021. https://www.gov.uk/government/publications/standards-for-school-food-in-england/school-food-in-england.

²⁴⁷ Dimbleby, H. and Vincent, J. 2013. School Food Plan. July 11, 2013. From: https://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf; British Nutrition Foundation. "Food Teaching in Secondary Schools: A Framework of Knowledge and Skills." London: Public Health England, 2015.

²⁴⁸ Slater, Stephanie. "School Food Matters." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

between food and education as essential and worked to train school kitchen teams on how to prepare food and campaign around school food quality.²⁴⁹

Nutrition

The Federal School Food Standards²⁵⁰ outline several guidelines for nutrition and meal content to promote healthy eating habits among students. This includes recommending that school meals and snacks are visually appealing, taste good and have sufficient nutrient and energy content to support students throughout their school day. The foods provided should also vary throughout the week with priority for fresh, sustainable and locally sourced ingredients, including items from school gardens.²⁵¹ A resource entitled "Sustainable procurement: the Government Buying Standards" includes guidance on how to reduce salt, saturated fat, and sugar in foods prepared for schools.²⁵² In addition, standards and guidance regarding portion sizes and food groups; allergy guidance; cooking healthy, tasty and varied meals; and checklists for all types of school foods are also available.²⁵³

The food-based standards provide and outline for the types of foods to be served to achieve a balanced diet including:

- Plenty of fruit and vegetables,
- Unrefined starchy foods,
- Some meat, fish, eggs, beans, and other non-dairy sources of protein,
- Some milk and dairy foods,
- A small amount of food and drink that may be high in fat, sugar, and salt. 254

The standards also specify what should be reduced or excluded including:

- Drinks with added sugar, crisps, chocolate or sweets in meals and vending machines.
- No more than 2 portions of deep-fried, battered, or breaded food a week.²⁵⁵,

²⁴⁹ Duncan, Naomi. "Chefs in Schools - Implementing a School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022.

https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁵⁰ To see the School Lunch Standards, visit GOV.UK. "School Food Standards Practical Guide." GOV.UK, May 2022. https://www.gov.uk/government/publications/school-food-standards-resourcesfor-schools/school-food-standards-practical-guide.

²⁵¹ GOV.UK. "School Food Standards Practical Guide." GOV.UK, May 2022.

https://www.gov.uk/government/publications/school-food-standards-resources-for-schools/schoolfood-standards-practical-guide.

²⁵² GOV.UK. "Sustainable Procurement: The Government Buying Standards (GBS)." GOV.UK, 2017. https://www.gov.uk/government/collections/sustainable-procurement-the-government-buyingstandards-gbs.

²⁵³ GOV.UK. "School Food Standards: Resources for Schools." GOV.UK, May 2022. https://www.gov.uk/government/publications/school-food-standards-resources-for-schools. ²⁵⁴ GOV.UK. "School Food Standards Practical Guide." GOV.UK, May 2022.

https://www.gov.uk/government/publications/school-food-standards-resources-for-schools/schoolfood-standards-practical-quide.

²⁵⁵ Ibid.

²⁵⁶ To see additional details on the guidance for Portion Sizes and Food Groups, visit: School Food Plan. "Portion Sizes and Food Groups." The Independent School Food Plan, 2016. http://www.schoolfoodplan.com/wp-content/uploads/2018/09/Portion Size Poster-06012015 V1B.pdf

Although these standards are in place, there is no oversight by school inspectors for nutritional content.²⁵⁷

Implementation

The Department of Education is primarily responsible for school food programs, setting the threshold for income-based free school meals programs, determining funding rates for school food interventions, setting school food standards, and outlining the roles and responsibilities of Local Authorities (LAs) and schools who implement the programs. Local governing bodies make decisions based on the School Food Standards as to what foods are offered at schools, and governing bodies work with senior school leadership to develop plans for a whole school food policy. The Local Authorities have a statutory obligation regarding children's safeguarding and wellbeing; therefore, they should actively engage in supporting school food programs specifically around nutrition and health issues with public health teams ²⁵⁸

Each school has its own implementation and school food model, but most schools share the following:

- Primary schools offer a choice of hot meat or vegetarian dish or snack meal plus a dessert for a fixed price.
- Secondary schools have a cafeteria or 'market style' approach with various hot and cold food choices each day.
- A dining hall is available for students to enjoy meals within.
- A 'family dining' atmosphere where children sit together and share food.
- Limited experiences of children eating within their classrooms. 259

Regardless of variations in school food programs, school leaders have the responsibility to embed a great school food culture.²⁶⁰ The School Food Plan provides a Checklist for Head Teachers²⁶¹ as a guideline with three core principles: lead the change; concentrate on the things children care about; and adopt a 'whole school' approach.²⁶²

The whole school approach requires the following to work well:

School leaders must understand and believe that good food helps kids learn.

²⁵⁷ Slater, Stephanie. "School Food Matters." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁵⁸ Bremner, Myles. "England's School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁵⁹ Duncan, Naomi. "Chefs in Schools - Implementing a School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁶⁰ Bremner, Myles. "England's School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁶¹ To see the checklist for head teachers, visit: http://www.schoolfoodplan.com/wp-content/uploads/2016/03/SFP-Headteacher-Checklist.pdf.

²⁶² School Food Plan. "A Checklist for Head Teachers." School Food Plan What Works Well, 2016. http://www.schoolfoodplan.com/wp-content/uploads/2016/03/SFP-Headteacher-Checklist.pdf.

- Each school needs a vision for what good school food looks like written by school leadership.
- Sufficient time must be allocated for the lunch break.
- Teachers are encouraged to eat with students.
- There are links between the school kitchen and the school curriculum. 263

It includes questions to consider for leadership, food provision, food education, and wider well-being.²⁶⁴

Oversight

The Department of Education, the Department of Food and Agriculture, and the Department for Health and Social Care contribute to the policies on procurement and food safety standards, however, they do not preside over school food policy. Local governing bodies decide what school lunches look like as long as they meet the School Food Standards. Hot lunches are encouraged, when possible, with students ideally having one hot meal every day. Critics suggest more oversight and the inclusion of a process to ensure that catering services are coordinated across all school food and drink outlets and compliance with school food standards is maintained.

Challenges and Benefits

Several challenges exist with England's school food programs and are outlined below:

- Income threshold for means tested school meals The income threshold for low-income families is considered too low with one-third of children in poverty not eligible to access the program. There is an immediate call to action for all children living in poverty to be eligible for free school meals.²⁶⁸
- Limited universal free school meals Free school meals are only available to all students regardless of family income in the first three years of school with calls to extend this to include all school years.²⁶⁹

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²⁶³ Duncan, Naomi. "Chefs in Schools - Implementing a School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022.

https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁶⁴ GOV.UK. "Creating a Culture and Ethos of Healthy Eating." GOV.UK, May 2022.

https://www.gov.uk/government/publications/school-food-standards-resources-for-schools/creating-a-culture-and-ethos-of-healthy-eating.

²⁶⁵ Bremner, M. "England's School Food Program."

²⁶⁶ Department of Education. "School Food in England." GOV.UK, August 26, 2021. https://www.gov.uk/government/publications/standards-for-school-food-in-england/school-food-in-england.

²⁶⁷ Department of Education. "School Food in England." GOV.UK, August 26, 2021. https://www.gov.uk/government/publications/standards-for-school-food-in-england/school-food-in-england.

²⁶⁸ Slater, Stephanie. "School Food Matters." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA; Kenton-Lake, Simon, Josephine Heger, Rebecca Tobi, and Indu Gurung. "FEEDING OUR FUTURE An InVEGtigation into UK School Food 2021." Peas Please, 2021.

²⁶⁹ Slater, S. "School Food Matters."

- Accountability There can be uncertainty around roles and responsibilities of school governors and staff leading to a lack of accountability.²⁷⁰
- School Food Standards The school food standards are not always adhered to, with poor food quality occurring in some schools and no monitoring currently in place.²⁷¹

Benefits of the SFP includes a revision of food standards from 2009 which removed the least nutritious foods from school lunch menus. but were considered restrictive by many school cooks. Current School Food Standards allow for greater flexibility in menu planning while preserving the nutrition quality gains that came into force in January 2015.²⁷² These mandatory standards apply to the whole school day, including breakfasts, morning breaks, tuck shops, vending machines and afterschool clubs.

The Government's National Food Strategy (2022) sets out wide-ranging reforms to improve the UK food system, including a call for a 'school food revolution'.²⁷³ This approach is further developed in the Levelling up the United Kingdom (2022) white paper, which stipulates that schools will receive greater support in procuring high-quality and value for money through the 'Get Help Buying for Schools.²⁷⁴ This service is the commercial arm of the Department for Education.

²⁷⁰ Duncan, Naomi. "Chefs in Schools - Implementing a School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022.

https://www.youtube.com/watch?v=4d8fPd7f7xA.

²⁷¹ Duncan, N. "Chefs in Schools"

²⁷² School Food Standards. 2014. From http://www.schoolfoodplan.com/wp-content/uploads/2015/05/School_Food_Standards_140911-V2e-tea-towel.pdf

²⁷³ Dimbleby, H. 2021. The Plan. National Food Strategy. From: https://www.nationalfoodstrategy.org/ ²⁷⁴ Levelling Up. 2022. Levelling Up the United Kingdom White Paper. ISBN 978-1-5286-3017-7 E02694177 02/22. From:

https://assets.publishing.service.gov.uk/media/61fd3c71d3bf7f78df30b3c2/Levelling_Up_WP_HRES.p df; Gov.Uk. 2023. Buying for schools: get free help from procurement specialists. September 1, 2023. From: https://www.gov.uk/guidance/get-help-buying-for-

schools#:~:text=The%20get%20help%20buying%20for,money%20on%20your%20existing%20contracts.

France's School Food Programs

Overview and Policy

Locally run school food programs have existed in France since the late 1700s, and in the last 20-30 years school food and nutrition policies have been leveraged as an important public health strategy. ²⁷⁵ Aligning with national standards and international recommendations from the World Health Organization (WHO) and the United Nations Food and Agriculture Organization (FAO), federal policy agendas for the nutritional quality of school meals and collective catering standards have become mandatory over the years.

In France, the national policy on food is defined in Article L1 (point I) of the *French Rural and Maritime Fisheries Code* (CRPM).²⁷⁶ This policy sets the foundation for national food policies and healthy school food programs with the following objectives:

"...ensure access for the public to safe, healthy and varied foods of good quality, ensure a sufficient quantity is produced under conditions that are economically and socially acceptable for all, and ensure food production is beneficial to employment, protects the environment and landscapes, and allows for the mitigation of, and adaptation to, the effects of climate change." 277

The National Food Program (Program National pour l'Alimentation, <u>PNA 3</u>) is the main policy lever for school food programs. The PNA was introduced in 2010, and has since been revised twice (i.e., PNA 2 in 2015, PNA 3 in 2019). Currently, PNA 3 centres its objectives on access to high quality food in institutional settings and joint action between local food systems and consumers (see **Figure 10** in <u>Appendix H</u>). The PNA 3 is comprehensively aligned with other public health, environment, and socio-economic development strategies such as the National Health and Nutrition Program (Program National Nutrition Sante, <u>PNNS 4</u>), which provides national targets, guidelines and priorities for nutrition policy. ²⁷⁹

Together, the PNA 3 and PNNS 4 set out the objectives, principles and directions of the national nutrition policy, and outlined goals, regulations and oversight for school food programs. These programs have been combined into France's *National Food and Nutrition Program (Program National de l'Alimentation et de la Nutrition*,

²⁷⁵ Code rural et de la pêche maritime. 2021. Légifrance. République Française. From: https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043978760

²⁷⁷ Code rural et de la pêche maritime. 2021. Légifrance. République Française. From: https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043978760 Article L1, #1

²⁷⁸ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

²⁷⁹ Programme national pour l'alimentation 2019-2023: territoires en action. 2020. Ministère de l'Agriculture et de la Souveraineté Alimentaire. From:

https://agriculture.gouv.fr/programme-national-pour-lalimentation-2019-2023-territoires-enaction#:~:text=Le%20PNNS%20%2D%20Programme%20national%20nutrition%20sant%C3%A9%202019%2D2023%20(PDF%2C%204.09%20Mo)

<u>PNAN</u>). ²⁸⁰ PNAN explicitly addresses school foods with its 'Levers for Dietary Transition'. These levers include quality collective catering for all (i.e., local/organic/nutritional mandates and proportionate universalism), the extension of food education from kindergarten to high school, and the promotion of local-level initiatives and actions through Regional Food Projects (PATs). ²⁸¹ PATs are a core component of PNA 3 as they fulfill national goals through regional actions. ²⁸²

School nutrition standards were mandated in 2011 (Decree No. 2011-1227),²⁸³ with updates made in 2019 (See **Tables 22 and 23** in <u>Appendix H</u>).²⁸⁴ In 2018, legal Decree No. 2018-938 (EGAlim) promoted more healthy, safe and sustainable diets by mandating school catering companies to procure 50% of their ingredients as high-quality, sustainable products, of which at least 20% should be organic by 2022. The legislation also banned plastic containers to serve or reheat foods in institutional

https://agriculture.gouv.fr/programme-national-pour-lalimentation-2019-2023-territoires-enaction#:~:text=Le%20PNNS%20%2D%20Programme%20national%20nutrition%20sant%C3%A9%202019%2D2023%20(PDF%2C%204.09%20Mo)

²⁸¹ Programme national pour l'alimentation 2019-2023: territoires en action. 2020. Ministère de l'Agriculture et de la Souveraineté . From:

https://agriculture.gouv.fr/programme-national-pour-lalimentation-2019-2023-territoires-enaction#:~:text=Le%20PNNS%20%2D%20Programme%20national%20nutrition%20sant%C3%A9%202019%2D2023%20(PDF%2C%204.09%20Mo)

²⁸² Lancement du 4ème Programme national nutrition santé 2019-2023. 2019. Ministère de l'Agriculture et de la Souveraineté Alimentaire. From:

https://solidarites-sante.gouv.fr/archives/archives-presse/archives-communiques-de-presse/article/lancement-du-4eme-programme-national-nutrition-sante-2019-2023

²⁸³ Publications officielles-Décret n° 2011-1227 du 30 septembre 2011 relatif à la qualité nutritionnelle des repas servis dans le cadre de la restauration scolaire. NOR : AGRG1032342D

From: https://www.legifrance.gouv.fr/eli/decret/2011/9/30/AGRG1032342D/jo/texte

Alias : https://www.legifrance.gouv.fr/eli/decret/2011/9/30/2011-1227/jo/texte JORF n°0229 du 2 octobre 2011. Texte n° 29. From:

https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000024614716; RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance. Public. From:

https://www.economie.gouv.fr/files/directions_services/daj/marches_publics/oeap/gem/nutrition/nutrition.pdf

²⁸⁴ RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance. Public. From:

https://www.economie.gouv.fr/files/directions_services/daj/marches_publics/oeap/gem/nutrition/nutriti on.pdf; Décret n° 2019-351 du 23 avril 2019 relatif à la composition des repas servis dans les restaurants collectifs en application de l'article L. 2019. 230-5-1 du code rural et de la pêche maritime. République Française. Légisfrance. Texte n° 23. From:

https://www.legifrance.gouv.fr/eli/decret/2019/4/23/AGRG1904273D/jo/texte Alias: https://www.legifrance.gouv.fr/eli/decret/2019/4/23/2019-351/jo/texte

JORF n°0096 du 24 avril 2019; Vieux, F., Dubois, C. 2013. Dietary Standards for School Catering in France: Serving Moderate Quantities to Improve Dietary Quality Without Increasing the Food-related Cost of Meals.

²⁸⁰ PNAN : le programme national de l'alimentation et de la nutrition. 2019. Ministère de l'Agriculture et de la Souveraineté Alimentaire. From:

catering by 2025, and includes additional requirements for sustainable practices, local engagement through Regional Food Committees (CRALIM), and food education ²⁸⁵

PNAN aligns with the school nutrition mandates as well as other national policies including the National Health Strategy, ²⁸⁶ the National Poverty Reduction Strategy, the Food Policy Roadmap 2018-2022, ²⁸⁷ Program Malin, ²⁸⁸ and the Educational, Social, and Health Policy for Pupils. ²⁸⁹ Additional school food policies exist at regional and local levels including the ministries and institutions responsible for school foods.

Funding

School meals in France are cost-shared between local authorities and parents of students attending the school.²⁹⁰ Cost per meal varies by region and school, ranging from €3 - €4.50 with the local portion paid by school administrators and school fees.²⁹¹ The local authorities responsible for funding school meals also offer opinions on meal prices and composition during negotiations. Since school meals are viewed as a social initiative, they are usually priced equal to or less than the cost of production and can be scaled according to the parent's monthly income and the school's population, depending on regional agreements.²⁹²

In primary schools, school catering is paid partially by the local municipality and managed through the school fund (i.e., a public fund for school use) and the financial

²⁸⁵ Galim, E. 1: Tout savoir sur la loi Agriculture et Alimentation.2018. Ministère de l'Agriculture et de la Souveraineté. From: https://agriculture.gouv.fr/egalim-1-tout-savoir-sur-la-loi-agriculture-et-alimentation; LOI n° 2018-938 du 30 octobre 2018 pour l'équilibre des relations commerciales dans le secteur agricole et alimentaire et une alimentation saine, durable et accessible à tous (1). JORF n°0253 du 1 novembre 2018

République Française, Légisfrance, From:

https://www.legifrance.gouv.fr/loda/article_lc/JORFARTI000037547983

https://agriculture.gouv.fr/egalim-1-tout-savoir-sur-la-loi-agriculture-et-alimentation

²⁸⁶ National Health Strategy 2018-2022. 2017. Ministères chargés de l'agriculture et de la santé. République Française. From: https://solidarites-sante.gouv.fr/IMG/pdf/dossier_sns_2017_vdef.pdf ²⁸⁷ FEUILLE DE ROUTE 2018-2022

POLITIQUE DE L'ALIMENTATION. n.d. États généraux de l'alimentation. République Française. From: https://agriculture.gouv.fr/telecharger/88674

²⁸⁸ Program Malin. n.d. Baby recipes. From: https://www.programme-malin.com/

²⁸⁹ Le Bulletin officiel de l'éducation nationale, de la jeunesse et des sports. 2015. General guidelines Educational, social and health policy for pupils. Ministère de l'éducation nationale et de la Jeuneuse. From: https://www.education.gouv.fr/bo/15/Hebdo42/MENE1517117C.htm

²⁹⁰ French-Property.com. n.d. Number 4. General operations of French schools - 4.7 School lunch. From: https://www.french-property.com/guides/france/public-services/school-education/operation/school-

lunches#:~:text=Generally%2C%20expect%20to%20pay%20from,for%20those%20on%20lower%20incomes.

²⁹¹ School meal price cut by €2 per child. 2019. The Connexion. From:

https://www.connexionfrance.com/article/French-news/School-meal-price-cut-by-2-per-child-in-French-schools; School Fees. n.d. International School of Toulouse. From: https://www.intst.eu/copy-of-admissions-

process#:~:text=The%20cost%20of%20the%20meals,is%20%E2%82%AC%20660.00%20per%20chi

²⁹² La restauration scolaire. n.d. Ministère de l'éducation nationale et de la Jeuneuse. From: https://www.education.gouv.fr/la-restauration-scolaire-6254

contribution of parents set by the municipality and based on family income.²⁹³ In secondary schools, the price of school meals is set by the appropriate local authority (often regional) and funds are sourced from local governments, parents, and the social fund for canteens (i.e., a public fund for social support). Each institution's administration or council is responsible for coordinating financial assistance as needed.²⁹⁴ In almost every case, councils subsidize the cost of school meals, and in some areas, free school lunches are provided through special programming under the principle of proportionate universality.²⁹⁵

Additional school food funding is sourced through national programs (for example, PNA 3 and the One-Euro-Canteen) community donations, fundraising, and PAT grants for school canteens.²⁹⁶ France also relies on international resources, receiving €35m in annual support from the EU School Fruit, Vegetable and Milk scheme.²⁹⁷

Food Literacy Education

Food education is a core component of PNA 3 and as such, school food programs are designed to engage students in food education and experiences from early childhood (see **Figure 11** in <u>Appendix H</u>). Many programs explore the regional and cultural foods of France, and offer hands-on learning about systems of food production, distribution, consumption, and waste. They demonstrate how to eat in familial and communal settings, and often emphasise pleasure and curiosity, balanced nutrition, food system components, and sustainability.²⁹⁸

Mealtime is viewed as both an opportunity to consume essential nutrients and a space to relax and discover new foods, tastes, and culinary possibilities ²⁹⁹ Many programs provide specialised opportunities for students to engage and learn, and

lunches#:~:text=Generally%2C%20expect%20to%20pay%20from,for%20those%20on%20lower%20i ncomes; Holman, R. 2019. France to invest €6 million in free breakfasts at public schools. France 24. 23/04/2019 - 16:46. From: https://www.france24.com/en/20190423-france-invest-6-million-euros-free-breakfast-public-schools; France to provide free breakfasts to poor students. 2019. RFI. 24/04/2019 - 12:54. From:

https://www.rfi.fr/en/france/20190424-france-provide-free-breakfasts-poor-students ²⁹⁶ Cantine à 1 euro : Plus de 10 millions de repas à un euro ou moins, servis dans les écoles. n.d. Ministère des Solidarités, de l'Autonomie et des Personnes handicapées. 10/11/2022. From: https://solidarites-sante.gouv.fr/actualites/presse/communiques-de-presse/article/cantine-a-1-euro-plus-de-10-millions-de-repas-a-un-euro-ou-moins-servis-

dans#:~:text=La%20cantine%20%C3%A0%20un%20euro,ces%20repas%20abordables%20%C3%A0%20tous; France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

²⁹³ Ibid.

²⁹⁴ Ibid.

²⁹⁵ French-Property.com. n.d. Number 4. General operations of French schools - 4.7 School lunch. From: https://www.french-property.com/guides/france/public-services/school-education/operation/school-

²⁹⁷ Ibid.

²⁹⁸ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

²⁹⁹ Ibid.

exposure to new foods are built into menus to increase student's acceptance, enjoyment, and curiosity. Schools often partner with dietitians and culinary or agrifood experts for programming, with some hiring full-time chefs who curate seasonal, nutritious, and creative menus, and collaborate with the students in areas of food production, preparation, service, and management.³⁰⁰

Actions prioritised through PNA 3 include providing food education from kindergarten to high school. For example, some schools in France: Offer 'taste classes' that awaken a variety of new tastes in students.

- Make agricultural education students and teachers PNA ambassadors.
- Promote food and nutrition literacy to improve balanced diets and adequate nutritional intake through school meals.
- Highlight food heritage (ex: a national day entitled "Behind the scenes of food" has been set to rediscover and celebrate France's agriculture, food and culinary heritage).
- Make food education tools available to students through various resources, mobile apps, and guides.³⁰¹

Nutrition

Public Health France is responsible for updating nutritional recommendations for the population at the national level. They are informed by data from the National Agency for Food, Environmental and Occupational Health and Safety (ANSES) and the opinion of the High Council for Public Health.³⁰²

France is one of a few countries in the world with nationally mandated school food nutrition standards. Starting with a non-compulsory set of recommendations for the nutritional quality of school meals in 2001, France progressed to mandate nutritional standards in school canteens in 2011.³⁰³ Heightened food procurement standards were established in 2018 through the National Council for Collective Catering

NOR: AGRG1032342D. From:

https://www.legifrance.gouv.fr/eli/decret/2011/9/30/AGRG1032342D/jo/texte Alias: https://www.legifrance.gouv.fr/eli/decret/2011/9/30/2011-1227/jo/texte JORF n°0229 du 2 octobre 2011

Texte n° 29. From: https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000024614716

³⁰⁰ Jeudi, L. 2022. Pour une cantine scolaire de qualité, partout et pour tous, Marie-Pierre Membrives lance. Cantines Revolution. Strip Food. From: https://www.stripfood.fr/pour-une-cantine-scolaire-dequalite-partout-et-pour-tous-marie-pierre-membrives-lance-cantines-revolution/; Projet Établissements Scolaires L'Alimentation "J'explore et je choisis." n.d. Association de L'Alimentation Durable. From: https://www.associationalimentationdurable.org/projet-alimentation-jexplore-jechoisis

³⁰¹ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

³⁰² Elaboration des recommandations nutritionnelles. n.d. PROGRAMME NATIONAL NUTRITION SANTÉ. From: https://www.mangerbouger.fr/ressources-pros/elaboration-des-recommandations-nutritionnelles/comment-sont-elaborees-les-recommandations-nutritionnelles2

³⁰³ Publications officielles-Décret n° 2011-1227 du 30 septembre 2011 relatif à la qualité nutritionnelle des repas servis dans le cadre de la restauration scolaire

(CNRC) which was formed in 2019 to implement improvements to the nutrition and quality of foods served by collective catering.³⁰⁴

The original school food mandate gave standards for menu and meal structure and aimed to ensure nutritional adequacy through frequency criteria standards (FCS). These standards were updated in 2015 with recommendations from the Collective Catering and Nutrition Market Group (GEM-RNC),³⁰⁵ and updated again in 2019 in accordance with PNAN.³⁰⁶ Currently, school meals must comply with 15 FCS expressed as nutritional requirements, in a series of 20 consecutive meals.^{307,308}

Specific requirements for food item frequency, nutrient content, cooking methods, and catering service depend on the type of meal being offered (i.e., breakfast, lunch, or snack). Importantly, children with chronic diseases and other health disorders can often receive a specialised diet or personalised menu through the Individualised Reception Project (PAI).³⁰⁹

Implementation

In elementary schools there are a variety of school meal production models. Municipalities or the public establishment for Inter-Municipal Cooperation (EPCI) take responsibility for organising food services. Implementation is often dependent on school population, location, funding capacity, facilities, and community and or

³⁰⁴ EGalim 1: Tout savoir sur la loi Agriculture et Alimentation.2018. Ministère de l'Agriculture et de la Souveraineté Alimentaire . From: https://agriculture.gouv.fr/egalim-1-tout-savoir-sur-la-loi-agriculture-et-alimentation

³⁰⁵ Recommandation nutrition. 2015. Version 2.0 - Juillet 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. M inistère de l'Économie, des Finances et de la Souveraineté industrielle et numérique. From: https://www.economie.gouv.fr/daj/recommandation-nutrition; RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance.

https://www.economie.gouv.fr/files/directions_services/daj/marches_publics/oeap/gem/nutrition/nutrition.pdf

³⁰⁶ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497 525102410e04e1ef47fb8f59; Décret n° 2019-351 du 23 avril 2019 relatif à la composition des repas servis dans les restaurants collectifs en application de l'article L. 230-5-1 du code rural et de la pêche maritime. 2019. JORF n°0096 du 24 avril 2019. Texte n° 23. From:

https://www.legifrance.gouv.fr/eli/decret/2019/4/23/AGRG1904273D/jo/texte;

https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000038403867

³⁰⁷ Vieux, F., Dubois, C., Duchêne, C., & Darmon, N. (2018). Nutritional Quality of School Meals in France: Impact of Guidelines and the Role of Protein Dishes. Nutrients, 10(2), 205. https://doi.org/10.3390/nu10020205.

³⁰⁸ See 15 Frequency Criteria for School Meal Service (20 consecutive meals): https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000024614763

³⁰⁹ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59; RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance. Public. From:

parental involvement. In general, municipally employed staff prepare the lunch and serve the students at school, often in the canteen (a shared eating space). Over the past 20 - 30 years, there has been an increase in the number of contract catering companies managing school food service operations with approximately 40% of programs contracted out to collective catering companies. If meals are not made fresh on-site, they are prepared in a central kitchen and then delivered to a satellite kitchen for hot or cold service. Students often enjoy their meals in a communal, sit-down setting. If a communal is the companies of the service in the staff prepare the lunch and setting the service of the service of

For middle and high schools, implementation is the responsibility of both the department of education and the region. In general, most secondary schools have on-site food production and directly manage the procurement, preparation, and service of meals. In some cases, management is provided by a collective catering company, and the meals are prepared as in elementary schools.³¹³

The uptake of school meals in France is quite high, serving at least 7 million students each week, with some variances for regional and local factors. According to the second French Individual and National Study on Food Consumption (INCA2) carried out by the ANSES Agency.³¹⁴ In 2006-2007, 63% of nursery and primary schoolchildren and 69% of middle and high school children ate lunch at the school canteen at least once a week. Respectively 50% and 64% of them eat lunch at school at least three times a week.³¹⁵

Oversight

In accordance with France's national food policy, the Ministry of Agriculture and Food is responsible for providing the French population with access to safe, healthy, and diversified foods of good quality. It partners closely with the Ministries of Economy and Finance, Health and Solidarities, and Education in the development of school food policies and the implementation of programs that align with national standards. The standards of the sta

Nationally, PNAN (PNA 3 and PNNS 4) ensures the coordination and coherence of interventions, provides the necessary scientific material and participant engagement for implementing the actions, and sets targets to monitor their implementation. It

³¹⁰ La restauration scolaire. n.d. Ministère de l'éducation nationale et de la Jeuneuse. From: https://www.education.gouv.fr/la-restauration-scolaire-6254

³¹¹ See: https://www.sodexo.com/en/services/food-services

³¹² Erling-Stringer, R., Membrive, M.P., Yves, P., Guéneau, A. 2022, December, 8.

Programme d'alimentation scolaire en France. Coalition for Healthy School Food [Webinar]. From: https://us02web.zoom.us/rec/play/608J1NeuUXO7WMjMN9L8SMhtmfOi86Lme2MvizEHfPzVGYl5s4g svcEMSH9t1vc-

yVBB_0jbuegrHXlp.l4iNKtbi5YY9UOGP?startTime=1670519064000&_x_zm_rtaid=itOlNTrAQBCh8qq 72N3bDA.1673387776700.22afa0eb909ed17b944e908ada43e6f5& x zm rhtaid=30

³¹³ La restauration scolaire. n.d. Ministère de l' Éducation nationale et de la Jeunesse. From: https://www.education.gouv.fr/la-restauration-scolaire-6254

³¹⁴ ANSES is the French Agency for Food, Environmental and Occupational Health & Safety. It is a public administrative body reporting to the Ministries of Health, the Environment, Agriculture, Labour and Consumer Affairs. See https://www.anses.fr/en/content/our-identity

³¹⁵ School Meals, 2013. ANSES. From: https://www.anses.fr/en/content/school-meals

³¹⁶ Code rural et de la pêche maritime. 2021. Légifrance. République Française. From: https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043978760

³¹⁷ Ministry of Agriculture and Food (France). n.d. Devex. From:

https://www.devex.com/organizations/ministry-of-agriculture-and-food-france-122846

supports all parties involved in school foods by outlining explicit guidelines, mandates, and oversight. 318

Key groups involved in national monitoring and evaluation are:

- (1) The National Food Council (CNA), an independent advisory body that is attached to the ministers responsible for environment, consumption, health, and agriculture. They are consulted on the definition of food policy and opinions for the attention of public decision-makers and the various players in the food chain. They address subjects such as food quality, consumer information, nutrition, health security, access to food, and crisis prevention.319
- (2) The Food Observatory (Ogali), jointly managed by the National Agency for Food, ANSES and INRA, 320 is the public body responsible for collecting, processing, and transmitting nutritional data and information in order to monitor the improvement of the food supply and to allow policy direction in this area. It monitors the deployment of Nutri-Score by industry members, distributors, and others, and overall adherence to nutritional standards.321
- (3) The Collective Catering and Nutrition Market Research Group (Groupement d'Etude des Marchés en Restauration Collective et de Nutrition, GEM-RCN) establishes nutrition recommendations for collective caterers based on national guidelines and consumption habits in food service. It draws up rules concerning nutrition quality in school canteens, based largely on the Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement, et du travail's (ANSES) opinions. 322
- (4) The CNRC brings all of the actors in the institutional catering sector together to ensure application of the nation's collective catering measures. Its core tasks are to organise a consultation process on the application of standards, to monitor progress, implement the support measures promised, and consider specific issues to overcome for school food (e.g., training and decision aids for buyers and facility capacity building), foster

318 Ibid

³¹⁹ Le Conseil National de l'Alimentation. 2018. Ministère de la Transition Écologique; Ministère de l'Économie; Ministère des Solidarités et de la Santé; Ministère de l'Agriculture et de l'Alimentation. From: https://cna-alimentation.fr/wp-content/uploads/2020/09/CNA Plaquette- 20200810.pdf ³²⁰ INRAE is France's National Research Institute for Agriculture, Food and Environment, created on January 1, 2020, It was formed by the merger of INRA, the National Institute for Agricultural Research, and IRSTEA, the National Research Institute of Science and Technology for the Environment and Agriculture. See: https://www.inrae.fr/en/about-us

³²¹ Lancement du 4ème Programme national nutrition santé 2019-2023. 2019. Ministère de l'Agriculture et de la Souveraineté Alimentaire. From:

https://solidarites-sante.gouv.fr/archives/archives-presse/archives-communiques-depresse/article/lancement-du-4eme-programme-national-nutrition-sante-2019-2023 322 RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance. Public. From:

https://www.economie.gouv.fr/files/directions_services/daj/marches_publics/oeap/gem/nutrition/nutriti on.pdf

exchanges of views between participants, and disseminate best practices.³²³

An inter-ministerial support committee under the Ministry of Health coordinates the PNNS. Ministry and organisational partnerships for implementation exist between each level of governance. Additional regulatory actors involved at the federal level include Public Health France, the French High Council for Public Health, the Director General of Food, and the Director General of Health.

At a more local level, Regional Health Agencies (Agence Régionale de Santé (ARS)) and the Regional Food Committees, Comité Régional de l'Alimentation (CRALIM) work to implement the initiatives of the PNNS 4 in conjunction with all participants. ARSs are responsible for implementing action items that reduce nutrition-related health inequities between social and economic classes. Regional prefects of the ARS coordinate the actions of local government departments responsible for implementing school food programs, and ensure that actions by the ARS, CRALIM, and school food implementers are consistent with approved regional adaptations for PNNS. 324

Challenges and Benefits

A flagship measure of the PNNS is the implementation of 'proportionate universalism' through collective catering and support for local initiatives. A lack of national funding however provides unstable variances in school food program delivery across France. At times, programs remain underfunded due to regional and local socioeconomic inequities. With the burden of funding largely placed on parents of children and local public funds, some communities and schools cannot afford to operate programs that meet national standards including inabilities to expand or maintain their facilities and staffing, create, and implement high-quality menus, or provide experiential educational programming and events for students. Further, students from low-income households are exposed to social stigma due to the applications and direct identification required for subsidised or no-charge meals. Proportionate universalism aims to address these issues and decrease inequity-driven health disparities. 326

³²³ Installation du Conseil national de la restauration collective. 2019. Ministère de l'Agriculture et de la Souveraineté Alimentaire. From:

https://agriculture.gouv.fr/installation-du-conseil-national-de-la-restauration-collective National Health Strategy 2018-2022. 2017. Ministères chargés de l'agriculture et de la santé. République Française. From: https://solidarites-sante.gouv.fr/IMG/pdf/dossier_sns_2017_vdef.pdf; France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

³²⁵ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

³²⁶ Bruckmayer, M., Picken, N., Flemons, L. 2021. Provision of School meals across the EU. Prepared as part of the European Platform for Investing in Children (EPIC) project, September 2021. European Commission. From:

https://ec.europa.eu/social/BlobServlet?docId=24761&langId=mt; PROGRAMME NATIONAL NUTRITION SANTÉ-2019-2023. n.d. Ministères chargés de l'agriculture et de la santé. République Française. From: https://solidarites-sante.gouv.fr/IMG/pdf/pnns4_2019-2023.pdf

Additional challenges in France's school canteens are related to menu offerings and their potential to reinforce discrimination and social isolation. School meals in France are designed to reflect traditional French cuisine, which means they typically exclude other foods and practices. Menus offering Halal, Kosher, vegetarian and/or vegan alternatives are not common and are considered unnecessary. In some cases, students have not been provided with suitable alternatives that meet their ethical, religious, and cultural needs, and little action has been taken to ensure ethnic, cultural, or religious diversity in school meals. In fact, there is strong political opposition to enforcing religious adaptations in school programming. Certain schools allow home-packed lunches to be eaten in the canteen, although this requires the development of their own meal plan through PAI.

Finally, there are concerns around the impacts of school nutrition standards and collective catering prevalence. The nutritional adequacy of menus is regularly analysed by local implementers and the Frequency Criteria model provides adequacy in most nutrients (although occasionally, Vitamin D and Omega-3 fatty acids were below threshold). However, there is consistent concern for the nutritional adequacy of school meals in marginalised communities. Critics have mentioned an inability to source fresh, local, and nutritious foods at affordable prices leaving many school food programs unable to fulfil their health promoting potential. Additionally, there are no nutritional standards for vegetarian alternatives and their protein content, raising concerns of nutritional inadequacy when compared to meals with meat or fish.³²⁸

The prevalence of collective catering in schools has increased significantly in the last two to three decades, with parents expressing concerns about the processed nature and nutritional quality of the foods offered and its health consequences.³²⁹ This led to the inclusion of Decree No. 2018-938 of 2018, the CNRC in 2019, and advocacy for improved nutrition and food quality for all communities and schools.³³⁰ Community action has therefore shifted school meals towards more fresh, local, and organic foods (see **Figure 12** in <u>Appendix H</u>).

France has long been committed to developing school feeding programs. For elementary school, school meals are the responsibility of the commune or the public establishment of inter-communal cooperation. For middle schools, it is the responsibility of the department and for high schools, school meals are the responsibility of the region. France views school meals as an opportunity to offer

³²⁷ Moffat, T, and Gendron, D. 2018. Cooking up the "gastro-citizen" through school meal programs in France and Japan. Moffat, Tina & Gendron, Danielle. (2018). Cooking up the "gastro-citizen" through school meal programs in France and Japan. Food, Culture & Society. 22. 1-15. 10.1080/15528014.2018. 1547587..

³²⁸ Bruckmayer, M., Picken, N., Flemons, L. 2021. Provision of School meals across the EU. Prepared as part of the European Platform for Investing in Children (EPIC) project, September 2021. European Commission. From:

https://ec.europa.eu/social/BlobServlet?docId=24761&langId=mt; Vieux, F., Dubois, C., Duchêne, C., & Darmon, N. (2018). Nutritional Quality of School Meals in France: Impact of Guidelines and the Role of Protein Dishes. Nutrients, 10(2), 205. https://doi.org/10.3390/nu10020205

³²⁹ Contribuer à l'attractivité des territoires et au bien-être des citoyens. n.d. Soxedo. From: https://fr.sodexo.com/votre-secteur/ecoles-et-universites/collectivites-locales.html

³³⁰ Jeudi, L. 2022. Pour une cantine scolaire de qualité, partout et pour tous, Marie-Pierre Membrives lance. Cantines Revolution. Strip Food. From: https://www.stripfood.fr/pour-une-cantine-scolaire-dequalite-partout-et-pour-tous-marie-pierre-membrives-lance-cantines-revolution/

varied meals, adapted to the nutritional needs of children, with healthy foods. More and more organic food is offered to children, in order to encourage local production and improve the quality of food.

Under the EGAlim law (Agriculture and Food law) of October 2, 2018, three main objectives have been set:

- Paying producers a fair price, to allow them to live with dignity from their work.
- Reinforce the sanitary, environmental and nutritional quality of products.
- Promote healthy, safe and sustainable food for all. ³³¹

France has been making excellent progress on local food and food waste reduction. Their EGAlim law in 2019 was enhanced by the Climate and Resilience Law of 2021 and has resulted in the creation of several regulations to accelerate the transition to a healthier and more sustainable diet, particularly at school canteens: Since 2021, school canteens in France must serve at least one vegetarian meal per week.

- Since 1 January 2022, 50% of the ingredients in meals must be sustainably sourced and of excellent quality (20% of ingredients must be organic).
- In 2025, single-use plastic will be banned in collective catering. 332

Examples of local benefits include a network of farmers in Dijon created to supply locally grown beef to canteens. A vegetable processing centre opened in May 2023 to supply the main municipal kitchen with produce, legumes and fruit from local and certified organic growers. These initiatives already 'bear fruit': food waste has dropped 54% between 2017 and 2021 and 50% of the school canteen budget goes to purchasing high-quality and local products (34% is organic and 14.5% are locally sourced). 333

Ministre de l'Agriculture et de Alimentation.2017. The National Food Conference (États généraux de l'alimentation – EGA. From: https://summitdialogues.org/wp-content/uploads/2021/07/EGA ANG.pdf

³³² Inrae. 2023. Transforming food systems worldwide with school meals. République Français. October 19, 2023. From: https://www.inrae.fr/en/news/transforming-food-systems-worldwide-school-meals#:~:text=How%20can%20school%20canteens%20reduce,1.25%20to%20low%2Dincome%20families.

³³³ Ibid.

Italy's School Food Programs

Overview and Policy

The primary objective of SFPs in Italy is to promote healthy choices with the goal of tackling widespread health issues and creating a healthier population long-term. Although there is no federally funded school meal program in Italy, school meals are served in most regions and municipalities.

The Ministry of Health has defined the national guidelines for school catering, describing the need for students to adopt correct eating habits for the promotion of health and the prevention of chronic-degenerative diseases (diabetes, cardiovascular diseases, obesity, osteoporosis, etc.) where inadequate nutrition is one of the main risk factors. The guidelines were informed by the experiences of school food animators from the twenty regions and municipalities of Italy and by SIAN (the Food Hygiene and Nutrition Service). The Ministry considered management systems, catering models, and the roles and responsibilities of the various institutions involved, before defining the specifications, nutritional aspects, characteristics of the menu, and evaluation techniques for nutritional quality.

School food programs are regulated by the following organizations:

- The Ministry of Health creates the guidelines that define how the menu should be designed. 334
- The Ministry of Environment shapes the Green Public Procurement Law, promoting school canteens to be more sustainable. For example, requiring at least 50% of food to be organic and that washable dishes replace disposable ones. 335
- The Ministry of Agriculture who allocates funds to reward the canteens that use at least 80% organic food. ³³⁶
- The Ministry of Education who defines school canteen organizational guidelines and regulates public contracts (including catering services). 337
- Municipal governments take responsibility for school feeding in Italy as the country's system is fully decentralized and the availability of school canteens varies by regions. Some Municipalities charge families for the full cost of food

https://www.miur.gov.it/documents/20182/0/m pi.AOOGABMI.ATTI+del+Ministro%28R%29.0000021.

14-08-2021.pdf/f2defe64-6a94-2676-f652-7c1ba87d304d?version=1.0&t=1629311928566

³³⁴ Ministero della Salute (Ministry of Health). From: https://www.salute.gov.it/imgs/C_17_pubblicazioni_1248_allegato.pdf
335 See I Criteri Minmili, from: https://www.mite.gov.it/pagina/i-criteri-ambientali-minimi;
https://www.certifico.com/ambiente/documenti-ambiente/257-documenti-riservati-ambiente/12516-criteri-ambientali-minimi-cam-elenco; and RELAZIONE ACCOMPAGNAMENTO CAM Servizio di ristorazione collettiva e fornitura derrate alimentari (DM n.65/2020) from:
https://www.mite.gov.it/sites/default/files/archivio/allegati/GPP/2020/relazione_accompagnamento_ca m_ristorazione_aprile2020.pdf; https://www.mite.gov.it/pagina/piano-dazione-nazionale-sul-gpp
336 In 2017, the Italian Ministry of Agricultural, Food and Forestry Policies created a fund for organic school canteens, with a substantial financial endowment: 4 million euro in 2017, 10 million both in 2018 and 2019, and 5 million starting from 2020, cf. Decree Law no. 50 of 2017. From: Gazzetta Ufficiale della Repubblica Italiana. Testo Coordinato del Decreto-Legge 24 Aprile 2017, n. 50. Available online: https://www.gazzettaufficiale.it/eli/id/2017/06/23/17A04320/sg
337 Ministero dell' Istruzione. 2021. Protocollo d'intesa per garantire l'avvio dell'anno scolastico nel rispetto delle regole di sicurezza per il contenimento della diffusione di covid 19. From:

- in the school canteens, while others charge just 30% of the cost. In addition, some municipalities fully subsidize the cost of food in cases of hardship. 338
- The Italian Ministry of Health has produced specific guidelines for the management of school canteens and the recommended amount of daily nutrient intake for each age group. The National Guidelines for School Catering (2010) from the Ministry of Health was approved in 2018, and defines the roles of the municipality, catering service managers, Food and Nutrition Hygiene Service (SIAN), program leaders, and schools.³³⁹
- The Ministry of the Environment oversees, supports, and rewards the procurement and use of organic local sustainable products and local cuisine in menu design and canteen procedures through Green Public Procurement (GPP). 340 a process from the EU regarding procurement policies and GPP National Action. 341

Funding

The majority of existing programs are funded and managed by regional or municipal governments, in absence of EU or federal funding. Regional and municipal SFP investments primarily support educational projects and promote local or organic produce procurement. Pappa Fish in the Marche region, for example, is a project which supports local fish markets by increasing the consumption of fish in schools, and in turn, promotes the Mediterranean diet in Italy as an educational model for nutrition and health promotion in public schools.³⁴²

³³⁸ Global Child Nutrition Foundation. 2021. Republic of Italy. From: https://gcnf.org/wpcontent/uploads/2022/04/Italy 2022 02 15.pdf

³³⁹ Ministero della Salute, 2018. "Linee di indirizzo rivolte agli enti gestori di mense scolastiche, aziendali, ospedaliere, sociali e di comunità, al fine di prevenire e ridurre lo spreco connesso alla somministrazione degli alimenti." From:

https://www.salute.gov.it/imgs/C_17_pubblicazioni_2748_allegato.pdf

340 The European Union's (EU) Green Public Procurement (GPP) is a process that encourages public authorities to buy goods, services, and works with a reduced environmental impact. See: https://green-business.ec.europa.eu/green-public-

procurement en#:~:text=While%20GPP%20is%20a%20voluntary,product%20groups%20is%20availa ble%20online.

³⁴¹ An important change that affected Italian school meals and Public Food Procurement were the opening of school canteens to lunches brought from home in 2016 (since rescinded) and the measures adopted since March 2020 to contain the COVID-19 pandemic. Disallowing meals from home transfers the responsibility of school food to schools rather than parents. The article concludes that "School meals significantly contribute to the daily food intake of students and are generally more nutritious than meals from other sources, including those brought from home" and that parents of schoolchildren should instead take an active role in food education, something so far almost completely neglected. Pagliarino, Santanera, and Falavigna. 2021. Opportunities for and Limits to Cooperation between School and Families in Sustainable Public Food Procurement. CNR-IRCRES, Research Institute on Sustainable Economic Growth, Italian National Research Council, 10024 Moncalieri, Italy. From: https://www.mdpi.com/2071-1050/13/16/8808/htm); Rosalia Filippini, Ivan De Noni, Stefano Corsi, Roberto Spigarolo, Stefano Bocchi. 2018.

Sustainable school food procurement: What factors do affect the introduction and the increase of organic food? Food Policy, Volume 76, 2018. ISSN 0306-9192. https://doi.org/10.1016/j.foodpol.2018.03.011.

⁽https://www.sciencedirect.com/science/article/pii/S030691921730115X)

³⁴² Bonanomi S, Colombelli A, Bucciarelli B, De Angelis R, Sala A. Serving Local Fish in School Meals: The Nutritional Importance of Consuming Oily Fish. Sustainability. 2019; 11(14):3990. https://doi.org/10.3390/su11143990

The meal cost of school food programs varies with some municipalities co-financing the program and others requiring families to cover the full amount. The cost for families also varies based on income level where low-income families may pay reduced fees or receive a full subsidy. The average meal ranges from $\{0.20 - 0.60 \}$ depending on the type of program, food preparation method used, quality of ingredients, and if co-financing from the ministry is provided.

Food Literacy Education

There is no federal mandate for food literacy education although initiatives are encouraged by the Italian Ministry of Education through the Guidelines for Food Education. In Italy, 81% of schools organize food education courses and 63% offer extra-curricular activities regarding food.³⁴⁴

An example of a former educational initiative with excellent results was MaestraNatura, an innovative nutrition education program aimed at both enhancing awareness about the importance of a healthy food-lifestyle relationship and the ability to transfer the theoretical principles of nutrition guidelines to everyday life. The project delivered the basic knowledge necessary for the understanding and proper application of the nutritional principles contained in the Italian Food Guide Pyramid. It was delivered to students aged 6 to 13 from 2012 to 2017 with excellent results. Another example is *School Food for Change*, an initiative of Slow Food and the largest project for school canteens in Italy, is designed to foster education for students, teachers, parents, and other decision-makers. 346

Nutrition

Adherence to the nutritional guidelines from the Ministry of Health is voluntary. Although the responsibility of implementation of school food programs belongs to municipalities, the Italian government encourages regions and municipalities to promote healthy choices and habits for children's diets to tackle widespread health issues and create a healthier population.³⁴⁷ The EU further influences school food nutrition with their <u>Farm to Fork Strategy</u>, encouraging fair, healthy, and environmentally friendly food systems.³⁴⁸

³⁴³ The Coalition for Healthy School Meals. 2021. Italy's School Food Program Webinar. From: https://www.youtube.com/watch?v=hD2FYO1JWeU

³⁴⁴ Frontiers in Sustainable Food Systems. 2024. State school catering in Italy during the COVID-19 pandemic: a qualitative study. May 1, 2024. From: https://www.frontiersin.org/journals/sustainable-food-systems/articles/10.3389/fsufs.2024.1387100/full

³⁴⁵ Scazzocchio B, Varì R, d'Amore A, Chiarotti F, Del Papa S, Silenzi A, Gimigliano A, Giovannini C, Masella R. Promoting Health and Food Literacy through Nutrition Education at Schools: The Italian Experience with MaestraNatura Program. 2021. Nutrients. 2021 May 4;13(5):1547. PMID: 34064365; PMCID: PMC8147768. Doi: 10.3390/nu13051547.

³⁴⁶ The Coalition for Healthy School Meals. 2021. Italy's School Food Program Webinar. From: https://www.youtube.com/watch?v=hD2FYO1JWeU; Food for Change Campaign. n.d. Slow Food. From: https://www.slowfood.com/get-involved/food-for-change-campaign/

³⁴⁷ Galli F, Brunori G, Di Iacovo F, Innocenti S. 2014. Co-Producing Sustainability: Involving Parents and Civil Society in the Governance of School Meal Services. A Case Study from Pisa, Italy. Sustainability. 2014; 6(4):1643-1666. https://doi.org/10.3390/su6041643

³⁴⁸ E.U. Science Hub. 2015. School food policy country factsheets. European Union. From: https://ec.europa.eu/jrc/en/publication/school-food-policy-country-factsheets

Implementation

Italian school meals benefit from a dietary and constitutional framework that guarantees 'children's rights to local and healthy food' while promoting teaching programs on salutary nutrition and sustainable consumption.³⁴⁹

The National Guidelines for School Catering (2010), and the definition of Minimum Environmental Criteria (CAM) from the Italian Ministry of Environment and the Protection of Natural Resources specifically request the inclusion of organic food in public procurement to reduce the impact on the environment during the production phase. 350 Beyond organic food and in the application of the GPP, CAM emphasizes the need for food quality, freshness and healthiness as well as regional food specialities. The care for Italian values, traditions and individual well-being leads people to retain control over their food and have a higher disposition to the introduction of organic and quality products in their eating behavior, influencing SFP purchasing power. 351

In 2020, Linee Di Indirizzo Nazionale Per La Ristorazione Scolastica offered approaches for addressing school canteens and hospitals including the elimination of preserved meat, reduction of red meat, and the promotion of whole grain foods per the WHO 2015 and IARC 2019 recommendations. The role of the canteen commissioners was also enhanced. Canteen commissioners act as a representative body with the municipality and service provider and perform roles and functions with specifications related to promoting healthy eating styles. Their roles include:

- Acting as a liaison between the user, the municipality, the school, and the ASL, including reporting user suggestions and complaints.
- Monitoring the acceptability of the meals and methods of providing the service through evaluation forms.³⁵²

Italian school food traditionally follows the principles of a Mediterranean diet, with emphasis on the inclusion of culturally significant foods.³⁵³ Some successful examples of regional and municipal school canteens include:

- Cremona region, they frequently rank at the top of the list.
- Fano School Canteen in the Marche region ranked first in 2023.
- Bio Scuola in Perugia uses 90% organic, local food.
- In Caggiano, parents provide produce from their gardens and payment varies based on their contribution. 354

³⁴⁹ Linee Di Indirizzo Nazionale Per La Ristorazione Scolastica. 2010. Ministero dell Salute. From: https://www.salute.gov.it/imgs/C_17_pubblicazioni_1248_allegato.pdf ³⁵⁰ Ibid.

³⁵¹ Ibid.

³⁵² Foodinsider, IT. 2020. Guidelines for School Catering. From:

http://www.foodinsider.it/commissione-mensa/linee-di-indirizzo-della-ristorazione-scolastica-2020/ 353 Hee and Mikkelson, 2010). Does organic school food service provide more healthy eating environments than their non-organic counterparts? Foodscape Series Report no. 1. Aalborg University. From: https://orgprints.org/id/eprint/17423/1/6th version.pdf

³⁵⁴ The Coalition for Healthy School Meals. 2021. Italy's School Food Program Webinar. From: https://www.youtube.com/watch?v=hD2FYO1JWeU

Organizations such as Slow Food and Foodinsider benefit programs by supporting municipalities in shortening food chains, procuring seasonal and local fresh foods, integrating food education into their programs, and training implementers in responsible canteen management. Foodinsider for example, monitors the menu quality for school canteens. Foodinsider for example, monitors the menu quality for school canteens. Foodinsider for example, monitors the menu quality for school canteens. Foodinsider for example, monitors the menu quality for school canteens. Foodinsider for European Schools for Healthy Food project. Their Pensa che Mensa! (Dream a Canteen!) initiative offers training courses in the field of food education aimed at public administration operators responsible for the management of canteen services and at decision-makers in drafting catering and procurement contracts.

Regional technical documents such as the Guidelines *of the Friuli Venezia Giulia Region for School Restaurants* describe an example of the proper organization and management of school catering services. The document was developed by a technical group at the Directorate General for Food Safety and Nutrition of the Ministry of Labor, Health, and Social Policies, aiming to address all operators of collective catering. It highlights information at a national level to improve the quality in various aspects, particularly nutrition, and the organization and management of catering services, defining the tender specifications, and providing a meal suited to the needs for different age groups while educating children on positive eating habits.³⁵⁷

The Guidelines also focus on various aspects that combine food with the environment, production areas and culture, supporting evidence that the habits, lifestyles, and behaviours of young people persist into adulthood and have significant effects in terms of health. The food supply model identified by public administrations is also noted to interact significantly with some elements transversally connected to nutrition and consistent with the principle of health in all policies. ³⁵⁸ The guidance within the document follows the ministerial program Gaining Health and represents a concrete articulation of the commitments shared by the Region with Anci Fvg and Federsanitá Anci Fvg (the Friuli Venezia Giulia (FVG) federation of health). Through intersectoral strategies, the overall objective is to develop joint initiatives to promote healthy behaviors in all aspects of school canteen services. They feel the special sensitivity on the theme of food for the new generations allows them to expand the awareness and values that food conveys, adopting the high principles of the right to food, access to healthy and nutritious meals, sustainability, solidarity, and equity. ³⁵⁹ School catering therefore becomes a context where health is co-produced and an

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Forest Stewardship Council. 2016. Italy Approves Green Public Procurement Law. From: https://fsc.org/en/newsfeed/italy-approves-green-public-procurement-law
 Filippini, R., De Noni, I., Corsi, S., Spigarolo, R., Bocchi, S. 2018. Sustainable school food procurement: What factors do affect the introduction and the increase of organic food? Food Policy, Volume 76, 2018. ISSN 0306-9192. https://doi.org/10.1016/j.foodpol.2018.03.011.
 (https://www.sciencedirect.com/science/article/pii/S030691921730115X); Slow Food Educa. n.d. Pensa che Mensa! From: https://www.slowfood.it/educazione/altri-progetti/pensa-che-mensa/
 Guida Della Regione Friuli Venezia Giulia Per La Ristorazione Scolastica. 2012. From: http://www.regione.fvg.it/rafvg/export/sites/default/RAFVG/famiglia-casa/politichefamiglia/FOGLIA30/allegati/lineeGuidaRistorazioneScolastica_allegatoDGR_2188_2012.pdf
 Guida Della Regione Friuli Venezia Giulia Per La Ristorazione Scolastica. 2012. From: http://www.regione.fvg.it/rafvg/export/sites/default/RAFVG/famiglia-casa/politichefamiglia/FOGLIA30/allegati/lineeGuidaRistorazioneScolastica_allegatoDGR_2188_2012.pdf;
 Ibid.

environment designed to support well-being in a combination of synergies between administrations and civil society, which finds a natural candidate for the application of the actions identified by the WHO in the document "Health 2020." 360

Food Literacy Education

There is no federal mandate for food literacy education, but *School Food 4Change*, an initiative of the EU, in collaboration with Slow Food in Italy is the largest project for school canteens in Italy.³⁶¹ It is designed to foster education for students, teachers, parents, and other decision-makers.

Oversight

A whole school approach is prioritized in Italy and integrated within laws. The 'Commissione Mensa' (Canteen Commission) involves families in the monitoring and evaluation of the quality of school meal services. 362 Each school must appoint its own 'Commissione Mensa' which includes a number of parents, appointed for three years, who can visit the school in groups of two, unannounced, any time during the term. According to Food Insider Italy:³⁶³

The Canteen Commission represents an institutional oversight committee recognized within the National School Catering Guidelines. 364 It is a form of 'participation' that can affect the quality of the service if the Administration is willing to open up to a dialogue. In Italy there are different methods of 'participation' that depend precisely on the policy of the Municipalities and the ability of parents to enter into a relationship with the various 'actors' and 'directors' of the school canteen. 365

https://www.macrotrends.net/countries/ITA/italy/healthcare-spending; World Health Organization. Regional Office for Europe. (2013). Health 2020: a European policy framework and strategy for the 21st century. World Health Organization. Regional Office for

Europe. https://iris.who.int/handle/10665/326386

³⁶⁰ Guida Della Regione Friuli Venezia Giulia Per La Ristorazione Scolastica. 2012. From: http://www.regione.fvg.it/rafvg/export/sites/default/RAFVG/famiglia-casa/politichefamiglia/FOGLIA30/allegati/lineeGuidaRistorazioneScolastica allegatoDGR 2188 2012.pdf; State of Health in the EU. 2019. Italy Country Health Profile 2019. European Commission. From: https://www.euro.who.int/__data/assets/pdf_file/0010/419464/Country-Health-Profile-2019-Italy.pdf; Italy Healthcare Spending 2000-2022. Macrotrends. From:

³⁶¹ School Food 4Change. n.d. School Food 4Change aims to make school meals enjoyable and healthy for both our children and our planet. From: https://schoolfood4change.eu/about/; L'Università degli Studi di Scienze Gastronomiche. n.d. SF4C – SchoolFood4Change. From: https://www.unisg.it/en/ricerca/school-food4change/

³⁶² Guidelines for School Catering. 2020. Foodinsider, IT. From:

http://www.foodinsider.it/commissione-mensa/linee-di-indirizzo-della-ristorazione-scolastica-2020/ ³⁶³ FoodInsider.it. 2024. The Canteen Commission. Associazione Foodinsider Aps CF 97884290152. From: https://www-foodinsider-it.translate.goog/commissionemensa/? x tr sl=it& x tr tl=en& x tr hl=en& x tr pto=sc

³⁶⁴ Linee Di Indirizzo Nazionale Per La Ristorazione Scolastica. 2010. Ministero dell Salute. From: https://www.salute.gov.it/imgs/C_17_pubblicazioni_1248_allegato.pdf

³⁶⁵ According to Food Insider: The most advanced realities scale the canteen commission to a citizen committee that becomes a true model of civic participation where citizens, in this case a representation of parents and canteen commissioners contribute to the decision-making process on a topic of public interest such as children's nutrition at school. The committees who sit at a discussion table with the institutions, have the opportunity to improve the service especially by asking for

Challenges and Benefits

Due to fragmentation, there are vast differences in program practices and standards throughout Italy and within schools in the same region or municipality. A well designed and funded national school meal program with mandated nutrition policies and standards that is developed with regional and municipal participation would support consistent and acceptable program deliveries throughout Italy. Adding food literacy education to curriculum across the country would help ensure students' future health.

Due to this fragmentation, the outsourcing of school canteens to private enterprises has had mixed results as to the inadequate provisions of quality meals. Fortunately, efforts are ongoing to reorganize and re-internalize foodservice to improve quality and sustainability and reduce waste and some contract caterers and municipal providers are providing some of the best programs in Europe. 366

An example of catering excellence is Qualità e Servizi whose mission as a collective catering company is to distribute high quality meals to schools.³⁶⁷ They are committed to quality food as a source of well-being and as a vehicle for education and development. They respond to requests for co-participation and support a local "circular economy". They package approximately 9000 meals daily and consider socio-environmental sustainability and the educational impact of its work.³⁶⁸

In Rome, almost 92% of the schools prepare their own meals on site in 645 different schools for three- to fourteen-year-olds and 180 kindergartens for children up to three years of age (high school students start classes early and finish in time to return back home for lunch). Their "Quality Revolution" project has increased the inclusion of organic food in 69% of menu items. School meals represent 40% of public catering in Rome; they offer approximately 140.000 meals each day plus a mid-morning snack for all children (reaching a total amount of 150 tons of food per day, which are 190 day per year); of the total meals served, 4.000 are based on special recipes for medical, ethical or religious reasons.

changes to the menu, new recipes and a different quality of ingredients. Canteen Committees interface with local institutions that initiate inclusive decision-making processes through a structured dialectic whose objective is to generate a widely shared decision.

This is the theory. In practice, the reality is extremely heterogeneous. There are examples of effective committees, but in a few situations representative bodies of canteen commissions have gone unheard. See: https://www-foodinsider-it.translate.goog/commissione-

mensa/?_x_tr_sl=it&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc 366 lbid.

³⁶⁷ Qualità & Servizi. 2024. From: https://www.qualitaeservizi.com/ ³⁶⁸ Ibid.

³⁶⁹ Elena Messina, E. and Bossi, L. 2015. Rome: When school canteens become the biggest organic restaurant of the whole country. Cities, Territories, Governance. From: https://www.citego.org/bdf fiche-document-

¹³²⁹_en.html#:~:text=The%20%E2%80%9CQuality%20Revolution%E2%80%9D%20project%20tried ,system%20of%20food%20and%20agriculture.

Denmark's School Food Programs

Overview and Policy

Denmark does not have a national school food program. Most jurisdictions rely on parents to continue a Danish tradition called '*madpakke*,' a school-packed lunch from home. Despite Denmark's highly developed welfare society, the packed lunch culture persists in most towns and food in schools primarily remains a parental duty.³⁷¹

Nevertheless, the City of Copenhagen has been making significant progress towards a school food program with an initiative called *Food Schools*. ³⁷² The program takes a holistic view on quality, taste, health, and student involvement since 2007. The initiative's goal is to change the mindset of Copenhagen's citizens about eating, beginning with pupils and their parents. The concept encourages youth to think about the food they choose to eat and create a link between diet and identity. ³⁷³

Funding

The Copenhagen municipality historically offered free and reduced-priced meals in their SFP and has recently agreed to provide 100% funding for school meals so all families can access school food programs.³⁷⁴ The funding covers the costs associated with meals and staffing.

In 2024, the price for one school meal in Copenhagen ranged from €3.50 - €4.50 with a 2024 menu listing 27 kroner (\$5.35 CAD) for a typical lunch.³⁷⁵ Production costs included, the average price was actually \$8.00 - \$10.00 CAD per meal. In the absence of national school food funding, the municipality of Copenhagen provides approximately eight to ten million Canadian dollars of funding per year. However, building a fully equipped school food kitchens represent an additional investment.

The City of Copenhagen's "Madskoler" designation of a culinary or food school, indicates that the school has its own on-site production kitchen and staff, who prepare lunch for the students every day. In this program, students in grade 4-6 help out in the kitchen on a rotation basis. Cooking and knowledge about food sustainability, animal welfare, and nutrition are therefore an integral part of life at the school. 376

³⁷¹ A madpakke typically contains a freshly made sandwich with rye bread and a type of protein, to be eaten in 15-20 minutes during a designated classroom break.

³⁷² Martinez. L. 2015. Towards a sustainable public food service in Copenhagen using the lever of education and training. Cities Territories Governance. From: http://www.citego.org/bdf_fiche-document-1327_en.html
³⁷³ Ibid.

³⁷⁴ The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo

³⁷⁵ Eat School Lunch. 2024. From: https://eat.kk.dk/om-eat/priser-og-vilkaar#:~:text=Eat%20tilbyder%20hver%20dag%20to,(2024)%20sammen%20med%20frokosten.; Also see: https://www.kk.dk/sites/default/files/agenda/b2594be0-4736-4feb-be07-ffe11958183c/7ae7d47c-a7b0-45ce-9290-6a850bf9ea8f-bilag-12.pdf

³⁷⁶ Ibid.

Food Literacy Education

In Copenhagen, *Food Schools* not only provide healthy, nutritious meals for students but also increase food literacy and use food environments as a learning space for gastronomy. *Food Schools* encourage students to participate in menu planning and daily food-production processes with the chefs. A team of six students will spend the day in the kitchen with professional chefs, participating in and discussing the production process, from preparation to service.³⁷⁷

While school feeding programs have not achieved national traction, a growing number of initiatives across the country view food as a vehicle for learning. Nationally, the Danish National Board of Health created a typology in 1999 of how the nation has changed over time. Food is shown as a social welfare project to promote health equity with students acting as the recipients of a public benefit. Food is a pedagogical endeavor in which it is both prepared with student involvement and presented as a didactic resource.³⁷⁸

In schools, home economics was renamed 'Food Knowledge' and requires additional lessons, instructor credentials, and an examination in older grades. Informed by sensory research and taste didactics, this training also encourages Danes to view taste as a vehicle for fostering critical awareness rather than something to be 'fixed'.

A national food '*Bildung*' program, a German term referring to learning that is integrated into one's own life and understanding of oneself (i.e., life-long learning), was also launched by the government for teachers. In Denmark 'food *bildung*' represents a central concept of 'food literacy' and 'food systems.'³⁷⁹ It has expanded meaning to include not just the ability to make choices about food related hands-on skills, but to relate to food as a social factor and a source of pleasure.³⁸⁰

The LOkal Mad/LOMA-local food project (LOMA) in Denmark is another innovative school food concept that involves students in the production kitchen using local ingredients, supporting learning, health, wellbeing, and sustainability through integrating food and meals into teaching. Students at participating schools are involved in food preparation and menu planning. Simultaneously, food preparation is integrated into the school curriculum. Schools are required to work with local food suppliers to arrange school excursions or host experts as guest lecturers in classes. Using the LOMA model, the municipality of Svenbo utilized EU regulations to create contract tenders that can be filled with local sourcing. These

³⁸⁰ Ibid.

³⁷⁷ The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo ³⁷⁸ Ibid.

³⁷⁹ Dyg, P.M. (2014: Fostering Food Literacy and Food Citizenship through Farm-School Cooperation and beyond - Theoretical perspectives and case studies on farm-school cooperation and food and agriculture education." Pg 28. From:

https://www.researchgate.net/publication/265090948_Dyg_PM_2014_Fostering_Food_Literacy_and_Food_Citizenship_through_Farm-School_Cooperation_and_beyond_-

_Theoretical_perspectives_and_case_studies_on_farm-school cooperation and food and agriculture educ;

³⁸¹ Field to School. 2022. LOMA project. Erasmus+ programme of the European Union. From: https://www.fieldtoschool.eu/denmark-1

contracted food producers not only to take part in the learning process and guest teaching but also open their production sites to school tours.³⁸²

Nutrition

Denmark's national nutritional guideline focuses on plant-based food, sustainable food procurement, including organic food use. ³⁸³ The Copenhagen *Food Schools* additionally are intended to:

- Act as a tool to solve health inequality through increasing access to tasty and healthy food regardless of social status or economic situation.
- Gradually integrate the food strategy of the city: healthy, green, and sustainable. 384

Implementation

To address the gaps created from the absence of a school food culture in Denmark, the Copenhagen Municipality proposed two solutions: (1) building kitchens in schools (*Food Schools*) and (2) establishing an 'EAT', a central kitchen that provides meals to several schools, a commissary kitchen that produces, packs, and transports meals to schools each school day.³⁸⁵

Food service delivery: Most schools in Copenhagen follow one of the two schemes, either in the form of EAT or as a Food School. For both schemes, low-income families can apply for a financial subsidy for school meals.³⁸⁶

Currently, there are sixteen *Food Schools* in Copenhagen including twelve *Folkeskolers* (public schools) and four Danish special schools for children diagnosed with special conditions (ADHD, autism, etc.).³⁸⁷ *Food Schools*:

Provide approximately 5000 meals per day.

³⁸² Fieldtoschool.eu. n.d. Loma Case Study. LOMA - LOkal MAed (Local Food). From: https://www.fieldtoschool.eu/user_uploads/Guidelines/Case%20studies/Denmark/LOMA%20case%20study.pdf

³⁸³ Food and Agriculture Organization of the United Nations. n.d. Food-based dietary guidelines-Denmark. From: https://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/Denmark/en; European Committee of the Regions. 2018. Sustainable public procurement of food. From: https://cor.europa.eu/en/engage/studies/Documents/sustainable-public-procurement-food.pdf; Oberst, L. 2016. Denmark is on its way to becoming an organic country. Food Revolution Network. From: https://foodrevolution.org/blog/denmark-organic-country/

³⁸⁴ The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo

³⁸⁵ Haynes, M. 2019. The Local. 17 May 2019. From: https://www.thelocal.dk/20190517/the-danish-schools-where-the-kids-make-the-dinners/

See the Implementation section for more on Food Schools and EAT. The Appendix has more information on Copenhagen's school food initiatives.

³⁸⁶ Københavns Kommune. n.d. From: https://www.kk.dk/borger/pasning-og-skole/skole-og-fritid/skole-og-fritidsinstitution/mad-i-skole-og-fritidsinstitution

³⁸⁷ The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo; Houlberg, K. Andersen, V.N., Bjørnholt, B., Krassel, F., Pedersen, L.H. 2016. Country Background Report-Denmark. Danish Institute for Local and Regional Government Research (KORA) for the Danish Ministry of Education. OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (School Resources Review. From: https://www.oecd.org/education/school/10932_OECD%20Country%20Background%20Report%20Denmark.pdf

- Act as decentralized organizations and production centres, occasionally receiving central support and development from the local municipality.
- Consults with private professionals on the menu's gastronomy.
- Aim to provide foods that are 90 to 100% organic, seasonal, and cooked from scratch, pushing the limitations of public food procurement rules and markets.
- Offer venues with tables for children to eat together. ³⁸⁸

Each *Food School* determines what is included on their menus and students participate through apprenticeships in the kitchen with the chefs. In contrast, EAT schools have a fixed menu for three months at a time where meals are portioned, packaged, and delivered to the classrooms where students eat. *Food Schools* have been identified as the ideal school model for future investment. However, they currently do not operate within post-secondary schools or with external organizations.

Schools in Copenhagen have diverse student cultures which are considered when designing menus. Some schools host weekly themes for their foods to the learning and celebrations of diverse cultures. 53 schools serve meals from centralized EAT kitchens, providing approximately 6,000 meals per day.³⁸⁹

EAT kitchens are commissary catering kitchens, mass-producing meals for distribution to schools. ³⁹⁰ Dishes primarily represent Danish cuisine, mixed with some foreign and vegetarian dishes. Two main dishes are produced each day, one of which is always vegetarian. Other EAT school characteristics include:

- EAT facilities are designed to provide meals for at least 30% of the city's students, producing approximately 150 meals per day within their small facilities.
- Food is 905 to 100% organic.
- Meals are prepared in EATs, then reheated and plated in the schools' kitchens
- EAT crews are responsible for meal preparation. They typically involve a chef and may include at least six students or an entire class. Typically, the more students participating in the EAT crew correlates with a higher number of meals sold.³⁹¹
- EAT kitchens are logistically complex and therefore expensive to operate. They involve planning related to production, menu, and meal development while meeting both the parents and students' expectations as well as the country's nutrition requirements.
- EAT kitchens are equally equipped and standardized (despite different capacities) for non-culinary professionals to operate. Detailed instructions and

³⁸⁸ The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo

³⁸⁹ Houlberg, K. Andersen, V.N., Bjørnholt, B., Krassel, F., Pedersen, L.H. 2016. Country Background Report-Denmark. Danish Institute for Local and Regional Government Research (KORA) for the Danish Ministry of Education. OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (School Resources Review. From:

https://www.oecd.org/education/school/10932_OECD%20Country%20Background%20Report%20Denmark.pdf

³⁹⁰ Ibid.

³⁹¹ Ibid.

- standard procedures are posted in the kitchens for food quality standardization and control.
- EAT kitchen staff is centrally employed. ³⁹²

Food procurement: Organic food procurement is an important goal in Copenhagen. Following the national mindset shift of food consumption and the city's sustainable goals, the city has decided (within the nation's *Public Organic Procurement Policies (POPPs)*; a policy model which encompasses education and training of food service staff, procurement procedures, and change of attitudes, processes, routines, and supply chains) to aim for 90% organic in food purchasing.³⁹³ However, only a few high schools and colleges currently provide organic and vegetarian food for students.

Oversight

Engaged participants share responsibility for the oversight of school meals. Nationally and regionally, food is linked to some of the UN-SDGs and is a politically emphasized objective to achieve in both schools and the local community.

Challenges and Benefits

Copenhagen has done well developing their school meal programs and represents an excellent model for a national school food program in Denmark which, at minimum, should support the funding of school food related programs. Expansion of the Copenhagen SFP models with local modifications and federal funding to provide universal school meals would benefit students.

Most schools in Copenhagen have a school meal scheme. Either in the form of EAT or as a *Food School*, with its own production kitchen and dining area where the school eats together. The school lunch in Copenhagen is commendable for the following reasons:

- Healthy and climate-friendly meals with a minimum of 90% organic.
- Menus with consideration for time of year and seasons.
- As high a degree of student involvement as possible. Students learn by doing and through this gain knowledge about healthy food, diet and exercise.
- Includes fresh ingredients in season and a good nutritional balance are highly valued in the eat food. You can see a nutrition declaration for each meal when you order. The Eat food may contain traces of peanuts, nuts, sesame and gluten. ³⁹⁴

³⁹² The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo; Also see:

https://sluseholmen.aula.dk/sites/sluseholmen.aula.dk/files/arkiv/Download_filer/eat-infomateriale%202021%20engelsk.pdf; and https://eat.kk.dk/

³⁹³ Organic on every table. n.d. IFOAM Organics Europe. From: https://euorganic2030.bio/initiatives/organic-on-every-table/

³⁹⁴ Eat School Lunch. n. d. Welcome to eat school food. København Kommune. From: https://eat-kk-dk.translate.goog/om-eat/hvad-er-der-i-

skolemaden?_x_tr_sl=da&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc; København Kommune. n. d. Food in schools and leisure institutions. From: https://www-kk-dk.translate.goog/borger/pasning-og-

skole/skole-og-fritid/skole-og-fritidsinstitution/mad-i-skole-og-fritidsinstitution?_x_tr_sl=da&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc

Germany's School Food Program

Overview and Policy

Germany has a harmonized national school food program with most funding and policy provided at the federal state level. The national government offers some funding for the cost of school food for those living in low-income households as described below and furnishes food policies that help provide a coordinated school food environment at the federal state level.

Each federal state government is responsible for education and school meals within its borders, resulting in a broad variety of institutional, organizational, and financial structures of school meal models. Prior to 2003, the school day was completed by noon therefore rendering at-school lunches unnecessary. However, with the expansion of the all-day-school model in 2003, at-school meals became a requirement, leading to the professional involvement of large global contract caterers such as Sodexo, in school meal provision, especially in western Germany. 395

There are over 2.6 million full-time students who may eat lunch at school across Germany, in tens of thousands of canteens. Students may bring lunch from home, purchase it outside of school, or at the school canteen. 37.4% of German students reported participating in school lunch. However, urban areas and regions in eastern Germany were shown to have higher participation rates. Participation rates varied considerably between school types, with the highest rates among elementary schools and the lowest rates among lower secondary school students. Cost, the taste of food, and break-time were the most prominent reasons for students not participating in lunch.

Policy

Five ministries are involved in the design of healthy and sustainable meals: the Ministry of Science and Education, the Ministry of Food and Agriculture, the Ministry of Environment and Nature Conservation, the Ministry of Health, and the Ministry of Family Affairs, Senior Citizens, Women & Youth. Specific departments within each ministry in all 16 federal states develop their strategies independently, although they share content.³⁹⁸

National laws regulating food are in place for federal states to follow. Regulation (EC) No 178/2002 provides general principles and requirements of food laws

³⁹⁵ Strassner, C., Noelting, B., Reimann, S. 2009. School food provision in Germany. From; https://orgprints.org/id/eprint/17418/1/Paper_submission_-_Strassner.pdf

³⁹⁶ United Nations Climate Change. 2023. Climate-Efficient School Kitchens and Plant-Powered Pupils | Germany. United Nations Global Climate Action Awards. From: https://unfccc.int/climate-action/momentum-for-change/planetary-health/climate-efficient-school-kitchens-and-plant-powered-pupils#:~:text=There%20are%20over%202.6%20million,tens%20of%20thousands%20of%20canteen

³⁹⁷ Sobek C, Ober P, Abel S, Spielau U, Kiess W, Meigen C, Poulain T, Igel U, Vogel M, Lipek T. 2021. Purchasing Behavior, Setting, Pricing, Family: Determinants of School Lunch Participation. Nutrients. Nov 24, 2021;13(12):4209. doi: 10.3390/nu13124209. PMID: 34959761; PMCID: PMC8706800.

³⁹⁸ German Federal Ministries. n.d. From: https://www.deutschland.de/en/topic/politics/germany-and-europe/federal-ministries

(Lebensmittel-Basisverordnung, [LM-BasisVO]). It applies directly in all EU member states and fundamentally regulates how the protection of health and the prevention of fraudulent, or deceptive practices is guaranteed at all stages of the process. In addition, the European Union's Farm to Fork Strategy for a fair, healthy and environmentally friendly food system includes several guiding principles for members to follow including food safety, transparency, risk management, and traceability, to name a few. Another general principle is the responsibility of food businesses, specifically to the duty of care.³⁹⁹

Federal states are additionally responsible for establishing educational curriculum and the requirements of nutrition in schools. Communities participate through building schools, designing eating rooms, hiring contacting caterers, establishing school room financing, and personnel management. The national government may additionally provide investments in school infrastructures and buildings where necessary.

The establishment of all-day schools, by resolution of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), obligated schools to offer lunch. 400 According to the KMK, this impacts approximately 3.5 million school children nationwide. 401 The implementation varies from state to state, municipality to municipality, and school to school. Unfortunately, "nationwide there is not even a regulation as to whether it has to be a warm meal or whether a cold meal is sufficient." 402

Funding

Funding is provided by school authorities at the community level. This includes financing for some costs including infrastructure, administrative, and some personnel expenses. Parents of students are responsible for covering costs associated with food, and partial personnel and operating costs.

Nationally, the "Education and Participation" program provides free lunches for children of households at risk of poverty. In 2020, only 25% of eligible people applied for and redeemed free lunch through this program, due to reasons including difficulty

³⁹⁹ DGE Quality Standard for Meals in Schools. 2022. In Form. DGE, Bonn. From: https://www.nqz.de/fileadmin/nqz/publikationsdateien/DGE_QST_Meals_Schools.pdf; Food and Agriculture Organization of the United Nations. 2020. Agroecology Knowledge Hub. European Union's Farm to Fork Strategy – for a fair, healthy and environmentally-friendly food system. From: https://www.fao.org/agroecology/database/detail/en/c/1277002/#:~:text=The%20strategy%20has%20 27%20concrete.for%20farmed%20animals%20and%20aquaculture

⁴⁰⁰ The Standing Conference of the Ministers of Education and Cultural Affairs is the oldest conference of ministers in Germany and plays a significant role as an instrument for the coordination and development of education in the country. It is a consortium of ministers responsible for education and schooling, institutes of higher education and research and cultural affairs, and in this capacity formulates the joint interests and objectives of all 16 federal states. See: https://www.kmk.org/kmk/information-in-english/standing-conference.html

⁴⁰¹ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU; Diehl, D. 2021. Lots of Cooks No Recipes. Tagesschau. From: https://www-tagesschau-de.translate.goog/inland/gesellschaft/schulessen-105.html? x tr sl=de& x tr tl=en& x tr hl=en-US& x tr pto=sc

ttps://www.youtube.com/watch?v=9bdgtEBYnjU; Diehl, D. 2021. Lots of Cooks No Recipes. Tagesschau. From: https://www-tagesschau-de.translate.goog/inland/gesellschaft/schulessen-105.html? x tr_sl=de& x tr_tl=en& x tr_hl=en-US& x tr_pto=sc

applying and a time-consuming or unclear process.⁴⁰³ Meanwhile Berlin, the federal state and city, since 2019, has offered free school meals for students in grades one through six, with costs borne by the taxpayer.⁴⁰⁴ As of 2020, funding per serving of a school meal in Berlin was increased so that an organic share of 50% can be achieved and regional foods used when available.⁴⁰⁵ Outside the state of Berlin, the amount spent on school food fees varies geographically, resulting in an average cost for parents of 3-4 euros per meal, per day.⁴⁰⁶

Approximately 60% of school food service personnel are paid or paid-in-part by local school authorities with the remaining 40% paid by parents.⁴⁰⁷

Kitchen equipment is covered by local school authorities fully or in part for approximately 93% of schools that maintain their own kitchens. 408 56% of the operating costs, such as electricity and water, are paid directly by the schools. 47.5% of schools in Germany have dining rooms. 409 Furniture and fixtures within the dining rooms are fully or partially funded by local school authorities. 410 The remaining costs are negotiated between the schools and the contract caterers depending on the individual system 411

Food Literacy Education

Nutrition education is not a central subject in German schools. In approximately 44.6% of schools that have kitchens, students have weekly learning sessions in which they are taught what foods are considered healthy and learn how to prepare them.⁴¹²

School run kiosks offering snacks and are led by students, parents and teachers and provide hands-on food literacy and ownership experience, with some kiosks focusing on fair trade and organic food products. Student involvement includes the principles of staged responsibility.⁴¹³

⁴⁰³ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU

⁴⁰⁵ Blog über Schulverpflegung und Schulessen. 2020. Die Schulköche GmbH. From: https://dieschulkoeche.de/blog-schulverpflegung-schulessen-berlin/

⁴⁰⁶ Ibid.

⁴⁰⁷ Ibid.

⁴⁰⁸ Ibid.

⁴⁰⁹ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU

⁴¹⁰ **Ibid**.

⁴¹¹ Ibid.

⁴¹² School Food Policy Country Factsheets. 2011. European Commission, From: https://ec.europa.eu/jrc/sites/default/files/jrc-school-food-policy-factsheet-germany_en.pdf; The German Nutrition Society (DGE). n.d. From: https://www.dge.de/en/

⁴¹³ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU.

Nutrition

Germany sets food and nutrient standards for school food through the German Nutrition Society (DGE), although it is not followed by all states. The German Ministry of Food and Agriculture (BMEL) has campaigned for quality standards for school lunches to be adopted in all schools since school catering is the responsibility of the municipalities as school authorities. However, there are currently no binding requirements on the part of state government to promote high-quality and child-friendly food in school although the ministry offers an extensive range of support including several model projects.

The German school food philosophy to promote healthy school food includes:

- Increasing mental and physical performance during the school day.
- Avoiding or reducing nutrition-related chronic disease.
- Contributing to the enjoyment and well-being of students.
- Improvement of the immune system.
- Improvement of quality of life.
- Promoting sustainable eating behavior. 417

Additionally, there are four goals for consideration when discussing sustainable nutrition:

- (1) Health: Health-promoting food consumption contributes to higher life expectancy, life expectancy, and a greater well-being for all.
- (2) Social: Food consumption guarantees minimum social standards along value chains.
- (3) Environment: Environment- and climate-friendly food consumption that fits in with Germany's medium and long-term sustainability goals.
- (4) Animal Welfare: Food consumption supports greater animal welfare and thus meets the changing ethical demands of society. 418

In 2016, the Federal Ministry of Food and Agriculture set up a National Quality Center for Nutrition in Day Care Centers and Schools (NQZ) to ensure that children eat well and enjoy eating in all daycare centres and schools in Germany.⁴¹⁹

⁴¹⁴ School Food Policy Country Factsheets. 2011. European Commission, From: https://ec.europa.eu/jrc/sites/default/files/jrc-school-food-policy-factsheet-germany_en.pdf; The German Nutrition Society (DGE). n.d. From: https://www.dge.de/en/

⁴¹⁵ Hundeshagen, C., Rosmann, H., Lindenmeier, J. 2024. The effect of obligatory versus voluntary school food standard implementation on the fulfillment of the school food standard requirements in Germany,

NFS Journal, Volume 37, 2024, 100197, ISSN 2352-3646. From: https://doi.org/10.1016/j.nfs.2024.100197

⁴¹⁶ Taste is a Matter of Luck, 2020, Taz Futurzwei. From: https://taz-de.translate.goog/Standards-beim-Schulessen/!5703158/?_x_tr_sl=de&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc

⁴¹⁷ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU ⁴¹⁸ Ibid.

⁴¹⁹ Nationales Qualitätszentrum für Ernährung in Kita und Schule. 2021. From: https://www.nqz.de/navigation/sub-footer-navigation/english Diehl, D. 2021. Lots of Cooks No Recipes. Tagesschau. From: https://www-tagesschaude.translate.goog/inland/gesellschaft/schulessen-105.html?_x_tr_sl=de&_x_tr_tl=en&_x_tr_hl=en-US&_x_tr_pto=sc

Germany focuses on sustainable school food quality standards and school food management and the German Nutrition Society is currently discussing different projects and action plans to improve school foods, including how to implement them across all federal states.

Implementation

School authorities (including parents, students, teachers) and the community (including networking centers, supported by regional and federal states) work closely together to manage local school food programs, but do not have an established and accepted national system.⁴²⁰

With an increase in demand for all-day schooling, school food is a frequent topic of discussion (in the federal states of Hamburg and Berlin, all-day school are mandated, while other states operate only 50% of schools' all-day). All-day schools are required by the KMK to provide heated meals. Cafeterias, bistros, and kiosks are often included in all-day school environments. In Germany, only 3.4 million students participate in full-day schools from a total school-aged population of 8.6 million students.

Many schools cannot offer or prepare school meals within schools and instead outsource to outside caterers. ⁴²² Approximately 30% of schools do not have established contracts with caterers or lunch providers, therefore, no guarantee of commitment or control of the quality of the food. Even when a contract is in place, meal quality is often not specified clearly and therefore may vary. ⁴²³

Four different catering systems exist which vary in how school meals are prepared. In addition to a fresh or mixed kitchen, the four models consist of the Cook & Serve model, Cook & Chill (chilled food) model, Cook & Freeze (frozen food) model, and the Cook & Hold (warm food) model. As the model names suggest, there are significant differences in the production processes, with dishes either freshly prepared on-site or in an external production facility (see the glossary for details on these methods). Refrigerated and frozen meals are temporarily stored and rethermalized before serving.

Key critical factors for successful school lunch programs according to a contract caterer in Berlin, include:

- Sufficient time is provided for lunch of at least 1 hour.
- Modern, comfortable rooms (dining room, cafeteria, cafeteria), ideally tailored to the different age groups, are provided.
- Staff are friendly and courteous in demeanor when serving food.

⁴²⁰ Nationales Qualitätszentrum für Ernährung in Kita und Schule. 2021. From: https://www.nqz.de/navigation/sub-footer-navigation/english Diehl, D. 2021. Lots of Cooks No Recipes. Tagesschau. From: https://www-tagesschau-de.translate.goog/inland/gesellschaft/schulessen-105.html?_x_tr_sl=de&_x_tr_tl=en&_x_tr_hl=en-US& x tr pto=sc

⁴²¹ Taste is a Matter of Luck, 2020, Taz Futurzwei. From: https://taz-de.translate.goog/Standards-beim-Schulessen/!5703158/?_x_tr_sl=de&_x_tr_tl=en&_x_tr_pto=sc; The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU ⁴²² Ibid.

⁴²³ Ibid.

- Processes for serving food are optimized to reduce waiting times and queues.
- Appealing, varied, and contemporary menus with modern and traditional recipes are offered.
- Consideration of the wishes and expectations of students, parents, and teachers through active participation options (e.g., meal committees, opinion polls) are included. 424

In addition, influences such as volume, the lighting of rooms, and the comfortability of furniture also play a significant role in optimizing the conditions for school catering. Eating rooms should be quiet, comfortable, well-ventilated and the students, school directors, and teachers should be satisfied with all aspects. Teachers are encouraged to provide pedagogical support to the students at lunch, for example by conveying "rules of behavior when eating together" or by promoting a nutrition education.

In practice, it is common for activities such as serving food to be conducted by a partner or by the school itself. 425 Challenges such as low cafeteria lunch attendance amongst older students has led to economic pressure for caterers to optimize their meal revenue by offering desserts. Nearby competition from local bakeries, supermarkets, and fast-food restaurants are favoured by older students as these competitors actively market soft drinks, sweets, and lower-cost meal alternatives to students.

Oversight

The Berlin Senate has developed a detailed quality criteria for the providers of school catering that are regularly reviewed. School and daycare providers are responsible for abiding by the Education and Participation Act which requires detailed structure and frequent monitoring of external quality assurance. School food programs that are self-managed require frequent commissioned inspections and discussions with kitchen staff; whereas programs that are partially managed externally consists of some discussions with meal providers, school staff, and committees in addition to inspections of procured goods and sample meals.

Challenges and Benefits

According to Michael Polster of the German School Catering Network, school lunches in Germany have been criticized as too expensive, too bland, and consisting of little organic content. The network organized a 12th German School Catering

⁴²⁴ Blog über Schulverpflegung und Schulessen. 2020. Die Schulköche GmbH. From: https://dieschulkoeche.de/blog-schulverpflegung-schulessen-berlin/
⁴²⁵ Ibid

⁴²⁶ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU; Senate Administration for Education, Youth, and Family Affairs. 2024. New in German? Information and Helpful Advice on Schools in Berlin. From: https://www.berlin.de/sen/bjf/gefluechtete/elternbooklet_neuzugewanderte_en.pdf; Also see: www.berlin.de/sen/bjf; and Schulte-Basta, D. & Wrase, M. 2021. Ein neues Bildungs- und Teilhabegesetz für Deutschland. From: https://www.boell.de/de/2021/11/17/ein-neues-bildungs-und-teilhabegesetz-fuer-deutschland

⁴²⁷ The Coalition for Healthy School Meals. 2021. Germany's School Food Program Webinar. From: https://www.youtube.com/watch?v=9bdgtEBYnjU

Congress in Berlin, in 2021 where Polster advocated for action to improve school canteens, including adding food literacy activities such as farm field trips. 428

In 2024, the Deutscher Budestag (the national parliament of Germany) recommended the implementation of free meals for all students by the German government. The estimated cost to offer free meals at school is 5.5 billion Euros per year which includes the cost of food, personnel, and overhead costs. The board highlights the importance of the role of children in the future of Germany and therefore suggests that by offering free meals and the provision of a healthy diet, it will provide optimal opportunities for each child. Pledging federal funding and mandating relevant standards across all states is recommended to improve health and educational outcomes nationally. Germany will hopefully emulate Berlin's model for a universal free school food program and expand it beyond grade 6 to include all students.

Sustainable food is an issue in the state of Lower Saxony. For example, the state's capital, Bremen passed a resolution on February 6, 2018, titled "Action Plan 2025 - healthy nutrition in the community catering of the city of Bremen" with the goal of increasing the quality of community catering and increasing food procurement to 100% organic and, if possible, regional products. A competence center for sustainable nutrition was created in Bremen - the "Forum Küche" ("Training Kitchen"). The Forum Küchen is tasked with working with school food providers and other caterers and is intended to enable public and private organizations to increase the proportion of organic food that is as regional, seasonal and minimally processed as possible in a largely cost-neutral manner and in accordance with the goals of their action plan, and to reduce food waste. However, according to a conversation with staff from Forum Küchen in 2024, they have yet to work directly with any schools⁴³².

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⁴²⁸ Deutschlandfunk Kultur. 2021. School catering must become part of the school philosophy. Michael upholstered in conversation with Liane von Billerbeck. From: https://www-deutschlandfunkkultur-de.translate.goog/schulessen-schulverpflegung-muss-teil-der-schulphilosophie-100.html? x tr_sl=de& x tr_tl=en& x tr_hl=en& x tr_pto=sc

⁴²⁹ Deutscher Bundestag. 2024. Final Recommendations of the Citizens' Assembly on Nutrition From: https://www.bundestag.de/en/parliament/recommendations-nutrition-995916

⁴³⁰ Ibid.

USA's School Food Program

Overview and Policy

In the United States of America (USA) throughout the late 1800s and early 1900s, school meals were provided through the generosity of local charitable organizations and state agencies. By 1937, fifteen States passed laws authorising school boards to operate school lunchrooms at cost (i.e., not for profit), and four States (Indiana, Vermont, Missouri and Wisconsin) had special provisions for students in need by offering meals below- or at no cost. A33 Coinciding with the ongoing implementation of compulsory school attendance for children in the early to mid-1900s and the devastating economic impact of the Great Depression, momentum built across the country in support of school meal programs. In 1946, after World War 2 the federal government started providing federally funded school lunches with the introduction of the *Richard B. Russell's National School Lunch Act* (P.L. 79-396).

The National School Lunch Act's (NSLA) dual mission included school meals becoming permanently institutionalized as a measure of national security for the health and well-being of future generations, and as a program that could redirect surplus domestic agricultural commodities for utilization to maintain their market value. Since the NSLA launched in 1946, the National School Lunch Program (NSLP) has grown from serving 4.5 million children, to currently serving over 30 million students in over 100,000 public and privatised non-profit schools. In 2020, the NSLP provided 3.2 billion meals, 76.9% of which were served free or at a reduced price. This share was 2.8% points more than in 2019. In 2021, the first full year of the COVID-19 pandemic, the program provided 2.2 billion meals, 98.9% of which were served free or at a reduced price. The increase in the share of meals served free or at a reduced price was in part attributable to a United States Department of Agriculture (USDA) pandemic waiver allowing for meals to be

⁴³³ Gunderson, G. W. 1971. The National School Lunch Program-Background and Development. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf ⁴³⁴ Compulsory Education. (2020). From: https://files.eric.ed.gov/fulltext/ED606970.pdf; National School Food Program for all – Towards a Social Policy legacy for Canada. (2022). CCPA Monitor, July/August 2022, 35. From:

https://policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2022/07/CCPA %20Monitor%20July%20August%202022%20OSOS%20WEB.pdf#page=35

White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf

White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-

prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf; USDA Foods: Commodities in the National School Lunch Program. (n.d.). National Alliance for Nutrition and Activity. From: https://www.cspinet.org/sites/default/files/attachment/commodities fact sheet.pdf

⁴³⁷ Gunderson, G. W. 1971. The National School Lunch Program-Background and Development. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf; White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-

prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf

provided free of charge to all students.⁴³⁸ The provision of meals post pandemic was 66.4% meals offered for free and 4% at a reduced price.⁴³⁹

This federally assisted meal program was designed to provide nutritionally balanced lunches to children at school and to benefit both public and non-profit private schools and residential childcare institutions. The USDA's Economic Research Service sponsored research, found that children from food-insecure and marginally food-secure households were more likely to eat school meals and received more of their food and nutrient intake from school meals than other children.⁴⁴⁰

Support is provided in two ways: 1) food costs are reimbursed by the federal government, and 2) food is provided by the USDA at no cost. School authorities are reimbursed for meals in one of three ways: free, reduced price, and paid.⁴⁴¹ Regulations can be found here and a comprehensive history of school food programs in the US can be found in Appendix I.

Policies and mandates for the NSLP have changed significantly over time, and a number of legislative amendments were made to create safer, more nutritious and accessible programs. He Further amendments to the NSLA provided guidelines for nutritional standards, directed additional benefits to children, communities, and states most in need, and enforced annual revisions to account for changes in the Consumer Price Index (CPI). Through their evolution, school food programs are thought to have become essential for national security, domestic agricultural interests, and greater academic achievement for students across all income levels.

In 1966, the Child Nutrition Act (Public Law 89–642; CNA) was passed into law. 444 This added a layer of social support to the NSLP by extending its ability to safeguard the health and well-being of children with improved nutritional standards and federal funds targeted for food service equipment. Section 13 of the CNA also provided the

⁴³⁸ National school lunch program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program/

⁴⁴⁰ The National School Lunch Program. 2017. United States Department of Agriculture. Food and Nutrition Service. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLPFactSheet.pdf

⁴⁴¹ PART 210-National School Lunch Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/part-210%E2%80%94national-school-lunch-program

⁴⁴² See FNS Documents and Resources. 1975-2022. United States Department of Agriculture. Food and Nutrition From:

https://www.fns.usda.gov/resources?f%5B0%5D=program%3A39&f%5B1%5D=resource_type%3A17 &f%5B2%5D=program%3A9069&f%5B3%5D=program%3A9088&f%5B4%5D=program%3A26&f%5 B5%5D=program%3A11712&f%5B6%5D=program%3A23&f%5B7%5D=program%3A47&f%5B8%5D=program%3A41

⁴⁴³ United States Code, 2019 Edition. Title 42 - THE PUBLIC HEALTH AND WELFARE CHAPTER 13 - SCHOOL LUNCH PROGRAMS. Sec. 1751 - Congressional declaration of policy From: https://www.govinfo.gov/content/pkg/USCODE-2019-title42/html/USCODE-2019-title42-chap13-sec1751.htm; "Healthy, Hunger-Free Kids Act of 2010." 2010. Public Law 111–296 111th Congress. 124 STAT. 3183. U.S> Government Information. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/pl_111-296.pdf

⁴⁴⁴ Child Nutrition Act of 1966. 2023. From: https://www.govinfo.gov/content/pkg/COMPS-10328/pdf/COMPS-10328.pdf

authority for placing all school food services under one federal agency: the United States Department of Agriculture. 445

By 1970, the USDA created uniform criteria for State agencies to request additional provisions for the reimbursement of free and reduced cost meals. The three-tiered division of 'Paid, Reduced Price or Free' meals was instituted and continues today, with State agencies responsible for providing proof of the need for assistance through various applications.⁴⁴⁶

In 2010, an amendment to the NSLA was made through the *Healthy and Hunger-Free Kids Act* (HHFKA), ⁴⁴⁷ often referred to as the 'Child Nutrition Reauthorization' bill. ⁴⁴⁸ This bill was implemented through the Obama administration with the primary goal of increasing access to nutritious school meals for children from low-income households. Today, numerous programs exist under the umbrella of "Child Nutrition Programs," which are designed to supply food to children and youth in need at school. ⁴⁴⁹

A patchwork of federal policies and cost-shared programs work to fill the gaps that were noticed after the introduction of NSLP,⁴⁵⁰ including the creation of:

- The School Breakfast Program (SBP), 451
- The Special Milk Program (SMP), 452
- The Child and Adult Care Food Program (CACFP), 453
- The Fresh Fruit and Vegetable Program (FFVP), 454
- The Summer Food Service Program (also known as the Summer Meals Program), 455

⁴⁴⁵ Child Nutrition Act of 1966. 2023. From: https://www.govinfo.gov/content/pkg/COMPS-10328/pdf/COMPS-10328.pdf; Gunderson, G. W. 1971. The National School Lunch Program-Background and Development. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf

⁴⁴⁶ Gunderson, G. W. 1971. The National School Lunch Program-Background and Development. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf; Child Nutrition Program Income Eligibility Guidelines. 2023. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cn/fr-021622

⁴⁴⁷ "Healthy, Hunger-Free Kids Act of 2010." 2010. Public Law 111–296 111th Congress. 124 STAT. 3183. U.S> Government Information. From: https://fns-

prod.azureedge.us/sites/default/files/resource-files/pl_111-296.pdf

⁴⁴⁸ Healthy and Hunger Free Kids Ac of 2010. 2010. Congress.gov. From:

https://www.congress.gov/bill/111th-congress/senate-bill/3307; CHILD NUTRITION

REAUTHORIZATION HEALTHY, HUNGER-FREE KIDS ACT OF 2010. n.d. From:

https://obamawnhitehouse.archives.gov/sites/default/files/Child_Nutrition_Fact_Sheet_12_10_10.pdf ⁴⁴⁹ Child Nutrition Programs, n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cn

⁴⁵⁰ FNS Nutrition Programs. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/programs

⁴⁵¹ The School Breakfast Program. 2017. https://fns-prod.azureedge.us/sites/default/files/resource-files/SBPfactsheet.pdf

⁴⁵² Special Milk Program. 2012. United States Department of Agriculture. Food and Nutrition Service. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/SMPFactSheet.pdf

⁴⁵³ Child and Adult Care Food Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cacfp

⁴⁵⁴ Fresh fruit/vegetable program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/ffvp/fresh-fruit-and-vegetable-program

⁴⁵⁵ Summer Food Service Program. n.d. United States Department of Agriculture. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/SFSP-Fact-Sheet.pdf

- and the Patrick Leahy Farm to School Program, formerly, Community Food Systems (CFS), and Farm to School. 456
- With updates to the NSLP and HHFKA,⁴⁵⁷

These programs are supported by the USDA's Food and Nutrition Service (FNS)⁴⁵⁸, which creates initiatives such as Team Nutrition,⁴⁵⁹ digital toolkits,⁴⁶⁰ and the Farm to School Grant Program for local foods and food education.⁴⁶¹ Additional assistance can be found through State agencies, local educational agencies (LEAs), and community-based organisations that support schools with functions such as completing free and low-cost meal applications.⁴⁶²

USDA and FNS programs have been found to increase the consumption of fruits, vegetables, and milk, and lower the risk of obesity and other nutrition-related illnesses. According to the Food research and Action Center in the US, school lunch is critical to student health and well-being and ensures that students have the nutrition they need throughout the day to focus and learn. Research shows that receiving free or reduced-price school lunches reduces food insecurity, obesity rates, and poor health. In addition, the new school meal nutrition standards have a

⁴⁵⁶ USDA Office of Community Food Systems. 2017. United States Department of Agriculture. From: https://www.fns.usda.gov/cfs/usda-ocfs-infographic; The Patrick Leahy Farm to School Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/f2s/farm-to-school

⁴⁵⁷ The National School Lunch Program. 2017. United States Department of Agriculture. Food and Nutrition Service. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLPFactSheet.pdf; 10-Year Anniversary of the Healthy, Hunger-Free Kids Act of 2010 (HHFKA). 2020. Center for Science in the Public Interest. From:

https://www.cspinet.org/sites/default/files/media/documents/resource/HHFKA_10Anniv_factSheet_2.p df

⁴⁵⁸ History of the Food and Nutrition Service. 2022. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/history-

fns#:~:text=The%20agency%20was%20established%20on,recommendations%20from%20the%2019 69%20Conference.

⁴⁵⁹ About Team Nutrition. 2022. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/tn/about-team-nutrition

⁴⁶⁰ Energize Your Day with School Breakfast! 2017. FNS Toolkit. From:

https://www.fns.usda.gov/sbp/toolkit; USDA Foods Toolkit for Child Nutrition Programs. 2023. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/usda-fis/usda-foods-toolkit-child-nutrition-programs

⁴⁶¹ The Patrick Leahy Farm to School Program. n.d. United States Department of Agriculture. Food and Nutrition Service. https://www.fns.usda.gov/f2s/farm-to-school; Farm to School Census and Comprehensive Review. 2021. The Patrick Leahy Farm to School Program. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/f2s/farm-school-census-and-comprehensive-review

⁴⁶² National school lunch program. n.d.). From: The National School Lunch Program. 2017. United States Department of Agriculture. Food and Nutrition Service. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLPFactSheet.pdf; School Meal Applications Outreach Toolkit. n.d. No Kid Hungry. From: https://express.adobe.com/page/1IPGBCsq9UO89/; Ensuring Access for Free and Reduced-Price School Meals for Low-Income Students. 2016. United States Department of Agriculture. Food and Nutrition Service. From:

https://www.fns.usda.gov/cn/ensuring-access-free-and-reduced-price-school-meals-low-income-students; Strategies for Improving Direct Certification. n.d. Hunger Solutions, New York. From: https://hungersolutionsny.org/wp-content/uploads/2020/06/Direct-Certification-strategies-1_7_22.pdf ⁴⁶³ Benefits of School Lunch. 2023. Food Research and Action Center. From: https://frac.org/programs/national-school-lunch-program/benefits-school-lunch

positive impact on student food selection and consumption, especially by increasing the fruit and vegetable intakes in student diets.⁴⁶⁵

Farm to school is an important aspect of meal programs in the United States, especially through the efforts of NGOs and active participants. These programs help school food authorities incorporate fresh, local produce into school lunch menus, aiding local economies while increasing the experiential learning opportunities for students to engage in various aspects of the food system.⁴⁶⁶

Funding

All levels of government and parents help fund programs. Funding includes:

- Federal, State, local support, and household payments.
- Reimbursements provided by the Federal government for each meal served at a set rate, adjusted annually to inflation.
- Claims submitted by individual operators outlining the number and type of meals served each month.
- Federal money received by States by way of a letter of credit, a signed Federal-State agreement to operate the program in compliance with federal regulations.
- Matched funds by some states offering an extra per-meal reimbursement to increase program offerings and quality. 467

The USDA provides federal funding support for school food programs in two ways: 1) cash reimbursements, and 2) providing USDA Foods, including the option for cash vouchers in-lieu of USDA Foods.

Cash Reimbursements: The USDA provides different rates of cash assistance based on each meal served to school children and the type of program(s) offered. States with participating schools are reimbursed after recording and reporting their program usage. Rates for reimbursement differ based on the three tiers (i.e., Paid, Reduced Price or Free) and the program being offered. Reimbursements rates are adjusted annually. 468, 469

Funding for low-Income households: Under the USDA, Food and Nutrition Service (FNS) and Child Nutrition Programs subsidies are provided to families in-need of financial assistance, offering free or reduced meal prices to students who are

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⁴⁶⁵ Ibid.

⁴⁶⁶ 2019 Farm to School Census Report (Summary). 2021. United States Department of Agriculture. Food and Nutrition Service. From:https://fns-prod.azureedge.us/sites/default/files/resource-files/2019-Farm-to-School-Census-Summary.pdf

⁴⁶⁷ Chung, M. 2022, May 4. US's School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

⁴⁶⁸ National School Lunch Program-Rates of Reimbursement. 2022. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cn/rates-reimbursement ⁴⁶⁹ For the Reimbursement Rates - Base Payment Chart, excluding KKFA increases (2022-2023): Please see: Federal Register. 2022. Office of the Federal Register. Vol. 87. No. 142. Tuesday, July 26, 2022. Pages 44326–44329. From: https://www.govinfo.gov/content/pkg/FR-2022-07-26/pdf/FR-2022-07-26.pdf

categorically eligible for free and reduced cost meals based on household income and the Income Eligibility Guidelines. 470

Local assistance and NSLP promotions often support families who are applying for subsidies, 471 while schools are responsible for working with eligible families and students to submit applications for free and reduced-price meals. 472 Students are automatically eligible for free meals if anyone in their household receives assistance from benefit programs such as the Supplemental Nutrition Assistance Program (SNAP). Temporary Assistance for Needy Families (TANF), or Food Distribution Program on Indian Reservations (FDPIR), and in some cases, families with Medicaid.473

Families who are not automatically eligible for subsidies are required to submit income information annually, which is cumbersome for lower-income parents and for immigrant families unfamiliar with English or the intricacies of the system.

Prior to the pandemic, 76% and 87% of breakfast meals were served at free or reduced pricing, respectively. Schools may not charge more than 40 cents for a reduced-price lunch. To reduce stigma, the point of purchase service process anonymizes what students receive. 474

⁴⁷⁰ Income calculations are based on the family income. Monthly income is calculated by dividing the annual income by 12; twice monthly income is computed by dividing annual income by 24; income received every two weeks is calculated by dividing annual income by 26; and weekly income is computed by dividing annual income by 52. All numbers are rounded upward to the next whole dollar. The numbers reflected in this notice for a family of four in the 48 contiguous States, the District of Columbia, Guam, and the territories represent an increase of 2.0% over last year's level for a family of the same size. "The Income Eligibility Guidelines" describe who may receive free meals and milk and reduced-price meals. See Income Eligibility Guidelines. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cn/income-eligibility-guidelines; and Federal Register, 20788. 2018. United States Department of Agriculture. Food and Nutrition Service. / Vol. 83, No. 89 / Tuesday, May 8, 2018 / Notices, Page 1, From:

https://www.govinfo.gov/content/pkg/FR-2018-05-08/pdf/2018-09679.pdf

⁴⁷¹ Federal Register, 34105. 2018. United States Department of Agriculture. Food and Nutrition Service. Vol. 83, No. 139 / Thursday, July 19, 2018 / Notices https://www.govinfo.gov/content/pkg/FR-2018-07-19/pdf/2018-15465.pdf

⁴⁷² Income Eligibility Guidelines. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cn/income-eligibility-guidelines

⁴⁷³ Supplemental Nutrition Assistance Program (SNAP). n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/snap/supplemental-nutrition-assistanceprogram; Temporary Assistance for Needy Families (TANF). 2022. Office of Family Assistance. From: https://www.acf.hhs.gov/ofa/programs/temporary-assistance-needy-families-tanf; Food Distribution Program on Indian Reservations (FDPIR). n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/fdpir/food-distribution-program-indian-reservations ⁴⁷⁴ Danner, R. 2023. The Problem of School Lunch Debt. Georgetown Journal on Poverty Law and Policy. December 18, 2023. From: https://www.law.georgetown.edu/poverty-journal/blog/the-problemof-school-lunch-

debt/#:~:text=The%20NSLP%20is%20administered%20federally,\$55%2C000%20must%20pay%20fu Il%20price; Annual adjustments to eligibility requirements are made as required under section 9 of the Richard B. Russell National School Lunch Act. The guidelines are intended to direct benefits to those children most in need and are revised annually to account for changes in the Consumer Price Index. See Income Eligibility Guidelines, n.d. United States Department of Agriculture, Food and Nutrition Service. From: https://www.fns.usda.gov/cn/income-eligibility-guidelines; and Federal Register, 20788, 2018. United States Department of Agriculture. Food and Nutrition Service. / Vol. 83, No. 89 / Tuesday, May 8, 2018 / Notices. Page 1. From: https://www.govinfo.gov/content/pkg/FR-2018-05-08/pdf/2018-09679.pdf

In addition to SFP subsidies at the individual household level, the "Community Eligibility Provision" provides free school meals to schools in communities if 40% students in the region meet low-income eligibility criteria. Importantly, CEP is a targeted universal free model: 476

- The USDA has added multiple provisions to their funding legislation that enable high-poverty schools to provide universal free school breakfast and/or lunch, including Provision 1, Provision 2, and Provision 3 of the NSLA, and the CEP.⁴⁷⁷
- The CEP was introduced as part of the HHFKA in 2010 and then became available to eligible schools nationwide in 2014.^{478, 479}
- To be eligible to opt into CEP, 40% of students in a district or school must be from low-income households, which is determined using existing administrative data (e.g., participation in SNAP).

Meal costs: In 2022-2023, schools were reimbursed \$4.33 per student receiving a free lunch which includes a \$0.40 increase legislated by Congress. 481 Of note, the Covid pandemic brought funding changes. 482

 ⁴⁷⁵ School Meal Changes are Coming in the 2022-2023 School Year. 2022. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/cn/2022-23-parent-faqs
 476 Cohen JFW, Hecht AA, McLoughlin GM, Turner L, Schwartz MB. 2021. Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. Nutrients. 2021; 13(3):911. From: https://doi.org/10.3390/nu13030911
 477 Ibid.

 ⁴⁷⁸ Summary of school meal provisions, USA https://www.mdpi.com/2072-6643/13/3/911/s1
 479 For a summary of School Meal Provisions in the United States, please see: Supplementary Table
 S1. Summary of School Meal Provisions in the United States. n.d. From: https://mdpi-res.com/d_attachment/nutrients/nutrients-13-00911/article_deploy/nutrients-13-00911-s001.pdf?version=1615469614

⁴⁸⁰ Cohen JFW, Hecht AA, McLoughlin GM, Turner L, Schwartz MB. 2021. Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. Nutrients. 2021; 13(3):911. From: https://doi.org/10.3390/nu13030911

⁴⁸¹ School Meal Statistics. n.d. School Meal Association. From: https://schoolnutrition.org/about-school-meal-statistics/

⁴⁸² In response to heightened need during COVID-19, many changes were made to the funding structure of school food programs through the American Rescue Plan Act (ARPA) and action by the USDA FNS. This included a large monetary investment from the Biden-Harris administration to provide free school meals for all students in participating schools throughout 2021-2022. See: Cohen, J. F. W., Polacsek, M., Hecht, C. E., Hecht, K., Read, M., Olarte, D. A., Patel, A. I., Schwartz, M. B., Turner, L., Zuercher, M., Gosliner, W., & Ritchie, L. D. 2022. Implementation of Universal School Meals during COVID-19 and beyond: Challenges and Benefits for School Meals Programs in Maine. Nutrients, 14(19), 4031. https://doi.org/10.3390/nu14194031; Zuercher, M. D., Cohen, J. F. W., Hecht, C. E., Hecht, K., Ritchie, L. D., & Gosliner, W. (2022). Providing School Meals to All Students Free of Charge during the COVID-19 Pandemic and Beyond: Challenges and Benefits Reported by School Foodservice Professionals in California. Nutrients, 14(18), 3855.

https://doi.org/10.3390/nu14183855; USDA Issues Pandemic Flexibilities for Schools and Day Care Facilities through June 2022 to Support Safe Reopening and Healthy, Nutritious Meals. 2021. United States Department of Agriculture. Press Release No. 0075.21. From:

https://www.usda.gov/media/press-releases/2021/04/20/usda-issues-pandemic-flexibilities-schools-and-day-care-facilities; FNS Response to Covid-19 Public Health Emergency. 2023. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/coronavirus; FNS Frequently Asked Questions. n.d. United States Department of Agriculture. Food and Nutrition

Students who do not qualify for subsidies pay full price, on average \$2.75 to \$3.00 per meal (prices vary by state and school district) although full-price meals apply to less than two percent of students who access the NSLP according to data from 2020-2021. ⁴⁸³ In exchange, NSLP institutions must serve lunches that meet Federal meal requirements and offer lunches at a free or reduced price to eligible children. The Food and Nutrition Service (FNS) also offers reimbursement to school authorities for snacks served to children involved in an approved after school program based on children's free, reduced price, or paid eligibility status. Adjustments to account for higher cost of foods in Alaska, Hawaii, and Puerto Rico are made by giving schools a higher reimbursement rate per each lunch served. ⁴⁸⁴

Food procurement funding: *USDA Foods* previously known as *Surplus Commodities* have been used for school food procurement since 1936, a decade before the NSLA was introduced. As USDA Foods were a core component of the NSLA's dual mission, they are authorized to purchase surplus farm commodities and distribute them to local schools. This relationship between school meals and agricultural interests is meant to protect market values and increase national consumption of domestic agricultural products. ⁴⁸⁵ USDA Foods include fruits, vegetables, proteins (pork, chicken, and beef), dairy products and grain and the USDA provides participating schools with entitlement funds, which are to be used for the purchase of USDA Foods for school lunches. ⁴⁸⁶

Each state USDA provides participating schools with entitlement funds, which are to be used for the purchase of USDA Foods for school lunches, breakfast, snack, and other child nutrition programs. Each state is responsible for storage and transportation costs after receiving supplier shipments. States and school districts can also use their USDA Foods Entitlement to purchase fruits and vegetables through the Department of Defense's (DoD) Fresh Fruit and Vegetable Program and the Pilot Project for the Procurement of Unprocessed Fruits and Vegetables (part of the 2014 Farm Bill). 488

prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf

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Service. From: https://www.fns.usda.gov/disaster/pandemic/covid-19/fns-frequently-asked-questions; S.-2089-Keep Kids Fed Act 2022. 2022. Congress.gov. From: https://www.congress.gov/bill/117th-congress/senate-bill/2089

⁴⁸³ Facts-National School Lunch Program. 2022. Food Research and Action Center (FRAC). From: https://frac.org/wp-content/uploads/National-School-Lunch-Program R2C.pdf

⁴⁸⁴ Federal Register, 34105. 2018. United States Department of Agriculture. Food and Nutrition Service. Vol. 83, No. 139 / Thursday, July 19, 2018 / Notices https://www.govinfo.gov/content/pkg/FR-2018-07-19/pdf/2018-15465.pdf

⁴⁸⁵ Ralston, K., Newman, C. Clauson, A. Guthrie, J., and Buzby, J. 2008. The National School Lunch Program Background, Trends, and Issues. United States Department of Agriculture. From: https://www.ers.usda.gov/webdocs/publications/46043/12051_err61_1_.pdf?v=0

USDA Foods in Schools: State Overview. 2017-2018 2019. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/Infographic-usda-fis-state-overview-SY1718.pdf
 White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-

⁴⁸⁸ USDA DoD Fresh Fruit and Vegetable Program. 2022. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/usda-foods/usda-dod-fresh-fruit-and-vegetable-program; Pilot Project: Unprocessed Fruits & Vegetables. n.d. United States Department of Agriculture. Agriculture Marketing Service. From: https://www.ams.usda.gov/selling-food/pilot-project

Food Literacy Education

The National Farm to School Network (NFSN) is a central USDA partner in farm to school. Although it's not part of the national SFP, it is a priority and happens through the USDA's Farm to School network. The NFSN supports programming for 'community food systems' in the efforts to increase local procurement, hands-on learning, and spark students' interest in trying new foods. The Office of Community Food Systems Resources also supports farm to school programs by helping incorporate local foods into programs and working with tribal communities to incorporate traditional foods into their programs.

The Patrick Leahy Farm to School Grant Program was established in 2010 to provide \$5 million in grant awards annually to support planning, development, and implementation of farm to school programs. Over 67, 000 schools participate.⁴⁹¹ As of 2019, approximately two thirds of school food authorities report participating in one or more Farm to School activities since the funding stream's inception.⁴⁹²

The NFSN is involved in tracking school participation and researching the impacts of Farm to School.⁴⁹³ Their research identified positive impacts in areas of economics,

489 2019 Farm to School Census Report (Summary). 2021. United States Department of Agriculture.
 Food and Nutrition Service. From:https://fns-prod.azureedge.us/sites/default/files/resource-files/2019-Farm-to-School-Census-Summary.pdf; USDA Office of Community Food Systems. 2017. United States Department of Agriculture. From: https://www.fns.usda.gov/cfs/usda-ocfs-infographic
 490 Child Nutrition Programs, n.d. United States Department of Agriculture. Food and Nutrition Service.
 From: https://www.fns.usda.gov/cn; Food and Nutrition Service. 2024. Office of Community Food Systems Resources. United States Department of Agriculture. From:

https://www.fns.usda.gov/f2s/office-community-food-systems-resources; The Patrick Leahy Farm to School Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/f2s/farm-to-school; Farm to School is an approach that includes three core elements, education (i.e., student participation in educational activities on agriculture, local food procurement and use (i.e., local foods are purchased, promoted, and served in meals and snacks) and school gardens (i.e., students engage in hands-on learning, e.g., through school gardens), and community inclusion. See Christensen, L. O., Jablonski, B. R., Stephens, L., Joshi, A. 2017. Economic Impacts of Farm to School-Case Studies and Assessment Tools. National Farm to School Network, From: https://assets.website-

files.com/5c469df2395cd53c3d913b2d/6110521216b78c5854ae23ac_EconomicImpactReport-min.pdf; The Patrick Leahy Farm to School Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/f2s/farm-to-school

⁴⁹¹ The Patrick Leahy Farm to School Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/f2s/farm-to-school; Farm To Child Nutrition Programs Planning Guide. n.d. United States Department of Agriculture. Food and Nutrition Service. Office of Community Food Systems. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/FTS-Planning-Guide.pdf

492 2019 Farm to School Census Report (Summary). 2021. United States Department of Agriculture. Food and Nutrition Service. From:https://fns-prod.azureedge.us/sites/default/files/resource-files/2019-Farm-to-School-Census-Summary.pdf; Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw; Farm to School Census and Comprehensive Review. 2021. The Patrick Leahy Farm to School Program. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/f2s/farm-school-census-and-comprehensive-review; National school lunch program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program/

⁴⁹³ Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

public health, education, environmental protection, equity, and community engagement. In 2017, the NFSN reported compounding exponential economic benefits due to local community-based spending, employment, public health improvements from a greater consumption of fruits, vegetables and whole foods, educational gains related to experiential learning, sustainability in reduced waste and local procurement, as well as greater community equity and buying power through local food purchasing. More information on federal and state farm to school initiatives can be found in the "Farm to School" section of Appendix I.

Nutrition

According to the NSLA (*Section 9(a)(4), 42 U.S.C. 1758(a)(4)*), school meals must reflect the latest iterations of the USA's nutrition research and public health guidelines by aligning with the "Dietary Guidelines for Americans" (DGA). ⁴⁹⁶ In 2010-12, significant changes to school nutrition standards were made through section 201 of the HHFKA (*Pub. L. 111–296*) to more closely match the Federal Dietary Guidelines for Americans. ^{497, 498} The amended Section 4(b) of the NSLA (*42 U.S.C. 1753(b)*) requires the USDA to create regulations to update the meal patterns and nutrition standards for school lunches and breakfasts based on the recommendations of the Food and Nutrition Board of the National Research Council of the National Academies of Science. ⁴⁹⁹ The HHFKA also stipulated that the nutritional standards must be reviewed every three years. ⁵⁰⁰

⁴⁹⁴ Christensen, L. O., Jablonski, B. R., Stephens, L., Joshi, A. 2017. Economic Impacts of Farm to School-Case Studies and Assessment Tools. National Farm to School Network. From: https://assets.website-

 $files.com/5c469df2395cd53c3d913b2d/6110521216b78c5854ae23ac_EconomicImpactReport-min.pdf$

⁴⁹⁵ Ibid.

⁴⁹⁶ Nutrition Standards in the National School Lunch and School Breakfast Programs. Rules and Regulations. 2012. Federal Register, 4088. United States Department of Agriculture. Food and Nutrition Service. Vol. 77, No. 17. Thursday, January 26, 2012. From:

https://www.govinfo.gov/content/pkg/FR-2012-01-26/pdf/2012-1010.pdf

⁴⁹⁷ Schwartz, C., Wootan, M. G. 2019. How a Public Health Goal became National Law. Nutrition Public Health. Volume 54, Number 2, March/April 2019. From:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716573/pdf/nt-54-67.pdf; Nutrition Standards in the National School Lunch and School Breakfast Programs. Rules and Regulations. 2012. Federal Register, 4088. United States Department of Agriculture. Food and Nutrition Service. Vol. 77, No. 17. Thursday, January 26, 2012. From: https://www.govinfo.gov/content/pkg/FR-2012-01-26/pdf/2012-1010.pdf

⁴⁹⁸ For the updated Nutrition Standards after the introduction of the HHFKA, please see: Nutrition Standards in the National School Lunch and School Breakfast Programs. Rules and Regulations. 2012. Federal Register, 4088. United States Department of Agriculture. Food and Nutrition Service. Vol. 77, No. 17. Thursday, January 26, 2012. From: https://www.govinfo.gov/content/pkg/FR-2012-01-26/pdf/2012-1010.pdf

⁴⁹⁹ Nutrition Standards in the National School Lunch and School Breakfast Programs. 2013. Food and Nutrition Service. Regulations.gov. Document ID.-FNS-2007-0038-64678. From: https://www.regulations.gov/document/FNS-2007-0038-64678

⁵⁰⁰Nutrition Standards in the National School Lunch and School Breakfast Programs. Rules and Regulations. 2012. Federal Register, 4088. United States Department of Agriculture. Food and Nutrition Service. Vol. 77, No. 17. Thursday, January 26, 2012. From: https://www.govinfo.gov/content/pkg/FR-2012-01-26/pdf/2012-1010.pdf

Child Nutrition Programs are subjected to five-year nutrition reviews through the Child Nutrition Reauthorization bill.⁵⁰¹ The legislation also authorized an additional payment per meal (7 cents as of the 2020–2021 school year) to schools when they demonstrate that they are serving meals that meet the updated standards and established new regulations for meal prices charged to students not certified for free or reduced-price meals.⁵⁰²

Some aspects of Nutrition Standards for meals include:

- Meals are flexible to their community needs.
- Nutrition standards must be met to be eligible for federal funding.
- Meeting the criteria of five food types: Fruits, Vegetables, Grains, Meat/Meat Alternatives, and Fluid Milk.
- Dietary specifications for each age group and daily nutrition components (calories, sodium, saturated fat, trans fat).⁵⁰³

Currently, the nutrition standards are listed on the USDA-FNS website along with technical assistance and guidance resources for school food practitioners.⁵⁰⁴ The standards are realized through minimum daily and weekly average requirements of nutrients, and are guided by meal patterns (i.e., frequencies of servings) in menu planning.⁵⁰⁵ Products with trans fats are not allowed to be served. Unlike its reduction aims for sodium, the USDA has not included limits on sugar content in school foods. ⁵⁰⁶

Changes to the nutrition standards were made in 2018 and 2022 to allow for greater flexibility in the standards for milk, whole grains, and sodium to allow municipalities and schools more control over their food service choices, making them more contextually appropriate. ⁵⁰⁷

⁵⁰¹ 2022 Child Nutrition Reauthorization Primer. 2022. Food Research and Access enter. Feeding America. From: https://frac.org/wp-content/uploads/2022-Child-Nutrition-Reauthorization-Primer.pdf ⁵⁰² National school lunch program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program/

Nutrition Standards for School Meals. 2022. United States Department of Agriculture. Food and Nutrition Service. From: www.fns.usda.gov/cn/nutrition-standards-school-meals; Chung, M. (2022, May 4). US's School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

⁵⁰⁴ Nutrition Standards for School Meals. 2022. United States Department of Agriculture. Food and Nutrition Service. From: www.fns.usda.gov/cn/nutrition-standards-school-meals https://www.fns.usda.gov/cn/nutrition-standards-school-meals

Lunch Program Meal Pattern. n.d. United States Department of Agriculture. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/nslp-meal-pattern-chart-2022.pdf

506 National School Lunch Program Meal Pattern. n.d. United States Department of Agriculture. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/nslp-meal-pattern-chart-2022.pdf

507 Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium Requirements; Correction. 2022. Food and Nutrition Service. Federal Register, National Archives. 12/20/2018. From: https://www.federalregister.gov/documents/2022/08/25/2022-18220/child-nutrition-programs-transitional-standards-for-milk-whole-grains-and-sodium-correction#sectno-citation-210.10; Proposed Rule on Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010. 2013. Final Summary of Public Comments. Food and Nutrition Service Coding and Comment Analysis. Docket FNS-2011-0019. Prepared by ICF Incorporated. From: https://fns-prod.azureedge.us/sites/default/files/allfoods_commentsummary.pdf

Lunches offered to children aged five or older must meet, at a minimum, certain meal requirements. Schools follow a food-based menu planning approach and produce enough food to offer each child the quantities specified in the meal pattern established for each age/grade group.⁵⁰⁸ In addition, school lunches must meet dietary specifications (see "School Meals and Patterns" in Appendix I).

Implementation

Generally, the federal government has agreements with each state-level agency to administer (i.e., implement/fund/track) school food programs, with additional support from school food authorities (SFAs), local program operators, and LEAs.⁵⁰⁹ The States are then responsible for establishing relationships and agreements with local agencies and operators who run programs in alignment with existing federal requirements. Implementation of Farm to School programming is supported through the NFSN, and school nutrition professionals work to advance the accessibility, quality, and integrity of school meal programs through the Student Nutrition Association (SNA).⁵¹⁰

Programs are administered by the National Food and Nutrition Services (FNS), the USDA, and state and local agencies in the following manner: 511

- The USDA and FNS:
 - o Provides funding.
 - Sets program standards and policy.
 - Oversees/supports State Agencies.
- Individual states:
 - Distribute reimbursements.
 - Manage their programs.
 - o Monitor local operators; provide technical assistance.
- Local Operators such as municipalities and school boards:
 - Operate programs and determine eligibility.
 - o Plan and provide nutritious, safe meals.⁵¹²

Participating institutions who operate school meal programs in the NSLP include:

Public or non-profit private schools of high school grade or below.

Nutrition Standards in the National School Lunch and School Breakfast Programs. Rules and Regulations. 2012. Federal Register, 4088. United States Department of Agriculture. Food and Nutrition Service. Vol. 77, No. 17. Thursday, January 26, 2012. From:

https://www.govinfo.gov/content/pkg/FR-2012-01-26/pdf/2012-1010.pdf

⁵⁰⁹ National School Lunch Program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/nslp

⁵¹⁰ Farm to School Census and Comprehensive Report Summary Report. 2021. United States Department of Agriculture. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/Farm-to-School-Census-Comprehensive-Review-Summary.pdf; Feeding bodies, fueling minds. n.d. School Nutrition Association. From: https://schoolnutrition.org/

⁵¹¹ National School Lunch Program. n.d. Feeding the Future with Healthy School Lunches. United States Department of Agriculture. Food and Nutrition Service. From:

https://www.fns.usda.gov/nslp#:~:text=The%20National%20School%20Lunch%20Program,to%20children%20each%20school%20day.

⁵¹² Chung, M. (2022, May 4). US's School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

- Public or non-profit private residential child-care institutions, and
- Charter schools (who may participate in the NSLP as public schools).⁵¹³

Schools must apply for funding reimbursement and meet specific nutrition standards.

Implementation looks different across states, regions, and localities, but all federally funded school food programs must adhere to federal standards and regulations in addition to state agency requirements. Many schools offer a combination of school food programs to meet their student population's needs (e.g., NSLP, SBP, SMP etc.), and USDA foods are purchased in addition to commercial products and locally or independently grown foods.⁵¹⁴ Program uptake and participation data is available at national and state levels through the FNS Child Nutrition Tables, see the "Numbers of Meals Served" section in Appendix I for details. 515

Each school may source or apply for funds for additional school food programming (e.g., Farm to School, CEP). FNS, State agencies, SFAs, LEAs, local program operators, and community organizations play key roles in improving the implementation of school food programs to meet the needs of students. The FNS, NFSN, SNA and research committees such as the Food and Nutrition Board of the National Research Council of the National Academies of Science support program evaluation by providing ongoing implementation improvement through research and community engagement to determine the needs, concerns, and next steps for school food programs.

Food Procurement: The USDA's Food and Nutrition Service (FNS) and Agricultural Marketing Service (AMS) work together to purchase and provide USDA Foods.

As mentioned, schools participating in the NSLP receive a cash reimbursement and "USDA Foods". The U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) provides domestically sourced and produced foods, known as USDA Foods, to Child Nutrition Programs, including the National School Lunch Program (NSLP), the Child and Adult Care Food Program (CACFP), and the Summer Food Service Program (SFSP). 516

States may select products from USDA stores who provide a list of foods available through the NSLP. Schools can also receive bonus USDA foods if they are available from surplus agricultural stocks. The variety of USDA Foods in the system depends on available quantities and market prices. At the State level, the NSLP is administered by State agencies, which operate the Program through agreements

https://fns-prod.azureedge.us/sites/default/files/resource-files/Farm-to-School-Census-Comprehensive-Review-Summary.pdf

⁵¹³ National School Lunch Program. 2022. United States Department of Agriculture. Economic Research Service. From: https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutritionprograms/national-school-lunch-program/

⁵¹⁴ White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fnsprod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf; Farm to School Census and Comprehensive Report Summary Report. 2021. United States Department of Agriculture. From:

⁵¹⁵ Child Nutrition Tables. 2023. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/pd/child-nutrition-tables; NLSP participation 2018-2022 https://fnsprod.azureedge.us/sites/default/files/resource-files/01slfvpart-2.pdf

⁵¹⁶ USDA Foods for Child Nutrition Programs. 2021.United States Department of Agriculture. Food and Nutrition Service. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/FNS-101-USDA-Foods.pdf

with local school food authorities.⁵¹⁷ For more information about USDA Foods in NSLPs, see: <u>USDA Foods in Schools</u>.

USDA foods: can be used for school breakfast, lunch, snack programs, and other child nutrition programs. According to the USDA's White Paper on USDA Foods in the National School Lunch Program, "every dollar's worth of USDA Foods used in a school menu frees up money that would otherwise be spent on commercial food purchases" and is a tool to balance local budgets and support domestic consumption.⁵¹⁸ The paper also states that

"The Federal government's large volume purchasing power is an important factor in maintaining school foodservice budgets because it may allow the procurement of food at a lower unit cost than if a school were purchasing equivalent commercial foods on its own." 519

However, there are barriers to implementation. One is what is known as the school meal "trilemma" involving the meal's nutrition shortcomings, program cost, and student participation in the program. Another concern is a *Healthy Menu Barrier*, the difficulty of serving lower fat menu items and more fruits, vegetables, and whole grains without overstepping program cost boundaries, lowering student participation, or increasing plate waste.⁵²⁰ Details on USDA foods can be found in <u>Appendix I</u>.

Oversight

The USDA's FNS is responsible for oversight of child nutrition programs in conjunction with designated State agencies. Oversight by the USDA ensures accountability through:

- Food safety standards.
- Audits.
- Reimbursement Claims
- Regular Administrator reviews of programs.⁵²¹

Eligibility is monitored but is a difficult process and has faced much criticism.⁵²² Information on income levels and sources of income to verify eligibility for reduced-

⁵²⁰ National School Lunch Program: Background, Trends, and Issues. 2008. Ralston, K., Newman, C., Clauson, A., Guthrie, J., and Buzby, J. Economic Research Report Number 61, July 2008. United States Department of Agriculture. From:

https://www.ers.usda.gov/webdocs/publications/46043/12050_err61_reportsummary_1_.pdf?v=0; White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-

prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf

⁵¹⁷ USDA Foods in Schools. n.d. United States Department of Agriculture. Economic Research Service. From: https://www.fns.usda.gov/usda-fis

⁵¹⁸ White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. Pg 4. From https://fns-prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf Pg 4.

⁵¹⁹ Ibid.

⁵²¹ National school lunch program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program/
522 lbid.

price or free meals can be found <u>here</u> and <u>here</u>. (The verification toolkit used can be found <u>here</u>.)⁵²³

The USDA oversees the use of USDA Foods in partnership with the FNS and the Agricultural Marketing Service (AMS). The FNS and AMS work together to purchase and provide USDA Foods as outlined below:

The FNS:

- Is responsible for the general oversight, regulation, and administration of the domestic USDA Foods programs,
- The primary liaison between USDA and the administering State agencies,
- o Determines the list of available USDA Foods,
- Develops the nutrition attributes,
- o Calculates and tracks state entitlements,
- Takes food orders from states.
- o Monitors the flow of USDA Foods, and
- o Provides policy guidance on program issues. 524

Challenges and Benefits

Child Nutrition Programs have provided billions of meals to students across the U.S. for decades, obviously helping families with food security. Programs have undergone numerous evolutions in response to social, political and economic turbulence, and have endured many challenges related to successful implementation and health-promotion in programming. ⁵²⁵ Central concerns include the unintended consequences and messaging of programs aimed at serving "needy" children (e.g., stigma associated with a lack of program universality, the inaccuracy of the means test); poor nutritional quality; limited oversight and enforcement of national standards at the school level; various barriers to successful implementation; and lack of achievement of the NSLAs goal of promoting health and wellbeing in youth, especially as it applies to times of emergency or in favour of national security. ⁵²⁶

⁵²³ Certification of Compliance with Meal Requirements for the National School Lunch Program Under the Healthy, Hunger-Free Kids Act of 2010. 2014. Federal Register. National Archives. From: https://www.federalregister.gov/documents/2014/01/16/2014-00624/certification-of-compliance-with-meal-requirements-for-the-national-school-lunch-program-under-the

⁵²⁴ Ollinger, M. and Guthrie, J. 2022. United States Department of Agriculture. Economic Research Service. Economic Information Bulletin Number 239, September 2022. From: https://www.ers.usda.gov/webdocs/publications/104633/eib-

^{239.}pdf?v=5173.7#:~:text=USDA%20has%20provided%20foods%E2%80%94often,programs%20(Ra lston%2C%202008); White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf

⁵²⁵ Schwartz, C., Wootan, M. G. 2019. How a Public Health Goal became National Law. Nutrition Public Health. Volume 54, Number 2, March/April 2019. From:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716573/pdf/nt-54-67.pdf

For Program Background, Trends, and Issues. United States Department of Agriculture. From: https://www.ers.usda.gov/webdocs/publications/46043/12051_err61_1_.pdf?v=0; Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw; National School

The roots of the NSLA came as a call to action to feed malnourished children in the mid-1900s. Millions of the 19.8 million students participating in the NSLP opted for reduced-price or free meals in 2020-21, and it is evident that the program still primarily aims to serve children from low-income backgrounds. ⁵²⁷ However, many programs fall short of meeting student needs for nutritional quality, food experiences, and social inclusion, and often results in stigmatized use that lowers the participation from those who would benefit most. ⁵²⁸ Additionally, there are many issues in the eligibility criteria, outdated three-tiered pricing system, and the inaccurate, burdensome verification of income processes. ⁵²⁹ Since the NSLA's introduction in 1946, many scholars, community organizations and members of the public have called for a universal free meals (UFM) model to reduce stigma, increase participation and program success, and reduce the administrative burden and economic inefficiencies of the three-tired, means tested system. ⁵³⁰

A particular example of low-income stigma affecting program success is in the lack of alignment between eligibility and participation. In the 2019–2020 school year, only 69% of eligible schools in the U.S. were participating in CEP, in part due to concerns about insufficient reimbursement from the federal government and in part due to inaccurate perceptions or determinations of eligibility. Concerns have also been raised about the impact of universal free school meals on school finances, specifically due to the increase in costs from preparing and serving more meals without adequate support from federal funds.⁵³¹ The issue of inadequate funding and inaccurate/inequitable eligibility has been raised as early as the NSLA's inception,

Lunch Program – Food Service Management Company Contracts. 2013. United States Department of Agriculture. Office of Inspector General. From: https://www.usda.gov/sites/default/files/27601-0001-23.pdf

Children, Washington, DC: The National Academies Press.

Facts-National School Lunch Program. 2022. Food Research and Action Center (FRAC). From: https://frac.org/wp-content/uploads/National-School-Lunch-Program R2C.pdf

⁵²⁸ Institute of Medicine. 2010. School Meals: Building Blocks for Healthy

https://doi.org/10.17226/12751; Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

⁵²⁹ Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From:

https://www.youtube.com/watch?v=Wkh7ciOSvOw

⁵³⁰ Walls, T., Thomson, J., Landry, A. 2021. Procurement of Foods in Mississippi Delta Schools. Journal of Child Nutrition and Management. Volume 46, Issue 1, Spring 2022. From: https://schoolnutrition.org/wp-content/uploads/2022/06/Procurement-of-Foods-in-Mississippi-Delta-Schools-Spring-2022.pdf; Landry, A. Thomson, J., Walls, T. 2021. Opportunities for Partnership in Local Food Procurement: Mississippi Delta Schools, Current Developments in Nutrition, Volume 5,

Supplement 2. ISSN 2475-2991, https://doi.org/10.1093/cdn/nzab060 008.

⁽https://www.sciencedirect.com/science/article/pii/S2475299123106081); Simmons, J., and Landry, A. 2022. Perception of Implementation of Universal Free Meals in the National School Lunch Program. School Nutrition Association. Volume 46, Issue 1, Spring 2022. From:

https://schoolnutrition.org/journal/spring-2022-perceptions-of-implementation-of-universal-free-meals-in-the-national-school-lunch/#full-article; Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.voutube.com/watch?v=Wkh7ciOSvOw

⁵³¹ Cohen, J. F. W., Hecht, A. A., McLoughlin, G. M., Turner, L., & Schwartz, M. B. 2021. Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. Nutrients, 13(3), 911. MDPI AG. Retrieved from http://dx.doi.org/10.3390/nu13030911

with Gordon W. Gunderson (a representative of the USDA) restating the issues of a lack of universality back in 1971:

"...The net result is that the children in the neediest areas must go without an adequate noonday meal at school, or perhaps an inadequate meal at home, or none at all...The predominating reason, however, appears to be inadequate funding at Federal, State and local levels with the end result that the children who cannot afford to pay are the losers." (p. 27) 532

Nutritional quality has been a long-standing issue in the USA's school meal programs. The original NSLA included Type A, B and C menu patterns that were developed to provide examples of nutritious meals in various income settings but were not suitable for healthy development at all school ages.⁵³³ Although the initial goals of the NSLA were to improve the nation's diet and provide youth with good quality food as a measure of national security, these aims have not been fully met.⁵³⁴

Also, USDA Foods must be considered in relation to their nutritional value rather than preserving market value. Foods supplied in schools are historically linked to agricultural commodities and are funded by permanent government appropriations intended to support farm incomes (by redistributing surplus foods) rather than supply whole, nutritious foods to students. Through multiple revisions to nutritional standards to improve the requirements from their war-time roots, there have been incremental improvements to the nutritional quality of school foods, but school meal oversight and standard enforcement remain inadequate. Some of the greatest issues are the limited mandates for fresh, local, and whole foods (e.g., minimally processed foods), and the new legislation requiring menu flexibility due to limited capacity to adhere to guidelines. 535 There are inadequate definitions of health-promoting foods for implementers to abide by, and the competitive nature and limited amount of Farm to School Grant Programs prevent universal implementation of such programs intended to connect students to their food systems, encourage healthy food consumption, and challenge the current food environment of highly processed and non-nutritious foods. Currently, the FNS is in the process of updating school food nutrition standards to reflect the updated Dietary Guidelines for Americans 2020-2025. The update is now seven years overdue and still pending completion due to COVID-19 reprioritization. 536

https://www.federalregister.gov/documents/2022/08/25/2022-18220/child-nutrition-programs-transitional-standards-for-milk-whole-grains-and-sodium-correction#sectno-citation-210.10 536 Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

Gunderson, G. W. 1971. The National School Lunch Program-Background and Development. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf

The School Nutrition Trends report 2017-Summary. 2017. Student Nutrition Association. From: https://schoolnutrition.org/wp-content/uploads/2022/08/2017-Trends-Report-Summary.pdf
535 Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements.2018. Food and Nutrition Service. Federal Register, National Archives. 12/20/2018. From: https://www.federalregister.gov/documents/2018/12/12/2018-26762/child-nutrition-programs-flexibilities-for-milk-whole-grains-and-sodium-requirements; Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium; Correction Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium Requirements; Correction. 2022. Food and Nutrition Service. Federal Register, National Archives. 12/20/2018. From: https://www.federalregister.gov/documents/2022/08/25/2022-18220/child-nutrition-programs-

Although the FNS and State agencies are tasked with oversight and receive support from the SFAs and local program operators, there is insufficient oversight including many gaps in both the review and enforcement of federal standards and eligibility criteria. The USDA's investigation into contracts for FSMC found that a number of contracts were awarded despite not following federal guidelines for free and reduced-price meal offerings, and in many cases there was a lack of communication from State agencies about the rebate process, resulting in credited rebates not being received by the SFAs despite the FSMC receiving these rebate credits. 537 This poses a concern for profiteering in the school food space, and highlights issues with FSMCs taking advantage of systems where state agencies. SFAs, and local program operators may be unaware of or unclear on the rebate processes and documentation requirements. Additionally, the incorrect certification of eligibility remains an issue for greater oversight and furthers the need for a universal model. As many SFAs are required to verify income and assign eligibility, there is a growing concern that means testing is inappropriate to fulfill the true potential for school foods, and too difficult for schools to accurately perform. 538 Oversight and enforcement of the threetiered system has been criticized as inaccurate, inequitable, burdensome, inefficient, inhospitable, exclusionary, stigmatising and deterring.⁵³⁹

There are also barriers to implementation. A school meal "trilemma" discussed earlier involves the meal's nutrition, program cost, and student participation in the program and has been identified by the USDA's own review as problematic. ⁵⁴⁰ It is difficult for local program operators to serve lower fat and sodium menu items and to include more fruits, vegetables, and whole grains without lowering student participation or increasing food waste, and without breaching program cost boundaries. There are particular limits to implementation in terms of providing local, fresh, and whole foods due to insufficient federal funds to cover the costs of labour and facilities for storage, preparation and service, as well as the limited local procurement networks that schools face due to ongoing reliance on USDA Foods and the affordability of even lower-quality commercial products in the current food environment. ⁵⁴¹ Additionally, there is heavy competition for additional funds to

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⁵³⁷ National School Lunch Program – Food Service Management Company Contracts. 2013. United States Department of Agriculture. Office of Inspector General. From: https://www.usda.gov/sites/default/files/27601-0001-23.pdf

Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From:

https://www.youtube.com/watch?v=Wkh7ciOSvOw; Simmons, J., and Landry, A. 2022. Perception of Implementation of Universal Free Meals in the National School Lunch Program. School Nutrition Association. Volume 46, Issue 1, Spring 2022. From: https://schoolnutrition.org/journal/spring-2022-perceptions-of-implementation-of-universal-free-meals-in-the-national-school-lunch/#full-article Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From:

https://www.youtube.com/watch?v=Wkh7ciOSvOw; Poppendieck, J. (2010). Free for All: Fixing School Food in America (1st ed., Vol. 28). University of California Press. http://www.istor.org/stable/10.1525/j.ctt1pn8qf

⁵⁴⁰ Ralston, K., Newman, C. Clauson, A. Guthrie, J., and Buzby, J. 2008. The National School Lunch Program Background, Trends, and Issues. United States Department of Agriculture. From: https://www.ers.usda.gov/webdocs/publications/46043/12051_err61_1_.pdf?v=0

⁵⁴¹ Chapman, L. E., Richardson, S., Harb, A. A., Fear, E., Daly, T. P., Olarte, D. A., Hawley, M., Zukowski, E., Schwartz, C., Maroney, M., & Cohen, J. F. W. (2022). Nutrient Content and Compliance with Sodium Standards in Elementary School Meals in the United States Pre- and Post-COVID-19. Nutrients, 14(24), 5386. https://doi.org/10.3390/nu14245386

support Farm to School and a limited ability to explore connections with community food systems without school food champions actively pursuing these new relationships. Finally, there are barriers to successful implementation due to the low participation of students.⁵⁴²

The School Nutrition Association has identified major challenges for school meal programs funded by the federal government, many of which are a direct result of the COVID-19 pandemic and the lack of emergency preparedness. These include increasing costs (food/labour), staff shortages, and menu item shortages. There are ongoing issues with accurate meal reimbursements (partially due to convoluted and inequitable policies), the loss of federal pandemic waivers for free school meals and high unpaid meal debts, a loss of student participation due to the removal of and barriers to free meal access, and an ongoing inability to meet nutritional standards. 544

The issue of cost may be hampering support for a universal free school lunch. Boston NPR affiliate WBUR reported that the USDA has spent \$30 billion since 2020 on the program of subsidized meals for everyone, \$11 billion more than it would have normally spent for income-based school lunch programs.⁵⁴⁵

Despite opposition to cost, universal free school lunch appears popular throughout the nation. A 2021 poll by Data for Progress, found that 74% of Americans support making universal free school meals permanent nationwide. Another poll, taken in June 2022 by the Urban institute, a nonpartisan think tank focused on social and economic research, found that 76% of adults living with children enrolled in public school and 67% of adults not living with children enrolled in public school support permanent free school meals. 546

⁵⁴² Poppendieck, J. (2010). Free for All: Fixing School Food in America (1st ed., Vol. 28). University of California Press. http://www.jstor.org/stable/10.1525/j.ctt1pn8qf

 ^{543 2023} School Nutrition Trends Report. 2023. School Nutrition Association. From: https://schoolnutrition.org/wp-content/uploads/2023/01/2023-School-Nutrition-Trends-Report.pdf
 544 Impact of COVID-19 on School Nutrition Programs: Part -A Summary of Survey Results. n.d.
 Student Nutrition Association. From: https://schoolnutrition.org/wp-content/uploads/2022/08/COVID-19-Impact-on-School-Nutrition-Programs-Part1.pdf; The School Nutrition Trends report 2017-Summary. 2017. Student Nutrition Association. From: https://schoolnutrition.org/wp-content/uploads/2022/08/2017-Trends-Report-Summary.pdf

⁵⁴⁵ Sutherland, P. and Chakrabarti, M. 2022. Lesson from America's Brief Experiment with Universal Free School Meals. WBUR Radio. July 7, 2022. From:

https://www.wbur.org/onpoint/2022/07/07/lessons-from-americas-brief-experiment-with-universal-free-school-meals

⁵⁴⁶ Winfrey, I. and Daley, J. 2022. End of nationwide federal free lunch program has some states scrambling. National Public Radio (NPR). October 26, 20225:00 AM ET. From: https://www.npr.org/2022/10/26/1129939058/end-of-nationwide-federal-free-lunch-program-has-some-states-scrambling

Kenya's School Food Programs

Overview and Policy

In 1979, with the assistance of the World Food Program (WFP), the Kenyan government launched a school milk program with 220,000 students at the pre-school and primary school level. ⁵⁴⁷ In 1980, the Kenyan Ministry of Education, Science and Technology and the WFP instituted a school meal program with shared responsibility. ⁵⁴⁸ It is estimated to have served 240,000 children the first year. ⁵⁴⁹ In 2009, the *Home-Grown School Meals Program* (HGSMP) was launched with a focus on procurement from local farmers. Under this program the Kenyan government became responsible for providing meals to 540,000 children, taking on a gradual transfer of responsibilities for their school feeding program from the WFP.

There are two models of School Meals Programs are summarized below. 550

Table 3Summary of School Meal Programs in Kenya

Regular School Meals Program (SMP)	Home Grown School Meals (HGSM) Program
The Regular SMP involves the physical distribution of food commodities to schools. Most of the food in this model is imported, though some food such as cereals may be purchased locally. The Regular SMP receives support from the WFP and provides mid-day meals to 650,000 pre-primary and primary school children in 45 sub-counties within Arid and Semi Arid Lands (ASALs), as	The HGSMP began in 2009 with the dual goal of increasing school attendance of children and support for Kenyan food production, therefore creating a sustainable SMP. 50,000 students were to be transferred each year from the Regular SMP to the Home Grown SMP as part of the transition. The program targets 906,000 school age students in the semi-arid regions. The benefits of the HGSMP include reduced costs, predictable markets for local farmers, local development, and local ownership of the SMP. School enrolment and retention increase, community food security is improved, and children receive nutritious food which aids their learning.

⁵⁴⁷ Songa, William. "School Feeding Programs in Kenya." Presented at the Leveraging Agriculture for improved nutrition & health International conference, New Delhi, February 2011. https://2020conference.ifpri.info/files/2010/12/Side Feedminds Kenya.pdf.

⁵⁴⁸ World Food Program (WFP). "Government Takes over School Meals in Kenya from the World Food Program | World Food Program." World Food Program, October 2018.

https://www.wfp.org/news/government-takes-over-school-meals-kenya-world-food-program. ⁵⁴⁹ World Food Program (WFP). "School Meals Program in Kenya." Info Brief No. 22. World Food Program, September 2018. https://docs.wfp.org/api/documents/WFP-0000102591/download/.

⁵⁵⁰ Ministry of Health. "Nutrition in Education." Nutrition Portal, n.d.

https://www.nutritionhealth.or.ke/programs/school-meals-program-in-kenya/; Songa, William. "School Feeding Programs in Kenya." Presented at the Leveraging Agriculture for improved nutrition & health International conference, New Delhi, February 2011.

https://2020conference.ifpri.info/files/2010/12/Side Feedminds Kenya.pdf.

Funding is dependent on school enrollment and funds available.

By 2012 all semi-arid areas in Kenya had transitioned to government oversight with more arid counties completing the transfer in 2015.⁵⁵¹ The *National School Meals and Nutrition Strategy* (the Strategy) first drafted in 2016, was meant to ensure that school children would be nourished, healthy, and able to learn.⁵⁵² The Strategy aligns with the Kenya Constitution (2010), which provides the mandate for school meals by stipulating in Article 53b and 53c that very child has the right to...free and compulsory basic education, basic nutrition, shelter, and healthcare."⁵⁵³ The Strategy was intended to guide the implementation of Kenya's school meals initiatives across the country, build on existing policies related to children's education and school meals, health and nutrition, and support smallholder farmer development.⁵⁵⁴ The other policies in which the Strategy builds from includes the:

- Basic Education Act (2013).
- Ministry of Education, Science and Technology (MOEST) Sessional Paper No.14, 2012.
- National Education Sector Plan (NESP) 2013-2018.
- Education and Training Medium Term Plan Two (MTP II) 2013-2018.
- Ministry of Education Strategic Plan 2013-2017.
- School Health Policy 2009.
- Food and Nutrition Security Policy (2011).
- Health Policy 2014-2030.
- Food and Nutrition Security Strategy 2015-2025.
- National Nutrition Action Plan 2012-2017.
- National Social Protection Policy (2011).555

The Strategy provides a nationwide framework that underpins the design of school meals at both national and sub-national levels. The *National School Meals and Nutrition Strategy* allows for counties, communities, and schools to have their own initiatives, and it calls on partners to follow the guidelines in the Strategy while

https://reliefweb.int/report/kenya/government-takes-over-school-meals-kenya-world-food-programme; Also see: World Food Program (WFP). "Government Takes over School Meals"

⁵⁵¹ Reliefweb.int. 2018. World Food Programme. October 2, 2018. From:

⁵⁵² UNESCO. "School Nutrition and Meals Strategy for Kenya," 2016.

https://healtheducationresources.unesco.org/library/documents/school-nutrition-and-meals-strategy-kenya

⁵⁵³ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. p.13 ⁵⁵⁴ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. ⁵⁵⁵ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.

cooperating across national and county governments to coordinate school meals initiatives ⁵⁵⁶

In June 2018, the transfer of oversight from the WFP to the Kenyan government was completed. At that time, a total of 1.6 million children in 4,048 schools participated in the program.⁵⁵⁷ The National School Meals and Nutrition Strategy is shaped by the following Guiding Principles:⁵⁵⁸

- Rights-based approach: the right for every child to basic nutrition, to be free from hunger and to have adequate food of acceptable quality as enshrined in the Kenya Constitution (2010).
- Equity and gender focused: Ensuring equity across regions and the promotion of gender equality.
- Direct purchase from local smallholder farmers: Procurement will prioritize direct purchase from smallholder farmers from the locality, then region and national levels until adequate supplies are found.
- Nutrition-sensitive: any intervention must follow nutrition standards and requirements and serve nutritious meals at the schools.
- Culture-sensitive: encourage and promote healthy regional dietary habits and ingredients for the composition of school meals.
- Health and Nutrition Education: health and nutrition education is embedded in school meals initiatives and needs to be promoted.
- Shared responsibility: school nutrition and meals implementation is a shared responsibility between national government, counties, sub-counties, local communities, practitioners, and participants.
- Sustainability: stable government funding is required to support the national school nutrition and meals program. The program will embrace different school meals initiatives supported by multiple partners, communities, and other participants under the guidelines of this Strategy.
- Integrity and Accountability: all participants commit to act in an honest, accountable, and transparent manner in all the undertakings.
- Flexibility: School meals initiatives in Kenya can have multiple modalities, food basket composition possibilities and sources of funding while they align with the Strategy.
- Alignment with international and national documents: this Strategy is aligned to the broader global and continental agenda, national plans, policies and strategies of various sectors (health, education, agriculture, water, commerce and industry, social protection etc.).
- Decentralization: Decentralization guarantees equitable access to good health and nutrition among school age children in Kenya.
- Multi-sectoral coordination and collaboration: School meals interventions require a multi-sectoral approach and dialogue for its multiple positive

Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals"
 World Food Program (WFP). "Government Takes over School Meals in Kenya from the World Food Program | World Food Program." World Food Program, October 2018.

Food Program | World Food Program." World Food Program, October 2018.

558 Planipolis.iiep.unesco.org. n.d. NATIONAL SCHOOL MEALS AND NUTRITION STRATEGY 2017—2022. Pg 21. From:

https://planipolis.iiep.unesco.org/sites/default/files/ressources/kenya_school_meals_nutrition_strategy _2017-2022.pdf

- impacts. Consequently, different sector coordination must be complementary. This is critical for successful implementation, which will maximize financial and human resources.
- Partnerships: the core value of this strategy is partnership between participants involved in school nutrition and meals. This implies working together, maximizing each actor's comparative advantages, exchanging and discussing to reach understandings towards common goals. The improvement of synergies will bring multiple benefits for those involved.
- Community participation: School community participation and empowerment is critical to the implementation of the program. Community plays diverse roles and responsibilities throughout the school nutrition and meals program implementation and supports the government to deliver this service. 559

The Strategy has six primary objectives:

- To increase intake and awareness of adequate, culturally appropriate nutritious meals amongst school age children.
- To equitably improve enrolment, attendance, retention, completion and learning of school age children.
- To promote economic, social, and agricultural development.
- To develop mechanisms for a nationally owned and sustainable program.
- To promote partnerships for resource mobilization for school meals.
- To strengthen governance and multi-sectoral coordination mechanisms for the school nutrition and meals program.⁵⁶⁰

Funding

Following the transfer of the school meals program to the Kenyan government, it was acknowledged that stable and sufficient funding from more than one source would be necessary. The government allocated 2.4 billion Kenyan Shillings for the 2018/2019 school year (nearly \$24 million U.S. at the time). In addition, there were calls for an effective governance and management structure, adequate capacity development support for food procurers and smallholder farmers to provide suitable and diverse produce, government participation at all levels as well as that of communities and parents, infrastructure, and environmental safety in schools. ⁵⁶¹ The Strategy recognized that broader mobilization could be necessary in moments of food insecurity due to human causes or natural disasters. ⁵⁶²

⁵⁵⁹ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.18-19

⁵⁶⁰ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.
⁵⁶¹ World Food Program (WFP). "Government Takes over School Meals in Kenya from the World Food Program | World Food Program." World Food Program, October 2018.
https://www.wfp.org/news/government-takes-over-school-meals-kenya-world-food-program.
⁵⁶² Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/? ga=2.65325422.1162278558.1674600892-282763749.1674600892.

The Strategy called for government funding to be 'ring-fenced' to prevent reallocation in future years. In addition, the Strategy acknowledges that Ministry of Education funds will not be sufficient to meet the needs of school meals program in all counties across the country and that resources will need to be mobilized from other sources, including other sectors of government such as Health and Agriculture, local communities, parents, development partners, and the private sector. Though funding from both the public and the private sector is permitted, funding should always be in line with the principles, guidelines, and goals of the Strategy. In-kind, support must abide by the guidelines in the Strategy. ⁵⁶³

Through the McGovern-Dole Food for Education Program created in 2004, the United States Department of Agriculture (USDA) provided support to the WFP for the purchase of local food from local Kenyan farmers for school meals. Despite the transfer of oversight to the Kenyan government, the WFP and USDA continued to support the government to ensure a smooth transition.⁵⁶⁴

According to the Ministry of Education, the 'school health nutrition and meal program' uses an In-Kind and Cash Transfer funding model. With the in-kind program, food is procured from a central place then transported to the Sub-Counties before the Sub-County Director of Education (SCDE) distributes the food commodities to schools. There are 10 Arid Counties with 2,855 schools and 834,037 enrolled students in this program. The home-grown school meal model involves a cash transfer directly to schools. The Ministry of Education prepares cash payment schedules and cash is transferred to a subsidiary bank to the beneficiary's school's account. A school committee manages a special account for monies allocated solely for school meals. The transfer of funds takes place each term and depends on the enrollment numbers at the end of the previous term. Once schools receive their funds the procurement of foods goes through a competitive tender process in accordance with the guidelines of the Ministry. In 2021-2022, 16 counties, 2075 schools and 878,717 enrolled students benefited from this program. 565

Food Literacy Education

One of the strategic objectives of the Strategy is to increase children's awareness of adequate, culturally appropriate nutritious meals. Food literacy education beyond this is not explicitly outlined in the Strategy though school meals programs may include activities such as gardening as a part of learning during the school day.⁵⁶⁶

Nutrition

The Strategy outlines the nutrition standards and requirements for school meal programs. The Kenyan Ministry of Health acknowledges the significant impacts of nutrition on the overall educational achievements of school-age children and that

⁵⁶³ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. pp.34-36

⁵⁶⁴ Bread for the World. "In Kenya with a Home-Grown School Meals Program." Bread for the World, 2020. https://breadorg.wpengine.com/article/in-kenya-with-a-home-grown-school-meals-program/; Ogaad, C. Personal communication. Phone conversation, June 2022.

⁵⁶⁵ Ministry of Education. "Early Learning & Basic Education Programs - School Meals Program." Ministry of Education - Republic of Kenya, 2022. https://www.education.go.ke/early-learning-basic-education-programs.

⁵⁶⁶ Ogaad, C. Personal communication. Phone conversation, June 2022.

ensuring that children are well fed, healthy, and able to learn is essential to the effectiveness of an education system. The main goal of the school meals program is to support the national government's effort towards attainment of their goals of Universal Primary Education (UPE) and Education For All (EFA).⁵⁶⁷ In the Ministry of Education's funded school meal programs, funds in 2021-22 were exclusively allocated for rice, beans, corn soya blends, oil, and salt.⁵⁶⁸ The Strategy provides guidance on the minimum school meal composition (see **Figure 15** in Appendix J).

Implementation

The *National School Meals and Nutrition Strategy* outlines how implementation of the school food program should be carried out. It refers to appropriate water, sanitation, and hygiene promotion (WASH) practices and public health standards in the preparation and provision of food. The Strategy noted that procurement guidelines were being developed when the document was written, with the goals of prioritizing direct purchasing from local smallholder farms. ⁵⁶⁹ Different implementation models for school meals program are outlined in the Strategy and include the following:

- Centralization: Procurement is done centrally at the national or county level and then food is distributed to schools for preparation. Either the government or a delegated institution organizes the procurement process, purchases the food and is responsible for the logistics to deliver it to schools. In either case, logistic arrangements can be shared between institutions or partners through several different models according to each region's capabilities and constraints. In-kind provision is of special relevance in areas where food supply chains are not well organized or if the decentralized procurement is too difficult, e.g., in remote areas.
- Decentralization: Funds are transferred to schools from the national, county, community, or other donors. The schools undertake the procurement, prepare meals, and manage the program through locally established mechanisms. This modality has been widely used in Kenya, most often combined with the targeting of local smallholder farmers for food supply. Figure 1 provides an illustration of a decentralized procurement model.
- A mixed model: This is a combination of the centralized and the decentralized models. An institution can either receive funds and procure food locally or receive food which has been procured centrally. This modality will allow the

⁵⁶⁷ Ministry of Health. "Nutrition in Education." Nutrition Portal, n.d. https://www.nutritionhealth.or.ke/programs/school-meals-program-in-kenya/. Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.31-32

⁵⁶⁸ Ministry of Education. "Early Learning & Basic Education Programs - School Meals Program." Ministry of Education - Republic of Kenya, 2022. https://www.education.go.ke/early-learning-basic-education-programs.

⁵⁶⁹ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.31-32

- different practitioners to organize their school nutrition and meals initiatives according to their needs while following common policies and guidelines.
- Outsourced Modality: In this modality, the supply is outsourced. Catering services can be contracted by schools or governments to supply and deliver food. Another possibility is to have a partner contracted by the government to manage the entire program that involves food procurement, supply of food to schools, payment of cooks, monitoring, and accountability of the program to the Government and donors.
- Community-Based: In this modality, parents contribute food or money to purchase food. In some experiences, communities play a fundamental role either complementing the program funding and overseeing its implementation or providing autonomous management and meals for their school children. There are other school meals initiatives undertaken by communities and school authorities without the support of county or national government. These initiatives are not regular, taking place when there is a good harvest.

The salient characteristics of these ad hoc school meals initiatives are as follows:

- Parents contribute with money for school meals as part of the school fees per three-month school term or with cash or food donations in kind.
- The menu is in most cases boiled maize and beans.
- School Meals Committees buy the food and arrange for cooking and serving to students.
- Some support is received from private and non-profit sectors.⁵⁷¹

See **Figure 16** in <u>Appendix J</u> for an illustration of Kenya's decentralized food supply chain operating model.

The Strategy states that the implementation of the school meals will rely on and comply with specific guidelines including:

- The Home-grown School Meals Implementation Guidelines (HGSM Guidelines).
- Nutrition surveillance and micronutrient supplementation guidelines (to be developed).
- Supply chain guidelines covering aggregation, storage and distribution of food for suppliers' capacity development.
- Strategies to promote local supply.⁵⁷²

Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.25-26

⁵⁷² Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.30-31

Oversight

The Ministry of Education and the Ministry of Public Health and Sanitation took the lead on school meal programs when the Strategy was created in 2016.⁵⁷³ With the Strategy, the Kenyan government recognized that multi-sectoral planning and intervention would continue to be necessary to oversee school meals. MOEST is the primary coordinator of the program in collaboration with key figures in agriculture, health, social protection, and finance sectors. A strong governance structure and institutional agreements with clear roles and responsibilities is required for such a multi-sectoral approach.⁵⁷⁴

Participation of the community is a guiding principle in the Strategy. Communities hold important roles in school meal programs and may or may not be engaged in mobilizing resources, program design, oversight, and implementation. The Strategy calls for School Meals Program Committees (SMPCs) to be established at every school in Kenya, with varying compositions depending on which roles county governments assign to these committees. Parents and communities donate time when participating in the committees at school level but require further support such as in-kind or monetary contributions. ⁵⁷⁵ Communities assist by contributing volunteer time, foodstuffs, and financially to their children's school meals programs. Communities in collaboration with the school and teachers can provide the majority of resources for programs outside the targeted arid areas. ⁵⁷⁶

See Figures 17 and 18 in Appendix J for the Proposed Institutional Framework.

Challenges and Benefits

The Strategy of 2016 outlined potential issues and challenges that might occur, including: 577

- Creating unintended negative effects through price changes in local markets.
- Risks from increased complexity of adding local procurement to implementation.

⁵⁷³ Songa, William. "School Feeding Programs in Kenya." Presented at the Leveraging Agriculture for improved nutrition & health International conference, New Delhi, February 2011. https://2020conference.ifpri.info/files/2010/12/Side Feedminds Kenya.pdf. ⁵⁷⁴ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/? ga=2.65325422.1162278558.1674600892-282763749.1674600892.p.36 ⁵⁷⁵ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.p.36 ⁵⁷⁶ Situma, Dr Jane, Rhoda L Musungu, and Cynthia Aguvania. "AN EVALUATION OF THE NATIONAL SCHOOL MEALS AND NUTRITION STRATEGY PROGRAM IN THE WESTERN REGION OF" 7, no. 1 (2019): 8.; Kiilu, Redempta M., and Lucy Mugambi. "Status of School Feeding Program Policy Initiatives in Primary Schools in Machakos County, Kenya." African Educational Research Journal 7, no. 1 (February 2019): 33-39.; Bread for the World. "In Kenya with a Home-Grown School Meals Program." Bread for the World, 2020. https://breadorg.wpengine.com/article/inkenya-with-a-home-grown-school-meals-program/.; Ogaad, C. Personal communication. Phone conversation, June 2022; Ogaad, C. Personal communication. Phone conversation, June 2022. ⁵⁷⁷ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/? ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.30-31

- The diverse and unequal underlying conditions within and between regions across the country.
- The significant amount of coordination and effort required to boost local production to meet program demands.
- Identifying the appropriate procurement mechanisms is a delicate exercise of assessing complex trade-offs and unintended negative effects.⁵⁷⁸

Due to these risks, the Strategy outlined the following issues to be addressed: 579

- The need to advocate for government commitment.
- Institutional strengthening.
- Increased community participation.
- Prioritizing local smallholder supply and direct purchase.
- Reviewing current legal frameworks and procedures to effectively enable smallholder farmers access to markets as suppliers (e.g., establishing other priorities besides lowest price for local purchase, organizing farmers in cooperatives to distribute the supply demand, support schools to coordinate purchases in clusters).
- Increased technical support to develop capacities at all levels.
- Development of the capacities of program leadership and communication mechanisms with participants.
- The promotion of private sector involvement.

More than five years after the Strategy was released, little information is available from the Kenyan government ministries on the progress and implementation of the Strategy across the country. In the few academic studies available and through communication with non-profit organization staff, challenges with funding from national governments was identified as an important barrier. The COVID-19 pandemic also resulted in delays to expansion of national oversight and fund allocation to additional communities as resources were focused on fighting this virus. ⁵⁸⁰

Additional challenges identified in earlier years that are still present include:

- Harsh climate conditions including frequent droughts.
- High poverty levels.
- Limited resources due to the high numbers of children in need of food aid.
- Difficult terrain in the operational areas particularly for regular school meal programs that require food to be transported long distances.⁵⁸¹

⁵⁷⁸ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. Pg 25-26. From: https://docs.wfp.org/api/documents/WFP-

^{0000070917/}download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.

⁵⁷⁹ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. Pg 26. From: https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.

⁵⁸⁰ Ogaad, C. Personal communication. Phone conversation, June 2022.

⁵⁸¹ Songa, William. "School Feeding Programs in Kenya." Presented at the Leveraging Agriculture for improved nutrition & health International conference, New Delhi, February 2011. https://2020conference.ifpri.info/files/2010/12/Side Feedminds Kenya.pdf.

A 2019 study in western Kenya and conversations with non-profit organization staff in this region identify a lack of a financial support framework, ill-defined sources of funding, insufficient clarity in the roles of participants and resource allocation, and only partial implementation of policy. Another study in Machakos County in central Kenya found the same challenge noting that though many primary schools had implemented a school meal program, 70% of funding for such programs comes from the local community, resulting in less impact than if stable state funding were more available. By 2022, government funding was not yet available to all counties across Kenya, but rather focused on areas in extreme need such as arid areas. In many communities school meal funding is organized by parents and school staff, along with possible funds from both national and international non-profit organizations.

Kenya started a school food programme over forty years ago. It worked for decades with the World Food Programme, but since 2018 has taken full responsibility for organizing and implementing the school lunch program. Their National School Meals and Nutrition Strategy complements the provisions of the National School Health Policy and the associated National School Health Guidelines. The strategy encourages inter-ministerial coordination, multi-sectoral planning, stable funding and monitoring and evaluation for home-grown school meals to all children in Kenya. The strategy provides for counties, communities and schools to have their own initiatives, and it calls on partners to follow the guidelines herein. The strategy provides for counties are supplied to the strategy provides for counties and schools to have their own initiatives, and it calls on partners to follow the guidelines herein.

"three-pillar approach is for school meals in Kenya includes: i) regular provision of meals every school day throughout the school year; ii) acknowledgement of nutrition and nutrition education as core components of school meals; iii) linking smallholder farmers with the demand for school meals by procuring directly from these suppliers where possible. Such an approach to school meals aims to unleash their multi-dimensional benefits. Within the African continent this approach is referred to as 'home-grown school meals'. Evidence shows that home-grown school meals bring about improvements in children's access to education and nutrition, whilst strengthening the food and nutritional security of children, households and

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⁵⁸² Situma, Dr Jane, Rhoda L Musungu, and Cynthia Aguvania. "AN EVALUATION OF THE NATIONAL SCHOOL MEALS AND NUTRITION STRATEGY PROGRAM IN THE WESTERN REGION OF" 7, no. 1 (2019): 8.; Ogaad, C. Personal communication. Phone conversation, June 2022.

⁵⁸³ Kiilu, Redempta M., and Lucy Mugambi. "Status of School Feeding Program Policy Initiatives in Primary Schools in Machakos County, Kenya." African Educational Research Journal 7, no. 1 (February 2019): 33–39.

⁵⁸⁴ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. p.36. ga=2.65325422.1162278558.1674600892-282763749.1674600892.

Schlein, L. 2017. Kenya Takes Over School Lunch Project from World Food Program. Voanews.com. October 2, 2017. From: https://www.voanews.com/a/kenya-takes-over-school-lunch-project-from-the-world-food-program/4603148.html

Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. P 10

communities. It also improves the access of smallholder farmers to stable markets, acting as a fruitful vector of local development." ⁵⁸⁷

In addition, their strategy aligns with many of the United Nations Sustainable Development Goals, working toward food security and the eradication of extreme hunger and poverty for their nation.

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⁵⁸⁷ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. P 10

Summary Tables of School Food Programs Around the World

Table 4Summary Table of Finland

Finland	
Overview & Policy	 Has a comprehensive school feeding system known as 'Kouluruokailu'. It is considered an essential part of the Finnish Education System Students are provided with 30-60 minutes dedicated for lunch with a dedicated space for serving and eating meals with a dedicated space for serving and eating meals Programs are based on national recommendations and are regulated by national and local legislation regarding curricula Every child attending pre-primary, compulsory basic education and compulsory upper secondary education has the right to a full, free-of-charge meal every school day (ages 5-19).
Funding	 There is no specific national budget for school meals as it is included in the education budget. The Ministry of Education receives approximately 25% of costs to operate education-related activities from the national Ministry of Finance and the Ministry of Education and Culture. Municipalities provide remaining funds via residential taxation Additional funding is also received through the European Union funded School Fruit, Vegetables and Milk scheme Resource allocation is determined by local municipal councils
Food Literacy Education	 Was established as part of the national core education curriculum in 2004 Food literacy is a central program component and integrated throughout the school day including during meals, within before and after school activities and student welfare services, and across various curriculum subjects Food education is focused on the development of 'food sense,' a personal and experience-based understanding of food choices and 'food sophistication,' an appreciation and gratitude for food, oneself, and the environment

Nutrition	 A balanced school meal is provided each day with the goals of ensuring adequate nutrition, sustaining students' ability to study, being enjoyable, providing renewed energy, and building knowledge and awareness of food and nutrition Meals are planned at the municipal level often by the food service provider and directed mainly by the Finnish nutrition recommendations, the preference of students, and price Caterers follow standard recipes and nutrient content calculations based on the National Food Composition Database
Implementation	 Municipalities and other education providers are primarily responsible for all school food program implementation including allocation of resources; schools may develop operations and evaluation of SFPs which include tools to allow students to participate in planning, implementation, and evaluation of school meals Schools may develop operations and evaluation of their SFPs which include tools to allow students to participate in planning, implementation, and evaluation of school meals Food service procurement, food safety and hygiene, and food preparation must all be outlined in an implementation plan
Oversight	 Is decentralized, but primary responsibility belongs to municipalities and other education providers A horizontal governance structure based on cooperation across ministries and government agencies exists with a shared responsibility for the well-being of children Monitoring and evaluation is shared between local and national levels (e.g., data on participation, food waste, cost)
Challenges	 Social, cultural, and economic sustainability are considered crucial and should be incorporated throughout the school food system Resources are subject to political decision-making at the municipal level, therefore the balancing of necessary criteria in school meals daily can be challenging
Benefits	 Multiple benefits include universal free meals for students with food literacy education, sustainable funding, support for student health and welfare, multi-sectoral cooperation with national guidance and local implementation, and strong oversight

Table 5Summary Table of Japan

Japan	
Overview & Policy	 Kyushoku' (their national school lunch program) is an official part of the Japanese school system via the School Lunch Act (1954) Initially developed through grassroot networks to address hunger and malnutrition among impoverished school children; school food programs are now used to introduce regional culture and cuisine, show gratitude, and provide education of food systems, food production, distribution and consumption 'Shokuiku' (food education) is part of a comprehensive, nation-wide food education program with the Basic Law on Shokuiku (2005) mandating the promotion of food education in schools, nurseries, at home, and in communities; the Ministry of Agriculture, Forestry and Fisheries creates and releases the Basic Plan for Shokuiku Promotion every five years The Health Promotion Act (2003) outlines the nutrition management policy of school lunch facilities The School Lunch Act (2008) was amended to prioritize changing students tastes, increase knowledge of healthy eating, raise awareness of traditional foods, and support domestic agriculture
Funding	 Funded through a cost-shared agreement between federal, prefectural, and municipal governments with contributions from parents Parents are directly billed with some receiving subsidies to cover half of the original price of meals The national budget dedicates funding for activities related to the "Promotion of Shokuiku" to ensure the stability and sustainability of the program
Food Literacy Education	 The Basic Law of Shokuiku states that food and nutrition plays the most important role in children's cultivation of humanity and acquisition of life skills Food education is introduced directly through school lunch (i.e., "living textbook") by the school lunch toban (i.e., student school lunch duties) in addition to curriculum involving experiential learning (cooking and gardening) and education coordinated with the local community

	 Food education is also embedded within the National Curriculum across Living Environment Studies, Social Studies, Science, and Home Economics in elementary schools and is detailed in Article 10 of the School Lunch Act
Nutrition	 Article 8 of the School Lunch Act establishes School Lunch Nutritional Standards which are adjusted each time the Dietary Reference Intakes (DRI) are updated Nutrition teachers or school dieticians create menus based on the standards and incorporate special menus for holidays, specialty menu items, and local ingredients; parents and homeroom teachers receive the school lunch menu in advance, on a monthly basis, to encourage involvement in food education
Implementation	 Overseen by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) with implementation plans developed by local governments A uniform menu is offered five days per week to all students in every school with a program There are three types of programs: full meal, supplemental meal, and milk only Lunches are prepared in school lunch centers (for distribution to schools) or on-site kitchens
Oversight	 MEXT evaluates school food programs through conducting surveys with assessment of lunch menus based on the Nutrition Standards outlined in the School Lunch Act Boards of Education manage school lunches through guidance to School Lunch Committees led by the principal in each school
Challenges	 Challenges with rising costs have been experienced due to decreases in the scale of operations (with declining population growth). Additionally, the rising cost of ingredients owing to climate change, oil prices, and a weak yen make it challenging for staff to keep meal prices within budget for parents. Resource shortages - some areas experience difficulty finding diet and nutrition teachers
Benefits	 Rigorous nutrition standards and comprehensive school food education program with high trust and support from the public High student meal participation rate Teacher's involvement and presence during mealtimes helps minimize food waste

Table 6
Summary Table of South Korea

South Korea	
Overview & Policy	 Provides a universal free, eco-friendly (healthy and traditional foods that are organic or pesticide-free) school lunch program for all students Per the School Meals Act (2006) the purpose is to "elevate the quality of school meal services and contribute to the sound mental and physical development of students and the improvement of the nation's diet by prescribing matters on school meal services" The School Meals Act (2006) redefined the responsibility of State and local governments to include providing administrative and financial support for the provision of safe, wholesome, and good quality meals. Nutrition education was embedded to ensure the development of traditional eating culture, although not directly into curriculum Special Act on Children's Dietary Life Safety Management (2008) and Dietary Life Education Support Act (2009) are two key laws that support school nutrition environment and food safety practices
Funding	 Cost-sharing agreement through national, district, and local contributions (Korean Office of Education – 50%; District Office of Education – 20%, City Office of Education – 30%) Local offices of education serve as conduits for educational funds from the Ministry of Education and regional and municipal governments
Food Literacy Education	 Broadly outlined in the <i>Dietary Life Education Support Ac</i>. It covers families, schools and communities Article 12 specifically requires schools to teach diet education at least twice a year with information on nutritional ingredients, chemical additives, and more Nutrition education primarily occurs through optional, or club activity periods. However, it is increasingly being incorporated in experience-based learning (cooking classes, school gardens, farm visits, etc.)

Nutrition	 There are mandatory nutritional standards for school lunch programs, but none for breakfast or dinner programs Nutritional standards are based on the Dietary Reference Intakes for Koreans (2005) and include reference values for energy and macronutrient, vitamins, and mineral breakdowns by age and gender
Implementation	 School principals have the flexibility to select whether foodservice management is self-operated (school employees managing all food preparation) or contracted (partially or fully) Eco-friendly Distribution Centres provide a supply of safe and stable eco-friendly food materials to schools within a region
Oversight and Evaluation	The Office of Education in each metropolitan area and province implement and administer school meal and nutrition programs
Challenges	 A reluctance to institute a strong food education policy is a challenge Funding to hire full-time nutrition teachers; precarious nature of a workforce with a majority of part-time workers No measures in place to fill potential funding gaps
Benefits	 All South Korean schools offer free school lunches to all students from kindergarten through high school There is a high percentage of self-catered schools at the elementary and middle school levels Support Centres provide a supply of safe and stable eco-friendly foodservice materials Designation of Children's Food Safety Zones (Article 5) within 200 meters around the school to promote healthy school meals and discourage students from off-campus fast-food

Table 7Summary Table of Brazil

Brazil	
Overview & Policy	 The Programa Nacional de Alimentação Escolar (National School Nourishment Program – PNAE) is considered one of the world's most extensive school meal programs, and is Brazil's longest-standing public policy initiative for promoting food and nutrition security It serves 100% of public-school students and includes early childhood, elementary, secondary, and adult literacy students as well as students from Indigenous and Quilombola communities The food and national security agenda is linked to highly regulated and integrated programs and policies that improve access to healthier foods A governing 'intersectoral collaborative' body manages the PNAE due to the integration of linked federal, state, and local laws, policies and programs
Funding	 Managed by the National Fund for the Development of Education which transfers financial resources to the states, the Federal District, and municipalities including funding the maintenance of school structures, human resources, and initiatives on food and nutrition education Communities provide additional funds according to needs The program is offered to all students in the public education network at no cost to parents (universal, fully subsidized meals)
Food Literacy Education	 Not specifically mandated but is recommended to be included in the teaching and learning process including themes of nutrition and development of healthy lifestyle practices from the perspective of food security and nutrition
Nutrition	Nutritionists oversee program delivery in cooperation with state and local government
Implementation	The education, agriculture, planning, procurement, and civil society sectors collaborate at national, state, and local levels

	 Family farming and nutrition is integrated into the legal framework to develop a link between family farming and diet quality (30% mandated and well-defined local procurement) and tracked through an online reporting system mandated for each municipality 75% of purchases must be spent on minimally processed foods School kitchens are fully equipped, and meals are prepared fresh-from-scratch for immediate consumption
Oversight and Evaluation	 The School Meal Council, a local collegiate body of a supervisory, permanent, deliberative, and advisory nature that is responsible for monitoring the use of resources from the National School Feeding Program including the purchase of products, quality of the food offered, hygienic and sanitary conditions in which food is stored, prepared, and served, the distribution and consumption, financial execution, and rendering of accounts
Challenges	 Currently there is a lack of formal food education, sustainable procurement policies and organic food ingredient targets Inequality between the wealth of various communities, school districts, and schools means there are differences in the quality of infrastructure and supports
Benefits	 Universal free school meals for all students Sustainable funding with nutritionists on-staff and schools which are fully equipped for self-catering Robust and consistent oversight with mandated minimum local food inclusion and maximum amounts of highly processed foods

Table 8
Summary Table of Scotland

Scotland	
Overview & Policy	 Free school lunches are provided to all children in primary (grade 1-5), universally, regardless of household income. Older children can access free school meals based on their parents' income and social security status. Other children who do not qualify can purchase meals at cost. The program is part of a strategy to address child poverty by reducing the cost of living for families. The Education (School Meals Scotland) Bill (2003) introduced legislation for a national school food program, outlining the circumstances in which education authorities must ensure students receive meals, milk or other refreshments for free.
Funding	 Funding (as part of a general federal grant) is allocated to the 32 local councils, each responsible for providing foodservice, infrastructure, catering services, procurement processes, and food education. The distribution of funds is at the discretion of local authorities with subsidies provided for any shortfall of funding
Food Literacy Education	There are several initiatives which focus on food literacy as a critical component of improving school food, health and well-being. These include programs and charities focusing on strengthening school gardens, environmental activities, skill development, and guides related to food education
Nutrition	 The Schools (Health Promotion and Nutrition) Scotland Act provides comprehensive national legislation around nutritional requirements, their governance and local control The Nutritional Requirements for Food and Drink in Schools Regulations (2020) additionally outlines the quality of meals provided in schools Local government policies related to school meals additionally exist
Implementation	A formal Concordat sets out the terms of the relationship between the Scottish and local governments with responsibility shared between both the local and national government

Oversight and Evaluation	 The Soil Association's "Food for Life Scotland" programs include a step-by-step framework for change and provides independent annual inspections to ensure that food service meets standards across three primary areas: championing local producers, sourcing environmentally friendly and ethical food, and making healthy eating easier for all
Challenges	 Large discrepancy of student meal uptake numbers between students receiving universally free and means-tested access Food sourced from outside of school curbs student in-school meal participation
Benefits	 Free meals for primary grades assist family budgets, addresses inequality, and removes stigma of means-testing Strong nutrition standards exist

Table 9
Summary Table of England

England	
Overview & Policy	 School Food Programs in England vary based on local governing bodies and are primarily based on means-testing with an income threshold for eligible families The School Food Regulations (2014) provide government guidance on how to apply School Food Standards including: the School Food Standards Practical Guide, Checklist for Headteachers, School Food: Guidance for Governors, Preparing Tasty and Varied Menus, Portion Sizes and Food Guides, Allergy Guidance for Schools, Preparing for Food Supply-Chain Changes, Checklist for School Lunches, Checklist for School Food other than Lunch, and Creating a Culture and Ethos of Healthy Eating The School Food Standards apply to all food and beverages throughout the school day (including breakfast, lunch, snacks, tuck shops, and after-school clubs), with some exceptions
Funding	 Funding for school meals is provided by the Ministry of Education with additional funding contributed through communities, non-profit organizations, local authorities, and businesses Households with an income of less than £7,400 can apply for free school meals for the duration of the education of the child There are no formal guidelines for the cost of school meals Additional schemes (i.e., the National School Milk Subsidy, Nursery Milk Scheme, and School Fruit and Vegetable Scheme) are also available for students aged 4-6 years old
Food Literacy Education	 Food education and learning to cook is a key recommendation in the School Food Plan (2013) and a mandatory part of the curriculum Non-Government organizations support food literacy education including providing opportunities for food growing courses and community gardens at school
Nutrition	The School Food Standards outline the guidelines for nutrition and meal content for students which includes the proper look and acceptable taste of food and levels of sufficient nutrients and energy to support students throughout their day

	 Additional standards outline guidance on portion sizing and food groups, allergy guidance, food preparation and cooking, and checklists for lunch and non-lunch school foods Chefs within schools' support procurement of foods and the development of menus
Implementation	 The Department of Education is primarily responsible for school food programs; including setting the thresholds for income-based free school meal programs, determining funding rates for school food interventions, setting school food standards, and outlining the roles and responsibilities of both local authorities and schools who implement the programs Local governing bodies determine what school lunches and other foods offered at schools consist of
Oversight and Evaluation	The Department of Education has policy control of school food programs and works with the Department for Health and Social Care and local governing bodies for additional measures
Challenges	 Limited universally free school meals exist outside of London, as the income threshold for low-income families to qualify for means-testing is considered too low There is uncertainty around roles and responsibilities of school governors and staff
Benefits	 School food standards now allow for greater flexibility and nutrition The 2022 National Food Strategy sets out wide-ranging reforms which may greatly improve school food quality and value

Table 10Summary Table of France

France	
Overview & Policy	 Food and Nutrition Policies for school canteens has emerged as an important public health strategy over the previous 20-30 years School food programs align with national standards and reflect international food policy recommendations from the World Health Organizations and the United Nations Food and Agricultural Organization The National Food Program is the main policy for school food programs in France with a central objective on access to high quality food in institutional settings and joint action between local food systems and consumers. This strategy is aligned with other public health, environmental, and socioeconomic development strategies and outlines the goals, regulations, and oversight for school food programs
Funding	 Cost-shared between local authorities and the parents of students attending the school (based on family income), with meal costs varying per region and by school Local authorities are responsible for funding school meals and are included when determining the pricing and composition of school meals; Councils subsidize the cost of school meals (in most cases) and some areas have implemented free school lunches through special programming under the principle of proportionate universality Additional funding is sourced through national programs, community donations, fundraising, and grants
Food Literacy Education	 Is a core component designed to engage students in food education and experiences from early childhood through high school Food education xplores regional and cultural foods of France and offers hands-on learning about systems of food production, distribution, consumption and waste Schools partner with dietitians and culinary or agrifood experts for programming

Nutrition	 School nutrition standards were mandated in 2011 (Decree No. 2011-1227) with recommendations updated in 2019 Public Health France is responsible for updating nutritional recommendations for the population and sets nutrition recommendations at the national level using data from the National Agency for Food, Environmental and Occupational Health and Safety, and the opinion of the High Council for Public Health
Implementation	 Multiple models exist for school meals in elementary schools and is the responsibility of the municipalities or the public establishment for Inter-Municipal Cooperation Implementation is dependent on school population, location, funding capacity, facilities, and community and/or parental involvement Implementation within middle- and high-schools is the responsibility of the region and the schools
Oversight and Evaluation	 The Ministry of Agriculture and Food is responsible for providing access to safe, healthy, and diversified foods of good quality. Additional partnerships exist with the ministries of Economy and Finance, Health and Solidarities, and Education help to develop school food policies and the implementation of programs that align with national standards
Challenges	 A lack of federal funding produces uneven school meal program quality across France putting pressure on parents and municipalities Stigma exists from direct identification of students accessing free and discounted meals at school Designing menus with traditional French items typically excludes outside foods and the diverse cultures of students Marginalized communities face concern over an inability to access nutritious foods
Benefits	 An increase in local and organic food ingredients has improved quality and local economies France has been making progress on reducing food waste in schools and increasing organic ingredient content

Table 11
Summary Table of Italy

Italy	Italy	
Overview & Policy	 There is no federally funded school meal program in Italy, however school meals are served in most regions and municipalities Multiple ministries contribute to the regulations that define school food programs including the Ministry of Health, Ministry of Environment, the Ministry of Agriculture, and the Ministry of Education 	
Funding	 Some regional governments provide funding, however most existing programs are funded and managed by regional or municipal governments who finance educational projects and promote local/organic products Some municipalities co-finance the program while others depend on families to cover the full cost. The cost for families is dependent on income levels, with low-income families paying reduced fees or receiving meals for free 	
Food Literacy Education	 There is no federal mandate for food literacy education Some initiatives exist that promote education and food literacy for students, teachers, parents and decision makers 	
Nutrition	 Adherence to the nutritional guidelines is voluntary with encouragement for regions and municipalities to promote healthy choices and habits for children's diets 	
Implementation	 The National Guidelines for School Catering (2010) from the Italian Ministry of Health outlines the management of school canteens including the daily nutrient intake amounts for each age group The Ministry of Environment oversees the procurement of organic and local sustainable products and their incorporation in local cuisine and menu design 	
Oversight and Evaluation	A whole school approach is used, with families involved in the monitoring and evaluation of the quality of school meals served	

	 Each school has an appointed 'Commissione Mensa' (canteen commission) which includes parents appointed for 3-year terms, who visit the schools unannounced during the term for monitoring and evaluation
Challenges	 Vast differences are apparent in program practices and standards with minimal federal participation The use of contract caterers not providing quality services has proven problematic in many cases
Benefits	 Some regional and local schools have excellent school food programs and management In Rome over 90% of schools prepare meals in-house and offer special menus for medical, ethical or religious reasons

Table 12Summary Table of Denmark

Denmark	
Overview & Policy	 Does not have a national school food program, as there is has been a strong tradition of 'madpakke,' a school-packed lunch that contains a freshly made sandwich and a form of protein, intended to be consumed in 15-20 minutes during a designated classroom break and designed to demonstrate the love and care of parents towards their children Copenhagen currently has an exemplary independent school food program especially concerning food education (Food Schools/EAT) Food is currently linked to some of the UN Sustainable Development Goals and politically emphasized to be achieved in schools and the local community
Funding	 The municipality of Copenhagen has free and reduced-priced meals and provides full-funding school meals (including staff costs); the Commune receives no national funding for school food
Food Literacy Education	 Food is utilized as a learning space and encourages student involvement in menu planning and the meal production process from preparation to service Additional projects and programs have recentralized on gastronomy and utilizing food as an educational initiative
Nutrition	 The national nutrition guidelines promote plant-based, organic, and sustainable food sources and procurement Currently, there are no strict rules on nutrition within Copenhagen's school food programs
Implementation	 The municipality of Copenhagen has two school meal schemes: (1) "Food Schools" which consists of schools with their own production kitchen and canteen and (2) "EAT" which is a centralized kitchen that cooks, packs, and transports meals to all schools within a defined area each day

Oversight and Evaluation	Engaged stakeholders share the responsibility for oversight
Challenges	 Denmark as a nation has no federal funding for school meals and no federal school meal program, due perhaps to a tradition of packed lunches Student meals for existing programs are mostly paid by parents
Benefits	 Copenhagen is an exception where Food Schools provide healthy, nutritious meals for students and use food environments as a learning space for gastronomy, encouraging students to participate in menu planning and daily food-production processes with the chef Copenhagen has achieved 90%+ organic food ingredients in school meals

Table 13Summary Table of Germany

Germany	
Overview & Policy	 Germany does not currently have a national school food program, rather each federal state government holds responsibility for school education and meals within its borders resulting in a broad variety of institutional, organizational and financial structures for school meal models The Ministry of Science and Education, the Ministry of Food and Agriculture, Ministry of Environment and Nature Conservation, the Ministry of Health, and the Ministry of Family Affairs, Senior Citizens, Women & Youth participate in the designing of healthy and sustainable meals Regulation (EC) No 178/2002 provides general principles and requirements of food laws including principles of food safety, transparency, public information, risk management, and traceability
Funding	 The 'Education and Participation' program includes free lunches for children of households who are at risk of poverty Funding is additionally provided by school authorities at the community levels and includes operating costs, some personnel, investment and administrative costs that are cost-shared with parents who fund partial personnel and operating costs Berlin currently offers free school meals for students in grade 1 – 6 with costs borne by taxpayers
Food Literacy Education	 Federal states are responsible for establishing educational curriculum and requirements for nutrition in schools however it is currently not a central subject within schools in Germany
Nutrition	 Nutrition standards for school food is set by the German Nutrition Society however is not followed by all states as it currently not a requirement for school authorities
Implementation	School authorities and the community work together to manage local school food program, however an established system does not exist

Oversight and Evaluation	 The Berlin Senate has developed detailed quality criteria for the providers of school catering that are regularly checked by a control body Quality management of school food is either self-managed or partially externally managed
Challenges	 Some lunches have been criticized as being too expensive, too bland, and consisting of little organic content Nutrition standards are not mandated across Germany
Benefits	 Berlin's model includes a universal free school food program for public school students in grades 1-6 Bremen (the state's capital) has an initiative that hopes to increase the quality of community catering and increase food procurement to 100% organic ingredients with more local food content

Table 14
Summary Table of the USA

USA	
Overview & Policy	 A national school food program was introduced as an initiative towards national security for the health and well-being of future generations and to redirect surplus domestic agricultural commodities for utilization to maintain their market value The National School Lunch Act (1946) was introduced following World War 2 to provide federally funded school lunches and sets the policies and mandates for the National School Lunch Program (NSLP) Additional federal policies and cost-shared programs exist to fill the gaps of the NSLP including the School Breakfast Program, the Special Milk Program, the Child and Adult Care Food Program, the Fresh Fruit and Vegetable Program, the Summer Food Service Program, and the Patrick Leahy Farm to School Program
Funding	 Funding is supported by all levels of government in addition to parents The United States Department of Agriculture (USDA) provides federal funding to support school food programs through (1) cash reimbursements and (2) providing USDA foods (including option for cash vouchers in-lieu of USDA foods) Subsidies are provided for families based on income eligibility guidelines
Food Literacy Education	 Grassroot community programs support local foods and food education programs Food education is not a major component of federal programming for school meal programs
Nutrition	 School meals are required to reflect the latest iteration of the Dietary Guidelines for Americans per the National School Lunch Act Nutrition standards are required to be reviewed every 3 years Child nutrition programs are subject to five-year nutrition reviews through the Child Nutrition Reauthorization bill

Implementation	 The federal government holds agreements with each state-level agency to administer school food programs with additional support from school food authorities, local program operators, and Local Education Agencies Implementation varies across states, regions, and localities. However, all federally funded school food programs must adhere to federal standards and regulations in addition to State agency requirements
Oversight and Evaluation	The USDA's Food and Nutrition Service is responsible for oversight of child nutrition programs in conjunction with designated State agencies and includes accountability for food safety standards, audits, reimbursement claims, and reviews of programs
Challenges	 Some circumstances of poor nutrition and limited oversight of national standards exist Stigma and difficulties with applications are with the means-test system, both for families and communities There are concerns for potential profiteering by school food participants
Benefits	 The billions of free and reduced-price meals served have benefited families for decades Farm to school efforts have provided benefits of healthy local food, food literacy education, and local economies

Table 15Summary Table of Kenya

Kenya	Kenya	
Overview & Policy	 School meal programs in Kenya began transitioning to the sole responsibility of the Kenyan government in 2009 with the introduction of the Home-Grown School Meals Program, transitioning away from a formerly shared model with the World Food Programme The National School Meals and Nutrition Strategy (2016) aligns with the Kenya Constitution (2010) and assists in providing the mandate for school meals (Kenya Constitution Article 53b/c) The National School Meals and Nutrition Strategy builds on numerous additional policies pertaining to education and school meals and provides a national framework for the design of school meals at national and sub-national levels 	
Funding	 Stable and sufficient funding from more than one source was acknowledged as necessary for program management Funds accrue from the Ministry of Education, the Ministry of Health and Agriculture, local communities, parents, development partners, and the private sector Currently, Kenya is experiencing funding inconsistencies between counties, with 'In-Kind' and 'Cash Transfer' models becoming the most prominent 	
Food Literacy Education	 School activities may include gardening as part of learning throughout the school day, however food literacy education is minimally outlined in the National School Meals and Nutrition Strategy and currently is not a core part of school curriculum 	
Nutrition	 The National School Meals and Nutrition Strategy outlines the nutrition standards and requirements for school meal programs and provides guidance on the minimum school meal composition 	
Implementation	 The National School Meals and Nutrition Strategy outlines implementation measures including water, sanitation, and hygiene promotion practices in addition to public health standards in the preparation and provision of food 	

	Different implementation models include centralization, decentralization, mixed-model, outsources, and community-based
Oversight and Evaluation	 The Ministry of Education, Science, and Technology is the primary coordinator in collaboration with key stakeholders in agriculture, health, social protection, and finance Community participation is additionally a guiding principle, with parents encouraged to donate time for participation, donating foodstuffs, and financially contributing to school meal programs
Challenges	 High poverty levels and difficulties with the ability of different regions to provide school meals that meet government standards A need exists for programs to prioritize smallholder farm procurement and for government to provide more technical support
Benefits	 Working with the World Food Programme has enabled Kenya to offer many students school meals and has given them the ability to take the lead on providing home-grown school meals Their National School Meals and Nutrition Strategy aligns with many of the United Nations Sustainable Development Goals

Part Two: Summary of Lessons for Canada

The preceding survey of different global school food programs provide multiple lessons that are relevant to Canada as we deploy our national School Food Program. Globally, school meal programs at national, state, and municipal levels have provided significant benefits to students, despite facing challenges related to funding, universality, and the establishment and maintenance of standards. Benefits include enhanced student health through increased access to local healthy foods, an increased readiness to learn and improved behaviours in a classroom setting, and increased rates of graduation. Additionally, students benefit from improved food literacy outcomes and learn strategies to maintain healthy eating patterns throughout their life. S88 As such, there are a range of advantages for communities through increased social capital, civic engagement, and enhanced economic outcomes. This section describes the lessons learned from the twelve countries studied organized into eight themes.

Policy: Defining the Mission and Vision

This research project concluded that the underlying reasons for instituting a school food program are critical. Many countries initiate SFPs with hopes of improving food security and student health and education, though typically their program goals and implementation evolve over time. In Japan for example, the *School Lunch Act* (2008) modified their initial goal of alleviating child poverty to address changing student tastes, increasing their knowledge of healthy eating, raising awareness of traditional foods, and supporting domestic agriculture. The evolution of policy included amendments to established food education goals within the school curriculum, school nutrition standards, hygiene safety control standards, and the inclusion of diet and nutrition teachers within schools.

In Kenya, The National School Meals and Nutrition Strategy includes a multitude of guiding rights-based principles including the right for children to receive basic nutrition and be free from hunger, the promotion of gender equality, the procurement of school food from local smallholder farmers, the inclusion of nutrition standards, culturally sensitive and appropriate local foods, food, and health education. Responsibilities are shared between the national government, counties and subcounties, local communities, practitioners, and participants. Goals include program

⁵⁸⁸ Government of Canada. 2024. National School Food Policy. From:

https://www.canada.ca/en/employment-social-development/programs/school-food/reports/national-policy.html; Cohen JFW, Hecht AA, McLoughlin GM, Turner L, Schwartz MB. Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. Nutrients. 2021 Mar 11;13(3):911. doi: 10.3390/nu13030911. PMID: 33799780; PMCID: PMC8000006.; Coalition for Healthy School Food. n.d. Benefits of School Food Programs. From:

https://www.healthyschoolfood.ca/_files/ugd/e7a651_659b6c971fff44e399747263e1c61269.pdf?index =true; Rockefeller Foundation. 2021. True Cost of School Food Meals Case Study. November 2021. From: https://www.rockefellerfoundation.org/wp-content/uploads/2021/11/True-Cost-of-Food-School-Meals-Case-Study-Full-Report-Technical-Appendix-Final.pdf

⁵⁸⁹ School Lunch Support. 2015. School Lunch Act. https://school-lunch-support.jp/en/act/

sustainability, integrity and accountability, equitable access, multi-sectoral coordination and collaboration, partnerships, and community participation. ⁵⁹⁰

In the United States, the National School Lunch Act's dual mission originally included school meals becoming permanently institutionalized as a measure of national security for the health and well-being of future generations, and as a program that could redirect surplus domestic agricultural commodities for utilization to maintain their market value. ⁵⁹¹ This dual purpose however has faced challenges as foods supplied to schools were linked to agricultural commodities funded by permanent government appropriations, intended to support farm incomes by redistributing surplus foods rather than supplying whole, nutritious foods to students. ⁵⁹² In recent years there have been some improvements in program delivery and quality, but issues persist.

In Italy, the common objective is the development of joint initiatives aimed at promoting healthy behaviors in the context of school canteen services through the launch of intersectoral strategies. Special sensitivity on the theme of food for new generations of students is meant to expand the awareness and values that food conveys, adopting the high principles of the right to food, access to healthy and nutritious meals, sustainability, solidarity, and equity. School catering becomes an opportunity to co-produce a healthy environment designed to support well-being and create synergies between administrations, participants, and civil society, valuable actions identified by the World Health Organization in the document "Health 2020.⁵⁹³

Funding, Program Sustainability, and Universality

Sustainable, legislated funding for universal free lunch meal programs is a necessity. Brazil and Finland ensure their programs will be maintained by decree. In Finland school food is embedded in education funding, demonstrating its critical importance to the health, well-being, and success of students and youth. Even in the U.S. there is a certain amount of cost sharing between the federal government/USDA, State Agencies, and local School Districts, with participating schools receiving cash subsidies and USDA foods for each reimbursable meal they serve.

Even when funding is not possible federally there needs to be compliance by outside funders to program goals, strategy, and ethics. A good example of this comes from Kenya, where federal funds are insufficient to meet the needs of school meal programs in all counties across the country. They must mobilize other resources, including other sectors of government such as Health and Agriculture, local communities, parents, development partners, and the private sector. All of whom

⁵⁹⁰ Planipolis.iiep.unesco.org. n.d. NATIONAL SCHOOL MEALS AND NUTRITION STRATEGY 2017–2022. Pg 21. From:

https://planipolis.iiep.unesco.org/sites/default/files/ressources/kenya_school_meals_nutrition_strategy _2017-2022.pdf

White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf; USDA Foods: Commodities in the National School Lunch Program. (n.d.). National Alliance for Nutrition and Activity. From:

https://www.cspinet.org/sites/default/files/attachment/commodities_fact_sheet.pdf 592 lbid.

⁵⁹³ State of Health in the EU. 2019. Italy Country Health Profile 2019. European Commission. From: https://www.euro.who.int/__data/assets/pdf_file/0010/419464/Country-Health-Profile-2019-Italy.pdf

must comply with The *National School Meals and Nutrition Strategy*. They use a *decentralized approach*, transferring funds to schools from the national, county, community, or other donors. Parents also contribute money for school meals as part of the school fees per three-month school term or with cash or food donations in kind.

The schools undertake the procurement, meal preparation, and program management through locally established mechanisms. This modality has been widely used in Kenya, most often combined with the targeting of local smallholder farmers for food supply.⁵⁹⁴

The presence or absence of a universal approach in school food programs has been demonstrated to impact the success of a program. In Brazil, the PNAE provides meals for over 44 million public-school students at no cost to parents. ⁵⁹⁵ Universal, fully subsidized meals promote food and nutrition security, improve educational outcomes, develop long-term healthy eating habits, and strengthen local economies through local family farm food procurement. ⁵⁹⁶ This in addition to the requirements for local and healthy foods and nutritionist oversight contributes to the strength of Brazil as a global leader for school food programs. Finland and South Korea also exemplify similar strengths providing universally available healthy and appropriate free meals to every student. ⁵⁹⁷

Conversely, a lack of program universality may lead to negative unintended consequences that should be avoided, if possible. In the United States, concerns of the existing three-tiered means system include the unintended consequences and messaging of programs aimed at serving "needy" children. Students who are qualified to receive free or reduced priced meals are at risk of stigmatization and social isolation by their peers, often leading to non-participation. The inaccuracy and difficulty of the means test to determine eligibility for free or reduced-priced meals has also been a challenge. Since the NSLA's introduction in 1946, many scholars, community organizations and members of the public have called for a universal free meals (UFM) model to reduce stigma, increase participation and program success, and reduce the administrative burden and economic inefficiencies of the three-tiered means tested system.⁵⁹⁸

Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. Gov.Br. Fundo Nacional de Desenvolvimento da Educação. n.d. From: https://www.gov.br/fnde/pt-br/acesso-a-informacao/acoes-e-programas/programas/pnae

⁵⁹⁶ 30% of food must be purchased from 'local family farms. LEGISLATIVE DECREE No. 6, OF MARCH 20, 2020; Amendments to Law No. 11,947, the definition of a family farmer and rural family entrepreneur is: the one who practices activities in the rural environment, meeting, simultaneously, the following requirements: I – do not have, in any way, an area greater than 4 (four) fiscal modules; II – predominantly use the family as its workforce in the economic activities of your establishment or enterprise; III – have family income predominantly originated from economic activities linked to the establishment or enterprise itself; IV - direct your establishment or business with your family. From: Caderno de Legislação 2023. From: Cadernodelegislao_PNAE_2023.pdf (www.gov.br) ⁵⁹⁷ School Meals Coalition. 2024. Republic of Korea Joins School Meals Coalition. From:

https://schoolmealscoalition.org/stories/republic-korea-joins-school-meals-coalition ⁵⁹⁸ Walls, T., Thomson, J., Landry, A. 2021. Procurement of Foods in Mississippi Delta Schools. Journal of Child Nutrition and Management. Volume 46, Issue 1, Spring 2022. From:

Food Education

Optimal SFPs include elements that provide students with significant food literacy education, such as those within Denmark, Finland, Japan, and France. In a Danish context, food is a pedagogical endeavor. Meals are produced with student involvement and presented as an educational resource. Significantly, SFPs in Finland teach students *food sense* as a personal and experience-based understanding of food choices. Students learn to recognize the diversity of choices, and understand food systems, and the social, cultural and everyday significance of food. This concept also emphasizes the multiple ways of eating to promote sustainable well-being. They include the appreciation and gratitude for food, responsibility and care for oneself in the food choices made, and caring for others and the environment.

In France many programs explore the country's regional and cultural foods and offer hands-on learning about systems of food production, distribution, consumption, and waste. They demonstrate how to eat in familial and communal settings, and often emphasise pleasure and curiosity, balanced nutrition, and sustainability.⁶⁰²

In Japan, a comprehensive food literacy education is embedded into various curriculum subjects to teach students about traditional Japanese food culture and food systems. In addition, "Shokuiku" aims to teach children how to grow, prepare and consume healthy food at school. School meals provide an opportunity to eat together while including lessons about nutrition and why it's important to maintain a

https://schoolnutrition.org/wp-content/uploads/2022/06/Procurement-of-Foods-in-Mississippi-Delta-Schools-Spring-2022.pdf; Landry, A. Thomson, J., Walls, T. 2021. Opportunities for Partnership in Local Food Procurement: Mississippi Delta Schools, Current Developments in Nutrition, Volume 5, Supplement 2. ISSN 2475-2991.

https://doi.org/10.1093/cdn/nzab060 008.

⁽https://www.sciencedirect.com/science/article/pii/S2475299123106081); Simmons, J., and Landry, A. 2022. Perception of Implementation of Universal Free Meals in the National School Lunch Program. School Nutrition Association. Volume 46, Issue 1, Spring 2022. From:

https://schoolnutrition.org/journal/spring-2022-perceptions-of-implementation-of-universal-free-meals-in-the-national-school-lunch/#full-article; Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw;

⁵⁹⁹ The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: https://www.youtube.com/watch?v=KXUhNSgJGPo

⁶⁰⁰ Janhonen K. et al., 2016 cited in National Nutritional Council. "Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9.

⁶⁰¹ Lintukangas, S. (2014) cited in National Nutrition Council. "Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9.

 $^{^{602}}$ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

healthy, balanced diet. Appreciation and understanding are key elements of *Shokuiku* and can be integrated into Canadian school meal culture over time. ⁶⁰³

Nutrition, Menus, and Diets

Established and well-defined policy and standards regarding nutrition, diet, and menus are also critical for program success. Programs should include identifying the parties responsible for setting and overseeing standards and outline what those standards are. Some of the most comprehensive nationally mandated school food nutrition standards can be found in France is one of a few countries in the world with nationally mandated school food nutrition standards. Nutritional quality for school meals and collective catering standards became mandatory over the years in France aligning with national standards and international recommendations from the World Health Organization (WHO) and the United Nations Food and Agriculture Organization's (FAO) policy agendas.

Employing in-school dieticians and nutritionists is likely to provide more consistent benefits and adherence to nutrition standards than programs who rely on foodservice staff or contract caterers, as demonstrated by Japan's and South Korea's SFPs. Programs in Brazil employ qualified staff who are responsible for maintaining their program's nutrition quality, adherence to standards, and proper delivery and implementation, including the planning and evaluation of school food programs and projects. ⁶⁰⁷ PNAE, the national school food agency, employs approximately 6,000 Dietitians and 80,000 School Meal Counsellors. ⁶⁰⁸ The existence of a strong legal

⁶⁰³ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/schoolfood-programs-around-the-world; Ministry of Education, Culture, Sports, Science and Technology. n.d. Japanese school

lunches and shokuiku (food and nutrition education). From: https://www.mext.go.jp/content/20211012-mxt_kenshoku-000008678_2.pdf

⁶⁰⁴ Publications officielles-Décret n° 2011-1227 du 30 septembre 2011 relatif à la qualité nutritionnelle des repas servis dans le cadre de la restauration scolaire

NOR: AGRG1032342D. From:

https://www.legifrance.gouv.fr/eli/decret/2011/9/30/AGRG1032342D/jo/texte Alias: https://www.legifrance.gouv.fr/eli/decret/2011/9/30/2011-1227/jo/texte JORF n°0229 du 2 octobre 2011

Texte n° 29. From: https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000024614716; Galim, E. 1: Tout savoir sur la loi Agriculture et Alimentation.2018. Ministère de l'Agriculture et de la Souveraineté Alimentaire. From: https://agriculture.gouv.fr/egalim-1-tout-savoir-sur-la-loi-agriculture-et-alimentation 605 Publications officielles-Décret n° 2011-1227 du 30 septembre 2011 relatif à la qualité nutritionnelle des repas servis dans le cadre de la restauration scolaire

NOR: AGRG1032342D. From:

https://www.legifrance.gouv.fr/eli/decret/2011/9/30/AGRG1032342D/jo/texte Alias: https://www.legifrance.gouv.fr/eli/decret/2011/9/30/2011-1227/jo/texte JORF n°0229 du 2 octobre 2011

Texte n° 29. From: https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000024614716 606 Code rural et de la pêche maritime. 2021. Légifrance. République Française. From: https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043978760 607 Guide to Support Technical Activities of PNAE Nutritionists (2018). National Fund for the Development of Education. Ministry of Education. From: https://centrodeexcelencia.org.br/wp-content/uploads/2019/07/Guide-to-Support-Technical-Activities-of-PNAE-Nutritionists.pdf 608 The technical responsibility for school feeding in the States, the Federal District, municipalities, and federal schools is the responsibility of nutritionists, who must comply with the guidelines provided for by Law and in the relevant legislation. From:

framework with operational regulations supports consistent, high-quality service delivery. Each school unit is required to have a nutritionist responsible for the alignment of school food menus with nutritional norms.⁶⁰⁹

In Scotland, Ministers, education authorities, and school managers must ensure that meals served in schools meet the nutritional requirements set by the federal government and the quality of meals provided is governed by the Nutritional Requirements for Food and Drink in Schools [Scotland] Regulations, 2020.⁶¹⁰

In Finland, the National Nutrition Council produces an illustrative guide that includes recommendations on portion sizes ('model plates') for different age groups as well as a *food triangle* guide to inform meal design. The availability of alternative foods for specialized diets is also emphasized in many countries' SFPs. Special dietary accommodations may be available if required such as for lactose intolerance, dietary restrictions (celiac disease or Type 1 diabetes), or for religious dictates such as halal and kosher.⁶¹¹ In France, children with chronic conditions and other health requirements often receive a specialised diet or personalised menu through the Individualised Reception Project (PAI).⁶¹²

Implementation: Foodservice

Lessons from global SFPs related to catering models, food service practices, infrastructure, and procurement should also be considered when establishing Canadian programs. The implementation characteristics of the best programs succeed through local control which enables animators to be responsive to the

https://www.fnde.gov.br/index.php/programas/pnae/pnae-area-gestores/pnae-manuais-cartilhas/item/12094-caderno-de-legisla%C3%A7%C3%A3o-2021. Also see the Guide to Support Technical Activities of PNAE Nutritionists (2018). National Fund for the Development of Education. Ministry of Education. From: https://centrodeexcelencia.org.br/wp-content/uploads/2019/07/Guide-to-Support-Technical-Activities-of-PNAE-Nutritionists.pdf

⁶⁰⁹ Executing units are agencies (municipalities and State Secretariats of Education) who are responsible for receiving and supplementing the resources of the federal government for the implementation of the programme. See: Sidaner, E., Balaban, D., Burlandy, L. The Brazilian school feeding programme: An example of an integrated programme in support of food and nutrition security, Public Health Nutr., 16, 2013. 989–994. From: https://pubmed.ncbi.nlm.nih.gov/23218237/; The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world

⁶¹⁰ Scottish Government. 2021. "Healthy Eating in Schools: Guidance 2020." From: https://www.gov.scot/publications/healthy-eating-schools-guidance-2020/

⁶¹¹ National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

⁶¹² France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59; RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance. Public. From:

appropriate needs and desires of their community. In the U.S., despite strong federal control on their lunch program the USDA acknowledged the feedback from school food implementers that cited persistent menu planning challenges and asked that they honour its commitment to giving schools greater control over food service decisions and an increased ability to offer wholesome and appealing meals that respect local preferences.⁶¹³ The *National School Meals and Nutrition Strategy* in Kenya asks for participating counties, communities, and schools to follow the strategy's guidelines, and coordinate school meals initiatives but allows these participants to include their own initiatives.⁶¹⁴

In France, on-site food production is common. It allows for the direct management of the procurement, preparation, and service of meals. In some cases, management is provided by a collective catering company (i.e., meals are prepared in a central kitchen to a satellite kitchen for hot or cold service). Similarly, the Municipality of Copenhagen in Denmark offers two solutions for food service: Food Schools (schools with kitchens) and EAT (central kitchens). Food Schools offer opportunities for student involvement in the SFPs supported by chefs and feature communal eating settings, while EAT schools offer a fixed menu for three months at a time and pre-portion, package and deliver foods directly to the classroom. Food Schools have been identified as the ideal school model for future investment in the country and could be an option for Canada to employ depending on school readiness, capacity, and infrastructure.

The considerations for public health practices extends to the associated training and certifications required for school food program staff. Finland for example requires school kitchen staff to complete a 'hygiene passport,' which ensures staff have basic knowledge of food safety and hygiene. The Finnish Food Authority conducts food

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⁶¹³ Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium Requirements; Correction. 2022. Food and Nutrition Service. Federal Register, National Archives. 12/20/2018. From: https://www.federalregister.gov/documents/2022/08/25/2022-18220/child-nutrition-programs-transitional-standards-for-milk-whole-grains-and-sodium-correction#sectno-citation-210.10; Proposed Rule on Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010. 2013. Final Summary of Public Comments. Food and Nutrition Service Coding and Comment Analysis. Docket FNS-2011-0019. Prepared by ICF Incorporated. From: https://fns-prod.azureedge.us/sites/default/files/allfoods_commentsummary.pdf

 ⁶¹⁴ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals"
 615 La restauration scolaire. n.d. Ministère de l'éducation nationale et de la Jeuneuse. From: https://www.education.gouv.fr/la-restauration-scolaire-6254

⁶¹⁶ Københavns Kommune. n.d. From: https://www.kk.dk/borger/pasning-og-skole/skole-og-fritid/skole-og-fritidsinstitution/mad-i-skole-og-fritidsinstitution; The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From:

https://www.youtube.com/watch?v=KXUhNSgJGPo; Houlberg, K. Andersen, V.N., Bjørnholt, B., Krassel, F., Pedersen, L.H. 2016. Country Background Report-Denmark. Danish Institute for Local and Regional Government Research (KORA) for the Danish Ministry of Education. OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (School Resources Review. From: https://www.oecd.org/education/school/10932_OECD%20Country%20Background%20Report%20Denmark.pdf

⁶¹⁷ Københavns Kommune. n.d. From: https://www.kk.dk/borger/pasning-og-skole/skole-og-fritid/skole-og-fritidsinstitution/mad-i-skole-og-fritidsinstitution; Haynes, M. 2019. The Local. 17 May 2019. From: https://www.thelocal.dk/20190517/the-danish-schools-where-the-kids-make-the-dinners/

inspections in facilities involved in food preparation for food safety and hygiene and utilizes an external firm to publish the results. 618

School food program considerations include attributes beyond the environment in which school food is prepared in and extends to the environments in which it is also consumed. In England, most schools have a dining hall, a cafeteria or a 'market style' approach with seating and various hot and cold food choices are offered each day. Some schools have a 'family dining' atmosphere where children sit together and share food. Finnish schools also commonly have a designated space where school meals are served and eaten, supporting their objectives for social growth and food education.⁶¹⁹

The reduction of food waste is also a critical component of SFP policies. The Ministry of Environment in Italy rewards the procurement and use of local organic and sustainable products in menu design and canteen procedures. In Japan, the *toban* system which involves both students and teachers, plays a critical role in minimizing food waste by promoting student engagement and the integration of mindful eating practices. As a result, food waste in Japanese schools is remarkably low, with only 7% of food served going to waste, in stark contrast to the more than 30% waste observed in the United States.

Procurement

Food procurement benefits from inter-agency and NGO collaborative partnerships. For example, the Soil Association Scotland - Food For Life Scotland, a non-profit organization funded by the Scottish Government, helps local authorities' source and serve more fresh, healthy, and environmentally sustainable products in their school meals. In the U.S., the USDA provides participating schools with entitlement funds, which are to be used for the purchase of USDA Foods for school lunches, breakfast, snack, and other child nutrition programs. Procurement is done using a list of surplus domestic foods that agencies can order from, and each state agency coordinates the delivery of USDA Foods for use within its participating schools. Since 2009, the

https://doi.org/10.1016/j.foodpol.2018.03.011.

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⁶¹⁸ National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all 619 National Nutrition Council. Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all 620 Rosalia Filippini, Ivan De Noni, Stefano Corsi, Roberto Spigarolo, Stefano Bocchi. 2018. Sustainable school food procurement: What factors do affect the introduction and the increase of organic food? Food Policy, Volume 76, 2018. ISSN 0306-9192.

⁽https://www.sciencedirect.com/science/article/pii/S030691921730115X)

⁶²¹ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/school-food-programs-around-the-world.

⁶²¹ Byker Shanks, C., Banna, J., Serrano, E.L. (2017). Food Waste in the National School Lunch Program 1978-2015: A Systematic Review. J Acad Nutr Diet., 117(11): 1792-1807.

National School Feeding Program of Brazil has institutionalized its linkage with family farming by requiring that at least 30% of the total financial resources allocated by the federal government to the states and municipalities for school feeding must be used to purchase products directly from local family farms; integrating family farming and nutrition into a legal framework and developing a link between family farming and diet quality. 622

In Kenya, procurement is done centrally at the national or county level and then food is distributed to schools for preparation. Either the government or a delegated institution organizes the procurement process, purchases the food and is responsible for the logistics to deliver it to schools. Their recently launched *Home-Grown School Meals Program* also focuses on procurement from local farmers. It combines the goals of increasing school attendance with support for Kenyan food production. The benefits of the HGSMP include reduced costs, predictable markets for local farmers, local development, and local ownership. Seath Korea operates using a similar model of nationally centralized procurement called School Meal Support Centres or Eco-friendly Distribution Centres, which supplies schools with safe, eco-friendly ingredients and food, and has vastly improved purchasing efficiency and food quality satisfaction, with Seoul's three centers serving 600-700 schools daily.

Marketing

Measures to counter the marketing of unhealthy food (energy-dense or empty-calorie foods) to students is another critical component of successful programs. Canadian food companies can freely advertise to students and hold a lot of power over what schools offer to kids allowing them to market their products directly to kids. This has been challenging for several countries to overcome, but there are examples of safeguards. South Korea designated Children's Food Safety Zones within 200 meters around schools, where junk food, sugary drinks, and other nutrient poor food sales are prohibited .⁶²⁶ They established standards for high calorie and nutrient poor value foods and limit or prohibit the sale of these foods in schools and within

⁶²² Hawkes et. al., 2016. How to engage across sectors: lessons from agriculture and nutrition in the Brazilian School Feeding Program. From:

https://www.scielo.br/j/rsp/a/7qRs7bdtkSNhYbMgSgbrSTv/?lang=en

⁶²³ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892. pp.25-

⁶²⁴ World Food Program (WFP). "School Meals Program in Kenya." Info Brief No. 22. World Food Program, September 2018. https://docs.wfp.org/api/documents/WFP-0000102591/download/.; Ministry of Health. "Nutrition in Education." Nutrition Portal, n.d.

https://www.nutritionhealth.or.ke/programs/school-meals-program-in-kenya/; Songa, William. "School Feeding Programs in Kenya." Presented at the Leveraging Agriculture for improved nutrition & health International conference, New Delhi, February 2011.

https://2020conference.ifpri.info/files/2010/12/Side Feedminds Kenya.pdf.

⁶²⁵ Eun-byel, I. (2022, July 13). Seoul to raise extra budget for free meal program. Retrieved February 8, 2023, from The Korea Herald website:

https://www.koreaherald.com/view.php?ud=20220713000611

⁶²⁶ Ting, J. (2020) School Lunches. Retrieved from:

https://storymaps.arcgis.com/stories/0e789380136b4e8a85d3dfde04026412

Green Food Zones.⁶²⁷ A Special Act also includes articles related to the limitation or prohibition of advertisements of high calorie, empty caloric foods; requiring nutrition labelling, the color-coding of nutritional values and quality certification standards for children's foods which are identified as safe and nutritionally balanced.⁶²⁸

Oversight

It is imperative that school food programs have good oversight and are sustainable, both environmentally and fiscally. In Brazil, the oversight of the compliance to program practices and standards is ensured by the Conselhos de Alimentação Escolar (CAE) or School Meals Councils. The Councils are responsible to the PNAE for monitoring the purchase of products, the quality of the food offered to students, the hygienic and sanitary conditions in which food is stored, prepared, and served, the distribution and the consumption, financial execution, and the task of evaluating and reconciling funding and expenses. School food goals and practices throughout Brazil are discussed with students' families to facilitate support for students' participation in school meals, which in turn supports their development. Some schools have school food committees, which include teachers, students, school health care staff, and food service providers.

In Finland, the school food system is led by a collaboration of ministries and governmental agencies who take shared responsibility for the well-being of the country's children, a horizontal governance structure based on cooperation. The national core curriculum also recommends multilateral cooperation between school principals and management, teachers, food service staff, students, and families. The monitoring and evaluation of school food is shared locally and nationally. At the local level, data on student participation in school meals, food waste, and cost is collected, caterers monitor the nutritional quality of school meals using national guidelines, and students are involved in evaluation of their school meals through feedback forms. Finland believes children have the right to be involved in decision-making that concerns their lives as the process facilitates learning about active citizenship and democratic participation and encourages students to participate in planning, implementing, and evaluating meals; fostering involvement and food education.

⁶²⁷ Ministry of food and drug safety. (n.d.). Mfds.go.kr. [cited 2023 Jan 28]. Retrieved from: https://www.mfds.go.kr/eng/wpge/m 13/de011004l001.do

⁶²⁸ Ministry of food and drug safety. (n.d.)

 ⁶²⁹ Ceccareli, Marcelo & Assis, Ana Elisa & Main, Gill. (2023). Law 11.947/2009. The National School Food Program Revisited. Direito Público. 19. 10.11117/rdp.v19i104.6960. From: Download citation of Law 11.947/2009. The National School Food Program Revisited (researchgate.net)
 630 Ibid, p.29

⁶³¹ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

⁶³² The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/schoolfood-programs-around-the-world; Byker Shanks, C., Banna, J., Serrano, E.L. (2017). Food Waste in the National School Lunch Program 1978-2015: A Systematic Review. J Acad Nutr Diet., 117(11): 1792-1807.

⁶³³ National Nutrition Council. Eating and Learning Together – Recommendations for School Meals."
Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for

In Italy, the 'Commissione Mensa' (Canteen Commission) has been integrated into law and involves families in the monitoring and evaluation of the quality of school meal services.⁶³⁴ In Kenya, A strong governance structure and institutional agreements with clear roles and responsibilities is required for the multi-sectoral approach of their SFP Strategy.⁶³⁵

Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all; Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

Guidelines for School Catering. 2020. Foodinsider, IT. From:
 http://www.foodinsider.it/commissione-mensa/linee-di-indirizzo-della-ristorazione-scolastica-2020/
 Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.p.36

Part Three: Advice for Canada 636

The following best practice recommendations emerged from our webinars with SFP experts and our research of policy, administration, and implementation during our 2021-23 project on the twelve countries SPFs described above. These recommendations are intended to inform practitioners and policymakers from all levels of government when developing or enhancing school food programs in Canada.

Policy Recommendations

Focus on the vision and goals you have for your SFPs, student well-being and success, and collaborate across all levels of government and practitioners to develop and create strong achievable and measurable standards:

- SFP vision and goals include the human rights of students, their health and well-being, ability to gain an education and succeed academically, obtain food literacy knowledge to live a long and healthy life, help to support the community
- Collaborate among federal provincial, and territorial governments, Indigenous leaders, and local municipalities to ensure adequate funding, infrastructure, standards, and oversight are in place to allow communities and schools to coordinate and deliver programs on the ground.
- Enact legislation to support strong program policies, funding, standards, and implementation which include civil participation, intersectoral decision-making, and local execution.⁶³⁷
- Adopt a whole school approach which embraces a positive and universal focus on wellbeing and includes student, family, and community involvement which aid in participant buy-in and program success.⁶³⁸
- Do not merely satisfy students' nutritional needs, rather design programs that promote active participation and engagement from students, teachers, parents, and the community in all stages of programming and execution.
- Promote outcomes of SFPs that offer continuous opportunities for education, health promotion, food literacy, and equality.

Funding Recommendations

Provide ring-fenced and sustainable cost-shared funding:

⁶³⁶ Part 3 presents examples of specific characteristics extracted from Section 2.

⁶³⁷ Examples include the Richard B. Russell National School Lunch Act: https://fns-prod.azureedge.net/sites/default/files/resource-files/nsla-amended-through-pl-116-94.pdf, and the subsequent United States Department of Agriculture's Farm to School Program (https://www.ers.usda.gov/webdocs/publications/82945/eib-168_summary.pdf)

National Children's Bureau. 2024. Whole School Approach. From: https://www.ncb.org.uk/what-wedo/improving-practice/wellbeing-mental-health/schools-wellbeing-partnership/whole-school#:~:text=Improved%20pupil%20wellbeing,schools%20can%20be%20found%20below.

- Offer sustainable and sufficient federal funding to all provinces, territories, and
 First Nation schools to operate a cost-shared universal and nationally
 harmonized School Food Program in Canada. This funding should support
 nutritious meals and snacks for all public childhood, elementary, secondary,
 and adult literacy students including after school and summer programs.
- Safeguard long-term federal SFP funding to provincial and territorial governments who support and manage local providers:
- Provide federal funding to SFPs on a per-child basis, determined on a regional cost basis that will vary accordingly with socio-economic factors, remote locations, difficult to reach areas, and unique food cultures.
- Utilize federal, provincial and territorial funds to provide school food program infrastructure, food service labour, and supplemental initiatives including hands-on food literacy education such as school gardens and farm field trips

Food Literacy Education Recommendations

Promote food literacy education as a critical part of a successful SFP, with both theory and hands-on learning, ensure teachers have sufficient training, and provide consistent messaging of the value of food education across all school activities, including lunch:

- Promote the importance of student involvement in SFP planning, preparing, serving, and learning about food and food systems to enhance the outcomes of SFPs as in Canada's National School Food Policy.⁶³⁹
- Embed food literacy in curricula by integrating theoretical and hands-on learning about food, food systems, and nutrition into relevant curriculum subjects
- Craft a comprehensive school food literacy policy. A proposed Ontario policy, Bill 216, Food Literacy Act for Students, 2020, presents an excellent example.⁶⁴⁰
- Provide professional development to train teachers in delivering evidencebased food and nutrition education.⁶⁴¹

⁶³⁹ Food literacy has been show to help create a healthier society while returning \$9 in benefits for every \$1 invested. World Food Programme. From: https://www.wfp.org/news/new-report-confirms-game-changing-impact-health-and-nutrition-

school#:~:text=SHN%20programmes%20are%20a%20cost,%241%20invested%20over%2080%20ye ars; Many countries with exemplary SFPs include food literacy components, such as Japa and Finland; Also see the Food Literacy section under the Summary of Best Practice Recommendations for Canada in Part 3.

⁶⁴⁰ Legislative Assembly of Ontario, 2020: https://www.ola.org/en/legislative-business/bills/parliament-42/session-1/bill-216

⁶⁴¹ See the Food Literacy section under the Summary of Best Practice Recommendations for Canada in Part 3.

 Integrate consistent messages about food, nutrition, and food systems in classroom lessons and during the lunch period with the help of teachers or nutritionists.⁶⁴²

Nutrition Recommendations

Establish evidence-based nutrition standards for all students, collaborate on menu design, recipe development, and ingredient choice, educate foodservice workers on healthy food and diets:

- Establish comprehensive national legislation and recommendations for nutritional standards and requirements for SFPs that emphasize local implementation, oversight, and control.⁶⁴³
- Establish a coalition of experts from provinces, territories, Indigenous communities, municipalities, school boards, and external organizations (such as municipal health departments and academic nutrition experts) to develop and maintain the standards for nutrition, develop menus and recipes, and maintain oversight of food service management.
- Mandate training in healthy and sustainable food service management at provincial, territorial, and local levels.

Implementation Recommendations

These cover a range of infrastructure and operational issues:

- Offer comprehensive programs including serving students snack, breakfast, and lunch options as funding and capacity allows, including serving foods according to dietary preferences and restrictions.
- Establish local-level, multi-sectoral partnerships to aid local and sustainable food procurement and food service practices in schools, including efforts to minimize food waste.

Food Preparation Recommendations

- Ensure SFPs have sufficient funding to purchase infrastructure and equipment required to support nutritious meal/snack foodservice, including advocating for prep or teaching kitchens in all new school buildings and where possible, dining facilities.
- As possible, offer SFPs through a self-catered model that serves culturally
 appropriate scratch made meals produced on-site, or produced in a central
 kitchen and distributed to schools where production facilities are not feasible.

⁶⁴² School Food Plan. "A Checklist for Head Teachers." School Food Plan What Works Well, 2016. http://www.schoolfoodplan.com/wp-content/uploads/2016/03/SFP-Headteacher-Checklist.pdf.

 $^{^{643}}$ Scotland, England, and Brazil have rigorous SFP nutrition standards. See the Nutrition sections of those countries in Part 2 of this report.

- If used, SFP contract caterers should adhere to the local program guidelines, including ensuring nutrition standards and other program outcomes (e.g., local procurement, food literacy education, sustainable food service practices, waste monitoring, etc.) are met.
- Ensure dining spaces and cafeterias are well designed and organized, inviting, well-ventilated, comfortable, and clean to enhance the student eating experience.

Procurement Recommendations

- Exclude or limit the purchase of ultra-processed foods (e.g., to a maximum of 5% of expenditures according to the NOVA food classification system and Tier 3 of Canada's Food Guide Food Classification System) and cap processed foods (e.g., to 20% of purchases according to the NOVA food classification system and Tier 2 of Canada's Food Guide Food Classification System).⁶⁴⁴
- Require at least 30% of the total financial resources allocated by the federal government to the provinces, territories and municipalities for school feeding must be used to purchase products directly from local family farms.
- Significantly limit the influence of producers or contract caterers of procurement sources
- Strengthen the support of local authorities in sourcing and serving more fresh, healthy, and environmentally sustainable products in their school meals.

Marketing Recommendations

- Safeguard programs and school environments from the marketing of unhealthy food and beverage products.
- Ensure parents have oversight of marketing their children are exposed to and are consulted about the acquisition of vending machines or use of school kiosks.

Oversight Recommendations

Proper oversight, governance, and evaluation at all levels of governmental and civil participation are necessary to achieve successful and sustainable programs:

- Provide oversight to ensure compliance of evidence-based nutrition guidelines and standards.
- Set up reporting protocols to enforce local food purchasing guidelines and targets based on the regional contexts (e.g., 20-30%), scaling up to include

⁶⁴⁴ For the NOVA Food System guide see https://ecuphysicians.ecu.edu/wp-content/pv-uploads/sites/78/2021/07/NOVA-Classification-Reference-Sheet.pdf; for the Canada Food Guide Food Classification System see https://ecuphysicians.ecu.edu/wp-content/pv-uploads/sites/78/2021/07/NOVA-Classification-Reference-Sheet.pdf; for the Canada Food Guide Food Classification-system-development-validation.html

- metrics on both local and sustainable/organic food procurement targets over time.
- Establish an oversight council (local and regional) to ensure proper use of funding and to ensure local implementation meets standards.
- Ensure cross-ministerial collaboration, with responsibilities for the SFP shared between relevant ministries.⁴³
- Create school meal councils (at the school board or school level) for program oversight who:
 - Are composed of an expert interdisciplinary local collegiate body of a supervisory, permanent, advisory nature that is responsible for monitoring the use of federal provincial and territorial resources, ensuring the quality of school feeding at all stages of the program's implementation process.
 - Include families, students and parents, in monitoring all aspects of foodservice.
 - Provide financial oversight and monitor the purchase of products, the quality and nutrition of the meals produced and offered to students, and the hygienic and sanitary conditions in which food is stored, prepared, served, and consumed.
 - Monitor and address food waste through menu and portion design, improve waste reduction strategies and sustainable practices, and promote and support food education for staff and students

Evaluation

- Establish independent provincial/territorial-wide online data collection and reporting platforms to track program outputs and monitor outcomes to understand program impacts, gaps, and opportunities for growth and enhancement.
- Train and support local SFP implementers to use data reporting platforms to assess finances and fundraising, student uptake, program strengths, improvement opportunities, procurement logistics, waste, etc.
- As possible, utilize a whole school approach which involves families in the
 monitoring and evaluation of the quality of the school meal service, including
 creating advisory councils or partnering with existing committees to assist with
 program monitoring via parents/caregiver visits to SFPs.

Conclusion

To ensure a successful National School Food Program in Canada, the Government of Canada should collaborate with provincial, territorial, and Indigenous leaders, guided by input from municipal governments, school officials, experts, and community-level partners. This type of coalition could develop comprehensive regulations for appropriate nutrition and food service standards and requirements, including local control of implementation and proper governance. Though not significantly explored in the insights gleaned from the twelve countries studied, Indigenous autonomy of their programs is necessary in Canada.

Federal funding for food and beverages and provincial and territorial funding of infrastructure and support of food literacy curriculum, with municipal and Indigenous control over menu and food and beverage service delivery will produce SFPs that provide sustainable Canada-wide, culturally appropriate, sustainable, and healthy meals and snacks for students.

As a critical component of a successful whole school approach to health and wellbeing for students, the provinces, and territories should provide food literacy education as part of a national program to help students understand the importance of food and nutrition.

To ensure environmental responsibility and provide value to the community, food should be as much as possible, local and sustainably produced, representing organic and regenerative agricultural practices. Local-level multi-sectoral partnerships can be established to aid sustainable sourcing. Food should be self-catered by school boards as much as possible, with meals and snacks produced simply with fresh ingredients that respect prescribed standards.

Proper use of funding and program implementation standards must be monitored. Provinces and territories can oversee municipal activities. At the local level, school meal councils should be formed to monitor the use of resources, conformity to health, safety, and nutrition standards, the quality of school feeding, student meal uptake, and waste. A whole school approach that involves families in the monitoring and evaluation of the quality of the school meal service should be adopted. In addition, each school can appoint its own 'oversight council,' parent groups to monitor foodservice quality.

School catering should not be seen solely as satisfying the mere satisfaction of nutritional needs but should be considered an important and continuous moment of education and promotion of health directed at children, which also involves teachers, parents, and the community.

Building a successful universal and nationally harmonized School Food Program in Canada will drive improved health and education outcomes for students, lower health costs, and offer significant economic gains almost immediately and well into the future.

Appendix A: The Coalition for Healthy School Food's 8 Guiding Principles

The <u>Coalition for School Food guiding principles</u> for school food program design are:⁶⁴⁵

Health-Promoting

Serve tasty, nourishing and culturally appropriate foods to all children, focusing on vegetables and fruits. Ensure that programs are in line with the revised <u>Canada's Food Guide</u>, foster a healthy food environment, and promote mental health and wellbeing.

Universal

Ensure that ALL children in a school can access the program in a non-stigmatizing manner. Over time, all children in Canada will be able to participate in a school food program.

Cost-shared

Use federal funding to both expand on current provincial, city, parental and community funding and to initiate new programs in a cost-shared model.

Flexible and locally adapted

Successful school food programs reflect the local context of the school and region and are connected to and informed by students and their parents or caregivers. Ensure that funding builds on existing programs, local knowledge, skills and relationships and that it supports different food service models, from breakfast to lunch to snacks.

Committed to Indigenous Control over Programs for Indigenous Students

Embed Indigenous Food Sovereignty in a School Food Program for Canada and negotiate funding for school food programs with First Nation, Métis and Inuit leaders.

A Driver of Community Economic Development

Encourage school food programs to set local and sustainably produced food purchasing targets, which would create jobs for Canadian farmers and local food producers.

Promoting of Food Literacy

Support the conditions for school food programs to be integrated into the curriculum and enable food literacy and experiential food skills education.

Supported by Guidance and Accountability Measures

Build on provincial and territorial school food funding and policies to ensure that programs have strong public accountability measures in place and are guided by Canada-wide nutritional standards, conflict of interest safeguards that prevent

⁶⁴⁵ The Coalition for Healthy School Food. n.d. Our Guiding Principles. From: https://www.healthyschoolfood.ca/guiding-principles

programs from marketing unhealthy food and specific products, as well as a framework for consistent Canada-wide program evaluation.

Appendix B: Guiding Principles within the National School Food Policy of Canada

The Canadian National SFP Policy states that:

"Every child in Canada deserves to have the best start in life. Getting the food they need to succeed at school is essential to a fair start in life, regardless of their family's circumstance. This is a key part of our plan for fairness for every generation." ⁶⁴⁶

Vision

That all children and youth in Canada have access to nutritious food at school, in an inclusive, non-stigmatizing environment that fosters healthy practices, while strengthening connections with local food systems, the environment and culture.

Principles

The following guiding principles will support progress towards the Policy's vision.

Accessible

Children and youth can participate in school food programs without stigma or barriers.

Health promoting

Food served is consistent with healthy eating recommendations in Canada's Food Guide, and children and youth are supported in developing healthful food-related behaviours and attitudes, as well as food and nutrition knowledge and skills.

Inclusive

Children and youth have access to culturally appropriate, relevant and inclusive school food programs that engage students and the broader community.

Flexible

Food is locally sourced where possible and reflective of local and regional circumstances.

Sustainable

Programs are designed to be environmentally sustainable, and adequately resourced.

⁶⁴⁶ Government of Canada. 2024. National School Food Policy. From: https://www.canada.ca/en/employment-social-development/programs/school-food/reports/national-policy.html

Appendix C: Finland

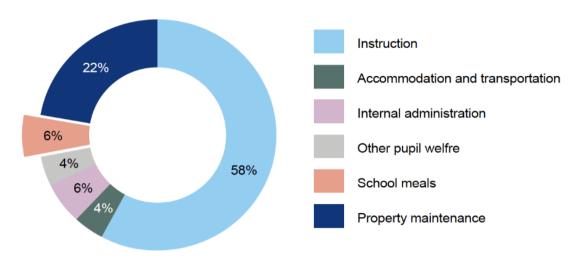
Cost Breakdown of School Food

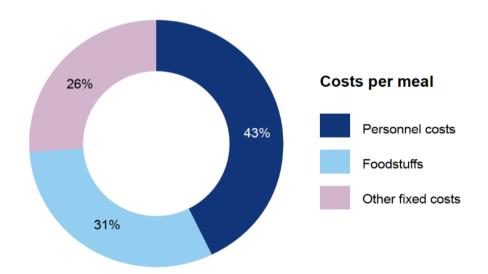
Figure 1 *National average costs of school food in 2017*⁶⁴⁷

Costs of school feeding	
Cost of one school meal in basic education (National average 2017)	EUR 2.80
incl. raw materials (approx. 30%) incl. labour (approx. 43%)	EUR 0.84 EUR 1.20
Share of school feeding of total operating costs of education in municipalities	6%
The actual cost per pupil per year in basic education (2017)	EUR 8,815
Costs of basic education school feeding in municipalities per pupil per year (2017, national average)	EUR 531
Annual national costs of school feeding (2016) Total In basic education In general upper secondary schools In vocational institutions	EUR 434M EUR 317M EUR 43M EUR 74M
Number of teaching days per year in the Basic Education Act (628/1998)	190
Number of pupils in basic education (2017)	524,272

⁶⁴⁷ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all.

Figure 2Division of costs of basic education and meals⁶⁴⁸





⁶⁴⁸ Ibid, p.26

Model Plate

Figure 3

Image of a model plate provided by the National Nutrition Council 649



Food Preparation Practices

Table 16

Types of Food Preparation Practices 650

The *Cook & Serve* method is the most traditional one. The food is cooked from raw materials, semi-finished products and pre-cooked foods in a school kitchen and served straight away close by. This practice is best suited to environments, where a large number of customers are served simultaneously.

The Cook cold method includes preparing and mixing cold components in a central kitchen, from which the food is transported cold to a school kitchen, where the food is cooked and served. The Cook cold method enables the kitchen to cook a limited

⁶⁴⁹ National Nutrition Council. "Eating and Learning Together – Recommendations for School Meals." Helsinki: National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017. http://urn.fi/URN:ISBN:978-952-302-844-9.

⁶⁵⁰ Pellikka, K., Manninen, M., & Taivalmaa, S.-L. School meals for all—School feeding: Investment in effective learning—Case Finland. Ministry for Foreign Affairs of Finland & Finnish National Agency for Education, Helsinki. (2019), https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all

https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all. p.17-18

amount of food at a time, dividing a large quantity of food into smaller portions according to customer flow.

In the *Cook & Chill* method the food is prepared, cooked and chilled at a central kitchen and transported to schools for re-heating. The microbiological quality of the food is ensured by paying close attention to the preservation of hot and cold Chains.

In the *Hot fill* method, the food is prepared and cooked at a central kitchen, packed hot and only then chilled. This method requires safe and durable packing materials and efficient means of chilling the food.

For more on Finnish kitchen types and food preparation and production models please see Pellikka et al.⁶⁵¹

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⁶⁵¹ Ibid, p.18, 23 and 24

Appendix D: Japan

Table 17

Operational cost breakdown for school lunches in Japan⁶⁵²

Table 3 A break down of the operating expenses for school lunches in Japan

A break down of the cost of resources	Costs
(1) Labor costs	Municipal tax (Public expenses); office workers, etc. Prefectural tax (Public expenses); diet and nutrition school teachers · school dietitian
(2) Ingredient costs	Parents (Beneficiary)
(3) Facility equipment costs (facility equipment and tableware)	National government and municipality (Public expenses)
(4) Other costs (Photothermal water costs, etc.)	Municipal tax (Public expenses)

Figure 4

A sample screen of Yamagata's Prefectural Agriculture, Forestry, and Fisheries department website promoting local food consumption through the "Perorin", a mountain shaped character which can be found on locally produced food products grown within the prefecture. ⁶⁵³



⁶⁵² Maruyama, S. & Kurokawa, A. 2018. The Operation of School Lunches in Japan: Construction of a System Considering Sustainability. From:

https://www.jstage.jst.go.jp/article/eiyogakuzashi/76/Supplement/76_S12/_pdf/-char/ja. P S17 ⁶⁵³ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/schoolfood-programs-around-the-world

Figure 5

The three school meal types in Japanese schools 654

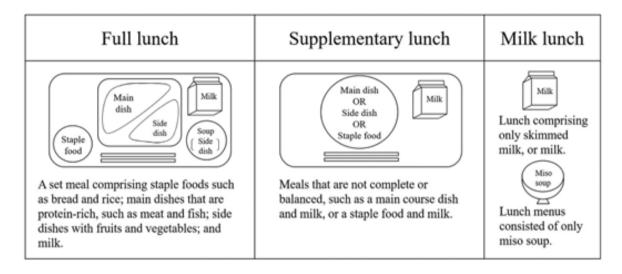


FIGURE 12.1 Three types of school lunch menu structure

Figure 6

Sample school lunch plate which includes rice, baked egg and vegetable dish, a seaweed and vegetable salad and a soup that contains strips of deep-fried tofu and vegetables, and milk. If there is fruit, it is served after the main meal as dessert. ⁶⁵⁵



⁶⁵⁴ Waida, Y., & Kawamura, M. 2022. Japanese school lunch and food education. In School Food, Equity and Social Justice. Taylor & Francis.

⁶⁵⁵ The Coalition for Healthy School Meals. 2022. From: https://www.healthyschoolfood.ca/schoolfood-programs-around-the-world

Table 18 *MEXT implementation surveys*⁶⁵⁶

table number	statistical table	
1	School lunch implementation situation	
2	School lunch implementation status (elementary school, junior high school, compulsory school, secondary school (first term))	
3	School lunch implementation status by prefecture (number of public elementary schools)	
4	School lunch implementation status by prefecture (number of children in public elementary schools)	
5	School lunch implementation status by prefecture (number of public junior high schools)	
6	School lunch implementation status by prefecture (number of public junior high school students)	
7	Implementation of school lunches by cooking method by prefecture (number of public elementary and junior high schools, compulsory education schools secondary education schools (first term))	
8	School lunch implementation status by prefecture cooking method (public elementary and junior high school, compulsory education school, secondar education school (first term) student number)	
9	Communal kitchen installation status by prefecture size (public)	
10	School lunch cook placement situation (public)	
11	Placement of school lunch cooks by prefecture (public/full-time)	
12	School lunch cook placement situation (public)	
13	Outsourcing situation for school lunches (public)	

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⁶⁵⁶ https://www.e-stat.go.jp/stat-search/files?page=1&layout=datalist&toukei=00400802&tstat=000001016540&cycle=0&tclass1=000001126135&tclass2=000001126136&tclass3val=0 (Japanese)

Additional Resources

- MEXT Guidance on Food and Nutrition Education at School
- MEXT 2021 Budget (Japanese)
- Japan's E-stat school lunch implementation survey reports (Japanese)
- Actions to Prevent Food Allergy-related Accidents in School Lunches
- Trends in Intervention Studies on Food and Nutrition Education in Japan Utilizing the School Lunch A Systematic Review

Appendix E: South Korea

Table 19Summary of Key Differences between 1996 and 2006 Amendments of School Meals Act⁶⁵⁷

	School Meals Act of 1996 (Act No. 5236, Dec. 30, 1996)	School Meals Act of 2006 (Act No. 7962, Jul. 19, 2006)
Purpose	To contribute to the sound development of students' mind and body through school meal service programs and, furthermore, to the improvement of the public's eating habits by prescribing the matters concerning the school meal service.	To elevate the quality of school meal services and to contribute to the sound mental and physical development of students and the improvement of the nation's diet by prescribing matters on school meal services, etc.
Definitions	"School meal service" means the meal service which is provided for students of a school or of its neighboring schools, in order to achieve the purpose under Article 1, with the installation of meal service facilities and equipment within the school and the meal service provided for students of various school levels within the jurisdictional areas of superintendent of the boards of education and educational superintendents of the Seoul Special Metropolitan City, other Metropolitan Cities, and Dos (hereinafter referred to as the "City/Do"); "Externally managed meal service" means a meal service operated by or implemented through transportation of prepared or processed food by school meal service providers upon being entrusted with the school meal	"School meal services" means meal services provided by school principals to students and pupils of schools or classes under the provisions of Article 4, in order to achieve the purpose under Article 1. "School meal service providers" are persons executing the business of school meal services upon entrustment according to contracts with school principals, pursuant to Article 15.

⁶⁵⁷ Korean Institute of Public Administration. (2017). Contracting Out or Contracting Back In: School Food Service Contracts in South Korea. Retrieved from: https://www.kipa.re.kr/synap/skin/doc.html?fn=1864_3&rs=/convert/result/board/311/

service by school principals; "School meal service provider" is any person who conducts the externally managed meal service as referred to in subparagraph 2.

"Meal service expenses" means food costs, meal service operation costs, and expenses for meal service equipment and installation necessary for a school meal service.

Operation Mode of School Meal Services

Article 10 (Externally Managed Meal Service)

- (1) In case of a school that fails to be furnished with the facilities and equipment for school meal service within the school, the installation and operation of the facilities for the school meal service may be entrusted to, or an externally managed meal service program may be implemented through transporting of prepared and processed food by, school meal service providers under contract.
- (2) Externally managed meal service programs shall be implemented by the principals of the schools intending to implement the externally managed meal service program in consideration of the opinions of the school management committees referred to in Article 44 (2) of the Local Education Autonomy Act or parents (limited to the cases where school management committees are not organized) only for the students wishing to participate in the externally managed meal service.
- (3) The meal service costs for an externally managed meal service program shall be borne by the

Article 15 (Operation Mode of School Meal Services)

- (1) A school principal shall directly manage and operate the school meal services, but may make the person equipped with specific requirements execute the affairs of school meal services by entrusting him/her therewith subject to the deliberation of the school operation committee under the provisions of Article 31 of the Elementary and Secondary Education Act: Provided. That he/she shall not entrust such person with the business of the selection, purchase and inspection of food materials, with the exception of inevitable cases for the given conditions of school meal services.
- (2) Where the compulsory education agency intends to entrust the business under the provisions of paragraph (1), it shall obtain in advance approval of the competent authority.

The scope of business entrustment for school meal services under the provisions of paragraph (1), the

	parents, but the State or local governments may support part of the meal service costs, if necessary, under the conditions as prescribed by the Presidential Decree. (4) Necessary matters concerning the standards for the school meal service providers and methods of the contract for external management referred to in paragraph (1) shall be determined by the Presidential Decree. [This Article Wholly Amended by Act No. 5236, Dec. 30, 1996]	requirements to be met by school meal service providers, and other matters necessary for business entrustment shall be prescribed by the Presidential Decree.
Duty of State and Local Governments	The State and local governments shall devise the policies necessary for improvement of eating habits through nutritional education and the efficient implementation of school meal plans.	(1) The State and local governments shall provide administrative and financial support to make the school meal services of good quality safely offered and devise the policies necessary for the cultivation of students' capability to manage correct diet and eating habits through nutrition education, and for the succession and development of traditional eating culture. (2) The Superintendents of the Offices of Education of the Special Metropolitan City, Metropolitan City, Do and Special Self-Governing Province (hereinafter referred to as "Superintendent of the Office of Education") shall establish and execute plans for school meal services every year.
Penalty	None	Article 23 (Penal Provisions)

- (1) The school meal service provider who has violated the provisions of Article 16(1) 1 shall be punished by imprisonment for not more than seven years or by a fine not exceeding 100 million won.
- (2) The school meal service provider who has violated the provisions of Article 16(1) 2 or 3 shall be punished by imprisonment for not more than five years or by a fine now exceeding 50 million won.
- (3) The person failing under any one of the following subparagraphs shall be punished by imprisonment for not more than three years or by a fine not exceeding 30 million won: 1. The school meal service provider who has violated the provision of Article 16(1) 4; and
- 2. The person who has refused or obstructed or avoided without any justifiable reason the entry, inspection, perusal, or removal under the provision of Article 19(1)

Article 24 (Joint Panel Provisions)

Article 25 (Fine for Negligence)

Table 20

School Lunch Process and Menus

Students and teachers receive a one-hour lunch break and commonly convene in the cafeteria together. There are a few mixed reactions, particularly regarding children cooking, preparing, serving, and cleaning up meals, but this norm in Korea is seen as a positive way for students to bond with others while eating. It teaches children a sense of responsibility from a young age and is a great way to partake in a happy, healthy, and relaxing meal.

School lunches in Korea are the ideal meal from a parent's perspectives: a variety of whole grains, protein, fruits, and vegetables. They are balanced and use a plethora of produce and locally sourced ingredients. Some schools have their own private gardens where some fruits and vegetables for lunch are grown directly. 658

Korean school lunches typically include soup and rice served with each meal. A protein (such as fish or meat), vegetable dish, or stew is also included. In addition, there is a variety with the types of foods served. In many Korean meals, school lunches and dinners; banchan, or side dishes, are served including kimchi, radishes, or a mixture of vegetables.

Schools also serve snacks throughout the day between classes and during after school activities such as sports or club meetings. These snacks include fruits such as apples or oranges, yogurt, crackers, breads, and other prepared foods such as dumplings or sandwiches. This helps students maintain their energy levels while studying or engaging in extracurricular activities.⁶⁶¹

⁶⁵⁸ Ting, J. (2020)

⁶⁵⁹ Seoul&. (2021)

⁶⁶⁰ Travel Monk. (2022). A Closer Look at School Lunches in South Korea. Retrieved from: https://livelearnventure.com/school-lunches-in-south-korea/

Figure 7
Sample School Food Meal⁶⁶²



This meal contains crops from six provinces across the country all of which are pesticide-free. Considering this sample meal, the "oats were brought in from Goheung, South Jeolla Province, and sesame leaves and garlic from Miryang, South Gyeongsang Province, and Yeongcheon, North Gyeongsang Province, all overnight. Carrots and Hallabong were from Seogwipo, Jeju, cucumbers were from Sangju, Gyeongsangbuk-do, glutinous rice was from Gunsan, Jeonbuk, and green onions and chives were from Shinan, Jeonnam and Buyeo, Chungnam. The beef bone and brisket used domestic antibiotic-free ingredients."

⁶⁶²Travel Monk. (2022). A Closer Look at School Lunches in South Korea. Retrieved from: https://livelearnventure.com/school-lunches-in-south-korea/
⁶⁶³ Ibid.

Appendix F: Brazil

Figure 8 Typical school lunch in Brazil⁶⁶⁴



 $^{^{664}}$ Kimmett, C. 2016. The Tyee. From: https://thetyee.ca/News/2016/05/11/Brazil-School-Meal-Program/

Appendix G: England

Table 21

Historical Overview of School Food Policy in England (adapted and summarized from Holland (2022) (1870-2001) and (Bremner, 2022) (2000-2022)

1870 - Forster Education Act makes primary education compulsory in Britain.

1906 - British Parliament passes the Education Provision of Meals Act making school meal provision mandatory, and Local Education Authorities (LEAs) responsible for providing primary school children with free meals. School canteen committees form and roughly one third of LEAs begin to immediately provide school meals, which are made up of a hot meal (often porridge), bread and a glass of milk.

1944 - The new National School Meals Policy is created directing LEAs to extend school food provision to everyone either free or at a subsidized rate, milk remains free.

The Education Act lays out nutritional guidelines, though even after food rationing ends ten years later meals are not very healthy.

1964 to 1970 - The Labour party requires parents to pay for school meals making access difficult for many. Free milk distribution ended in secondary schools in 1968, and in 1971 for primary schools.

1980 - The Education Act ends the requirement that children in school have access to school meals, unless their families receive government benefits. This results in some counties getting rid of school meals completely. School meal production can be done by private contractors, making quality and nutritional oversight difficult.

1980s - Increase is seen in processed foods, fast food options at school, and soft drinks, with fewer students opting for the school meal available.

1986 - The Social Security Act results in the loss of free school meals to 500,000 children from low-income families.

1999 - A UK report reveals the diet of the average 4-year-old is less healthy in the 1990's than it was in the 1950's.

2000-2010 - New school meal standards introduced.

Chef Jamie Oliver's launches 'Jamie's School Dinners' documentary, advocating for schools to achieve national food standards and encouraging kids to get excited about healthy food.

Nutrition based School Food Standards introduced.

The School Food Trust is established and funded by to monitor and report on new Standards.

Free School meal funding is ring-fenced.

2010-2013 - The School Food Trust is eliminated resulting in no data or reporting on school meals.

Free school meal funding is no longer ring-fenced, and schools decide how to allocate funds.

2013 - The School Food Plan is published (Dimbleby & Vincent, 2013) and School Food Standards in 2014 includes universal free school meals for Infants valued at £2.30/meal, compulsory food education, and new school food standards. School Governors have responsibility for school food and school food catering begins to improve as quality assurance standards are implemented.

2015-2020 - A new Healthy Rating Scheme and new School Food Standards are planned but then delayed.

2020-present - National Food Strategy calls for all students whose families receive government benefits to qualify for free school meals.

Holiday Activity Fund allocates £200 million for providing activities and free meals outside of school terms.

Figure 9

The movement of funds through the school food system in England⁶⁶⁵

Government Funding Stream	Local Authority	The School	Catering Team	Child/Young Person
 Agrees policy objective Sets eligibility criteria Sets funding rate Determines how funding should be allocated Publishes guidance and conditions of grant Commissions direct procurement of Fruit & veg scheme & breakfast scheme 	 Determines (with a Schools Forum) the funding levels that should be given to schools Local distribution/ allocation of national gov't schemes Can run procurement activities (service/product) Service provision 	 Allocates budgets for school food Service commissioning for respective school food activities Sets eligibility criteria (where it is not set by funder guidance) Can deliver certain school food activities without a caterer 	 Delivers the respective school food activity Service provision Quality Assurance management Financial performance management 	 Parents are responsible for registration for free school meals Take-up of relevant school food offer

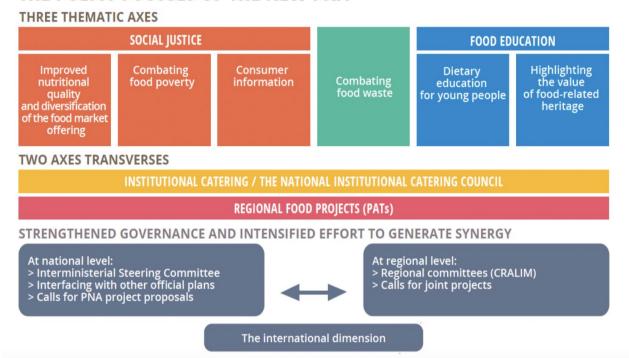
⁶⁶⁵ Bremner, Myles. "England's School Food Program." Presented at the England's School Food Program Webinar - School Food Around the World, Lessons for Canada, Coalition for Healthy School Food, September 28, 2022. https://www.youtube.com/watch?v=4d8fPd7f7xA.

Appendix H: France

Figure 10

Policy Focuses of the PNA 3 (2019-2023)666

THE POLICY FOCUSES OF THE NEW PNA



PNA Flagship Measures

- 1. To increase fibre content and reduce quantities of salt, sugars and fat in everyday foods through firm undertakings given by economic actors from 2020 onward, plus promotion of Nutri-Score, with a view to its mandatory application across the EU, in order to improve the nutritional quality of all processed foods, encouraging voluntary initiatives by industry professionals.
- 2. To reduce salt consumption by 30% by 2025 (France's commitment to the WHO). Where bread is concerned, which accounts for around 25% of the French population's daily salt intake, work will begin in 2019 with sector companies to define a target percentage and the measures needed to achieve it.
- 3. To protect children and adolescents from exposure to advertising for non-recommended foods and beverages: encouragement of the definition of codes of

⁶⁶⁶ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

conduct based on the new provisions in the EU's Audiovisual Media Services Directive.

- 4. To ensure fully transparent provision of high-quality, institutional catering for all: to upgrade institutional catering with 50% procurement of organic, sustainable and high-quality products by 2022.
- 5. Starting in 2020, organisation of a national "Behind the Scenes in Food" day, modelled on the National Heritage Days, in which food professionals will put on a wide range of educational and introductory events (open days, tasting sessions, visits to training centres, organisation of conferences and debates).
- 6. To expand food education from nursery to high school: teaching resources for food education will be made available in 2019 to cover all age groups: e.g. a handbook and educational toolbox available on the Eduscol website "food" portal and the dispensing of taste education lessons.
- 7. To promote and share at national level innovative local actions as sources of creativity: in each territorial département, by 2023, such initiatives will be promoted in Regional Food Projects (PATs) and an annual conference will be held.
- 8. To extend the obligation to offer a partnership to food charities to encourage donations and agricultural donations to include institutional catering and manufacturers: from 2019, institutional catering and the agrifood industries will be directly involved in combating food waste and will need to organise food donations to charities.
- 9. To ensure high quality and reliability for digital applications informing consumers on their dietary choices: by 2020, to define, in consultation with participants under the auspices of the CNC, of the ways in which consumers can be guaranteed access to fair and relevant useful information when using these applications.

School Canteen Menu Requirements 667

Table 22The components of main meals, lunches and dinners. To meet the nutritional recommendations and frequency requirements. 4 of 5 components must be met.

Composantes	Les repas à 5 composantes	Les variantes du repas à 4 composantes		
Entrées	X	x	x	-
Plats protidiques	X	x	x	x
Garnitures	X	x	x	x
Fromages ou produits laitiers	x	x	_ ***	x
Desserts	X	-	x	x
Pain *	Présence systématique			
Eau **	Présence systématique			

 Table 23

 A summary of the components of main meals

- Entrées	Crudités, cuidités, entrées de légumes secs et ou d'autres féculents, entrées protidiques (œuf, poisson), préparations pâtissières salées, charcuteries		
- Plats protidiques	Plat principal à base de viande, poisson, œuf, abats Préparations pâtissières salées servies en plat principal (crêpes salées, friands divers, pizzas, tartes, quiches, tourtes) Charcuteries servies en plat principal (préparation traditionnelle à base de chair de porc, boudin noir, saucisses diverses, crépinettes,)		
- Garnitures	Légumes, légumes secs, pommes de terre, produits céréaliers		
- Produits laitiers	laitiers Lait demi-écrémé, lait fermenté ou autre produit laitier frais, fromage, dessert lacté		
- Desserts	Desserts Fruit crus entier ou en salade, fruit cuit ou au sirop, pâtisserie, biscuit, sorbet, dessert lacté, glace.		

⁶⁶⁷ RECOMMANDATION NUTRITION. 2015. GROUPE D'ETUDE DES MARCHES DE RESTAURATION COLLECTIVE ET NUTRITION GEM-RCN Version 2.0 – JUILLET 2015. Direction des Affaires Juridiques. Observatoire Economique de L'Achat. République Française. Légisfrance. Public. From:

 $https://www.economie.gouv.fr/files/directions_services/daj/marches_publics/oeap/gem/nutrition/nutrition.pdf$

Figure 11

PNA 3 - Core Axis 3 - Food Education 668

3. FOOD EDUCATION

Reliance on food education means counting both on the understanding, appropriation and ownership of healthier and more environmentally-friendly food behaviour by young people and on targeting those around them to enable discovery or rediscovery of our exceptional culinary heritage.

DEVELOPMENT OF FOOD EDUCATION IN EARLIEST CHILDHOOD

THE ISSUES

Like language, food behaviour and taste are formed in earliest childhood. To reinforce education on food for the youngest children is to give them the means to understand and assimilate the link between diet, health, the environment and the French agricultural model.

This work on knowledge transmission should allow individuals, often far removed from the rural world, to grasp the importance of the goals and issues of our agriculture and our food model from field to fork.

THE STRATEGY FOR ACTION

School is an especially favourable context in which to promote a healthy, sustainable diet based on conviviality, taste and a proper balance between different foods. Children at school should be given the means to know, access and appreciate the rich wealth of food in France.

The importance of the educational dimension was reaffirmed during the National Food Conference as a lever for advancing the food transition. France's Education Code⁽¹⁴⁾ provides for the dispensing of information and education on food and food waste

in schools as part of the school syllabus and out-ofschool activities. The EGAlim law extends this provision to all teaching establishments, i.e. secondary and high schools.

PNA FLAGSHIP MEASURES

1/ From 2019, education on food from nursery to high school will be strengthened by developing teaching resources dedicated to education on food and combating food waste.

2/ From 2020, students and teachers in agricultural colleges will be made ambassadors for the PNA.

3/ From 2019 the "Taste Lessons" programme will be continued and action taken to heighten awareness of taste in young people.

4/ From 2019, the EU School Fruit, Vegetables and Milk scheme is to be promoted.

HOW THE PNA FITS IN WITH OTHER PLANS

Dietary education programmes for young people are part of an educational pathway directed by the Ministry of National Education. Education on diet is notably included in the national health strategy and reflected in the national public health plan and the PNNS.

(14) Education Code - Article L.312-17-3, as amended by law no. 2018-938 of 30 October 2018 - Article 90

⁶⁶⁸ France's National Food Programme-The Regions in Action, 2019-2023. 2019. Ministère de l'Agriculture et de L'Alimentation. From:

https://agriculture.gouv.fr/telecharger/108904?token=3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59

Figure 12

Example of French school lunch reflecting new standards/mandates⁶⁶⁹

FRENCH SCHOOL LUNCH REFORMS 2020



- 1. One vegetarian meal per week
- 2. 50% of foods served must be organic and/or local (phased in by 2022)
- 3. All plastics banned in school cafeterias and kitchens
- 4. Recycling and composting reinforced

Photo: Manon Girardin Infographic: rebecaplantier.com Saint-Jorioz elementary school

LUNCH MADE «FROM SCRATCH» IN MORNING, SERVED AT NOON.

80% of French people consider that an effort has been made in several areas to improve the canteen offer (products that are local, organic, with labels of quality, for example). Diners with the highest opinions are also among the youngest and have a recent experience of school lunches: among 18–24-year-olds, 81% declared that they had a good perception of canteens, with 22% having a "very good" image. ⁶⁷⁰ There is also a push to improve nutritional intake by serving foods of high quality that suit the student's taste preferences and are genuinely enjoyed. ⁶⁷¹

⁶⁶⁹ Plantier, R. 2020. Inspirelle. Blog. From: https://inspirelle.com/why-french-school-lunches-outshine-other-cafeterias/

⁶⁷⁰ Delphine. 2022. Institutional catering in France: evolving consumer expectations and emerging innovations. Vitagora. From:

https://www.vitagora.com/en/blog/2022/mass-catering-consumers-innovation/

⁶⁷¹ Erling-Stringer, R., Membrive, M.P., Yves, P., Guéneau, A. 2022, December 8.

Programme d'alimentation scolaire en France. Coalition for Healthy School Food [Webinar]. From: https://us02web.zoom.us/rec/play/608J1NeuUXO7WMjMN9L8SMhtmfOi86Lme2MvizEHfPzVGYl5s4g svcEMSH9t1vc-

 $yVBB_0jbuegrHXlp.l4iNKtbi5YY9UOGP?startTime=1670519064000\&_x_zm_rtaid=itOlNTrAQBCh8qq~72N3bDA.1673387776700.22afa0eb909ed17b944e908ada43e6f5\&_x_zm_rhtaid=30$

Appendix I: United States of America

History of School Food in the United States 672

- https://schoolnutrition.org/wp-content/uploads/2022/04/A-Brilliant-History-of-Serving-Kids.pdf
- https://doi.org/10.2307/2009222
- https://fns-prod.azureedge.us/sites/default/files/PL 108-265.pdf
- https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf
- https://www.govinfo.gov/content/pkg/USCODE-2019-title42/html/USCODE-2019-title42-chap13-sec1751.htm

672 From: A Brilliant History of Serving Kids. 2021. Student Nutrition Association. From: https://schoolnutrition.org/wp-content/uploads/2022/04/A-Brilliant-History-of-Serving-Kids.pdf; Johnston, B. F. (1957). Farm Surpluses and Foreign Policy. World Politics, 10(1), 1–23. https://doi.org/10.2307/2009222; Also see: Public Law 108–265. 2004. 108th Congress. 118 STAT. 729. June 30, 2004. From: https://fns-prod.azureedge.us/sites/default/files/PL_108-265.pdf; Gunderson, G. W. 1971. The National School Lunch Program-Background and Development. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/NSLP-program-history.pdf; and United States Code, 2019 Edition. Title 42 - THE PUBLIC HEALTH AND WELFARE CHAPTER 13 - SCHOOL LUNCH PROGRAMS. Sec. 1751 - Congressional declaration of policy From: https://www.govinfo.gov/content/pkg/USCODE-2019-title42/html/USCODE-2019-title42-chap13-sec1751.htm

Farm to School 673

National Farm to School Network

- Works with partners and communities across the country to build more just, equitable and sustainable food systems through school foods.
- Hub for:
 - o Information, networking, advocacy,
 - o Connecting people to resources, people, and policy,
 - Avoid recreating the wheel, creating relationships, and advocating for farm to school and community food/school food systems in policy.
- Procurement:
 - o Depends on assets, resources, and interest in each community.
- Core elements:
 - School gardens
 - School or community gardens where students learn.
 - o Education (STEM, history, social studies, cultural exploration).
 - Procurement (getting local foods into school meals/snacks, and building networks/relationships for local food provision),
 - Also connect farmers to students.
- A triple win: kids, farmers, and communities.
- Benefits/Pros:
 - Economic development (diversified market opportunity, inc. sales):
 - Compounding economic benefits with local/community spending.
 - In Minneapolis, Georgia, they found every \$1 invested in farm to school purchasing had a return of \$1.93 and \$2.11 in community.
 - Farm to school keeps dollars local.
 - o Public Health:
 - Children are more likely to report enjoying target foods like fruits and vegetables, and early evidence of lasting impact of these behaviours continuing into early adulthood.
 - Benefits to health with nutritious/local foods.
 - o Education:
 - Engaging students,
 - Nourishing their minds.
 - o Environment:
 - Reduced waste (often)
 - Can target producers who have climate-friendly practices.
 - Equity and Community Engagement:
 - Relieve the burden of quality educational experience and access to foods, local foods in particular.⁶⁷⁴

⁶⁷³ Stephens, L., Poppendieck, J., Cheung, M. 2022, May 4. United States' School Food Program [Webinar]. Coalition for Healthy School Food. From:

https://www.youtube.com/watch?v=Wkh7ciOSvOw

⁶⁷⁴ Stevens, L. (2022, May 4). US's School Food Program [Webinar]. Coalition for Healthy School Food. https://www.youtube.com/watch?v=Wkh7ciOSvOw

Figure 13

A modern history of Farm to School provided by the National Farm to School Network

Modern History of Farm to School





- Farm to school has been done from a grass-roots perspective since children were in schools; it is an old concept with much support over time.
- Can partner w USDA and advocate/advise government.t
- National Farm to School Census:
 - Every 3 years, assess farm to school practices/activities,
 - Goes to every school authority/district,
 - 65.4% of school food administrators report participating in farm to school activities 2018-19,
 - 42.8M students attend schools that offer F2S activity,
 - 67 369 Schools have local menu items or educate students.⁶⁷⁵
- F2S funding:
 - USDA Farm to School Grant funding,
 - \$12 million for competitive grants for farm to school initiatives.
 - 176 grants, over 6000 schools and 1.2 million students.
 - However, it is not sufficient for the number of applications received or number of people wanting to fund their work.
 - Local Foods in School Cooperative Agreement:

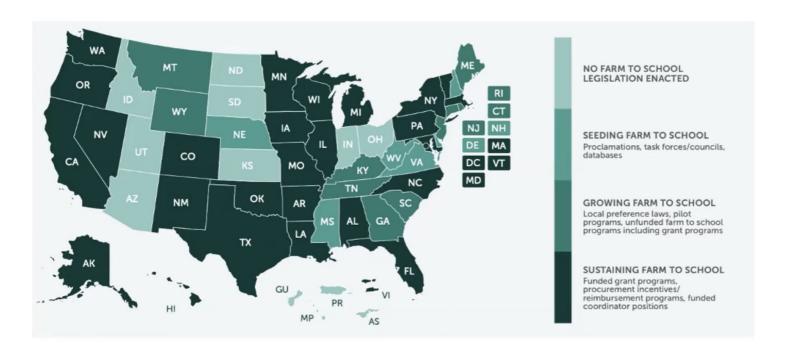
⁶⁷⁵ Farm to School Census. 2019. United States Department of Agriculture. From: http://farmtoschoolcensus.fns.usda.gov/

- Federal gov provides lump sums of money to each state to purchase local foods to schools,
 - \$200 Million for state governments to purchase local.
 - Some states do the purchasing themselves, some partner with large FSMC, some local operators do it themselves.
- State Farm to School Policy:
 - Important components to support the work.⁶⁷⁶
- Common: Local Food Reimbursement (state-level):
 - Additional State procurement incentive to purchase local,
 - Voluntary but increasing across the country.
- Challenges:
 - Farm to School versus Equity Centred versus Universal Free Meals.
 - o Commitment to equity.
 - Vision of a racially just food system
- Local food purchasing builds power in communities.⁶⁷⁷

⁶⁷⁶ Stevens, L. (2022, May 4). US's School Food Program [Webinar]. Coalition for Healthy School Food. https://www.youtube.com/watch?v=Wkh7ciOSvOw

Figure 14State Farm to School Policy from the National Farm to School Network⁶⁷⁸

State Farm to School Policy





⁶⁷⁸ National Farm to School Network. n.d. From: https://www.farmtoschool.org/

School Meals and Patterns

Over a 5-day school week:

- The average calorie content of the meals offered to each age/grade group must be within the minimum and maximum calorie levels specified.
- Average saturated fat content of the meals offered to each age/grade group must be less than 10% of total calories as specified.
- Average sodium content of the meals offered to each age/grade group must not exceed the maximum level specified.
- Schools must follow a meal pattern for school breakfasts and offer the food components and quantities required in the breakfast meal pattern established.⁶⁷⁹

Schools or school food authorities must keep production and menu records for the meals they produce. These records show how the meals offered contribute to the required food components and food quantities for each age and grade group every day. Schools or school food authorities must maintain records of the latest nutritional analysis of the school menus conducted by the State agency. Production and menu records must be maintained in accordance with FNS guidance.⁶⁸⁰

Overtime, there has been mounting pressure to increase the nutritional quality of school foods offered through the NSLP, which has resulted in shifts in the offerings from USDA Foods. The aim is to improve the products they provide to align with the recommendations from the Dietary Guidelines for Americans, the MyPlate food guidance system, the Institute of Medicine recommendations for school meals, and the NSLP meal pattern requirements and dietary specifications.⁶⁸¹

Recent changes to school food menus include:

- More whole grains, fruits, and vegetables.
- Lower sugar, salt, and fat (no trans- and low saturated fats).
- A greater variety of fresh ingredients. ⁶⁸²

An example of a School Meal Pattern, five-day lunch menu cycle for Kindergarten to grade 8 students can be found <u>here</u>. For additional nutrition guidelines, please see the Child nutrition tables for ongoing NSLP reports <u>here</u>.

Overall, the USDA's guidelines and standards are meant to improve student consumption of whole grains, fruits, and vegetables, encourage greater diet variety and lower sodium, saturated fat, and trans-fat intake. Programs such as the Fresh Fruit and Vegetable Program (which introduces children at participating low income

⁶⁷⁹ Nutrition Standards in the National School Lunch and School Breakfast Programs. Rules and Regulations. 2012. Federal Register, 4088. United States Department of Agriculture. Food and Nutrition Service. Vol. 77, No. 17. Thursday, January 26, 2012. From: https://www.govinfo.gov/content/pkg/FR-2012-01-26/pdf/2012-1010.pdf
⁶⁸⁰ Ibid.

 ⁶⁸¹ Benefits of School Lunch. 2023. Food Research and Action Center. From:
 https://frac.org/programs/national-school-lunch-program/benefits-school-lunch
 ⁶⁸² National School Lunch Program Four-day Lunch Meal Patterns for Grades K-5, 6-8, and 9-12.
 2023. Connecticut State Department of Education. From: https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/MealPattern/NSLP_meal_pattern_4day.pdf

elementary schools to a variety of produce they otherwise might not have the opportunity to taste) and the aforementioned Farm to School Grant Program, have been helpful in increasing the amount of fruits, vegetables, and whole foods that students consume. Research done by the USDA has found that children who participate in the NSLP have superior nutritional intakes compared to those who bring lunch from home or otherwise do not participate, but some findings are contested by other research.

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⁶⁸³ Fresh fruit/vegetable program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/ffvp/fresh-fruit-and-vegetable-program; Farm to School Census and Comprehensive Report Summary Report. 2021. United States Department of Agriculture. From: https://fns-prod.azureedge.us/sites/default/files/resource-files/Farm-to-School-Census-Comprehensive-Review-Summary.pdf

⁶⁸⁴ Facts-National School Lunch Program. 2022. Food Research and Action Center (FRAC). From: https://frac.org/wp-content/uploads/National-School-Lunch-Program_R2C.pdf 685 Ralston, K., Newman, C. Clauson, A. Guthrie, J., and Buzby, J. 2008. The National School Lunch Program Background, Trends, and Issues. United States Department of Agriculture. From: https://www.ers.usda.gov/webdocs/publications/46043/12051_err61_1_.pdf?v=0; Schwartz, C., Wootan, M. G. 2019. How a Public Health Goal became National Law. Nutrition Public Health. Volume 54, Number 2, March/April 2019. From:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716573/pdf/nt-54-67.pdf; Chapman, L. E., Richardson, S., Harb, A. A., Fear, E., Daly, T. P., Olarte, D. A., Hawley, M., Zukowski, E., Schwartz, C., Maroney, M., & Cohen, J. F. W. (2022). Nutrient Content and Compliance with Sodium Standards in Elementary School Meals in the United States Pre- and Post-COVID-19. Nutrients, 14(24), 5386. https://doi.org/10.3390/nu14245386; 2023 School Nutrition Trends Report. 2023. School Nutrition Association. From: https://schoolnutrition.org/wp-content/uploads/2023/01/2023-School-Nutrition-Trends-Report.pdf

Numbers of Meals Served

Over 95,000 schools/institutions serve school lunches to 28.6 million students each day, including:

- 19.0 million free lunches,
- 0.5 million reduced price (student pays \$0.40),
- 8.5 million full price,
- 4.7 billion lunches are served annually.⁶⁸⁶

Over 90,000 schools/institutions serve school breakfasts to 14.45 million students each day, including:

- 11.1 million free breakfasts,
- 0.5 million reduced price (student pays \$0.30),
- 3.1 million full price,
- 2.4 billion breakfasts are served annually.⁶⁸⁷

79.5% of lunches were free or reduced price with over 96% of those free. 688

(See:Preliminary USDA FY 2023 data)

⁶⁸⁶ School Meal Statistics. n.d. School Meal Association. From: https://schoolnutrition.org/about-school-meal-statistics/
⁶⁸⁷ Ibid.

⁶⁸⁸ National school lunch program. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program/

USDA Foods

USDA Foods support school food programs and domestic agriculture. The Food and Nutrition Service partners with the Agricultural Marketing Service to make products available.⁶⁸⁹ Procurement for school food programs is supported by a "Food Buying Guide" to help operators with food procurement. The USDA offers food commodities to supply SFPs. "USDA Foods" supply represents ~15-20% of foods in each lunch with the intent of providing "Healthy Choices; American Grown (food)." The governments' purchasing power allows for the foods being high in quality and less expensive than those on the general market. However, local operators purchase 80-85% of their own foods, and procure foods and services directly at the school-level from commercial markets by using funds from:

- Cash assistance provided by USDA.
- Funds provided by State and local governments.
- Student payments for reduced price and paid lunches.
- Proceeds from a la carte sales, catering activities, and other funds earned by or provided to the school food service.⁶⁹²

Food Service Management Companies are contracted for catering, often to maintain compliance with federal school food requirements. A Buy American requirement indicates that schools must purchase American grown food products (to safeguard supply and agriculture). Many schools use resources for local food purchases with the USDA offering support to increase local provision. 694

Although the FNS division of the USDA administers the lunch program at the federal level by liaising with state agencies and partners, the Agricultural Marketing Service (AMS) coordinates purchasing. The AMS serves as the primary purchasing agent for USDA Foods (from the USDA Foods Available List) and works in consultation with the FNS to develop product specifications, issue product solicitations, accept bids from manufacturers, purchase products, and ensure delivery to State designated locations. Beyond AMS, States and school districts can also use their entitlement to purchase fruits and vegetables through the Department of Defence (DoD), the Fresh Fruit and Vegetable Program, and the Pilot Project for the Procurement of Unprocessed Fruits and Vegetables.

Institutions can purchase USDA Foods in two ways:

⁶⁸⁹ USDA Foods Programs. n.d. United States Department of Agriculture. Food and Nutrition Service. From: https://www.fns.usda.gov/usda-foods

⁶⁹⁰ USDA.gov. n.d. Food and Nutrition. From: https://www.usda.gov/topics/food-and-nutrition#:~:text=USDA%20is%20responsible%20for%20providing,Fresh%20Fruit%20and%20Vegeta ble%20Program.
⁶⁹¹ Ibid.

⁶⁹² Chung, M. (2022, May 4). US's School Food Program [Webinar]. Coalition for Healthy School Food. From: https://www.youtube.com/watch?v=Wkh7ciOSvOw

⁶⁹³ OSPI (Office of Superintendent of Public Instruction) 2018. Reference: 7CFR210.21(D); SP38-2017 Compliance with and Enforcement of the Buy American Provision in the National School Lunch Program. From: https://ospi.k12.wa.us/sites/default/files/2022-

^{12/}buyamericanprovisionreferencesheet.pdf; also see: https://www.fns.usda.gov/nslp/compliance-enforcement-buy-american
694 lbid.

- (1) Direct Delivery: USDA purchases nutritious, domestically produced food products, ranging from ingredients to finished end products, which can be used in preparing school meals.
- (2) Bulk Ingredients for Further Processing: States can request USDA Foods in bulk form (e.g., chicken, apples, and sweet potatoes) be sent to a commercial manufacturer to be made into a variety of end products. 695

(Note: Over 40% of USDA Foods, representing more than 30 different raw materials, are diverted for further processing.)⁶⁹⁶ See - The Role of USDA Foods in NSLP.

⁶⁹⁵ White Paper-USDA foods in the National School Lunch Program. 2016. United States Department of Agriculture. Food and Nutrition Service. From https://fns-prod.azureedge.us/sites/default/files/fdd/NSLP-White-Paper.pdf ⁶⁹⁶ Ibid.

Appendix J: Kenya

Figure 15 Composition of a school meal⁶⁹⁷

Standards for composition of 1 school meal					
Cereals and root crops (energy foods): cassava, maize, rice, sorghum, millets, sweet potato, yams, Irish potato, bread and chapatti	~150 grams per child per school day				
Protein sources and possible substitutes: eggs, pulses (beans, lentils, pigeon peas, cow peas etc.), meat, milk, ground nuts	~40 grams per child per school day				
Dairy	½ to 1 cup				
Vegetable oil	~5 grams per child per school day				
Iodized Salt	~3 grams per child per school day				
*Complementary rations of fresh fruits (1 cup) and vegetables (½ cup cooked or 1 cup					

fresh) should be provided as often as possible

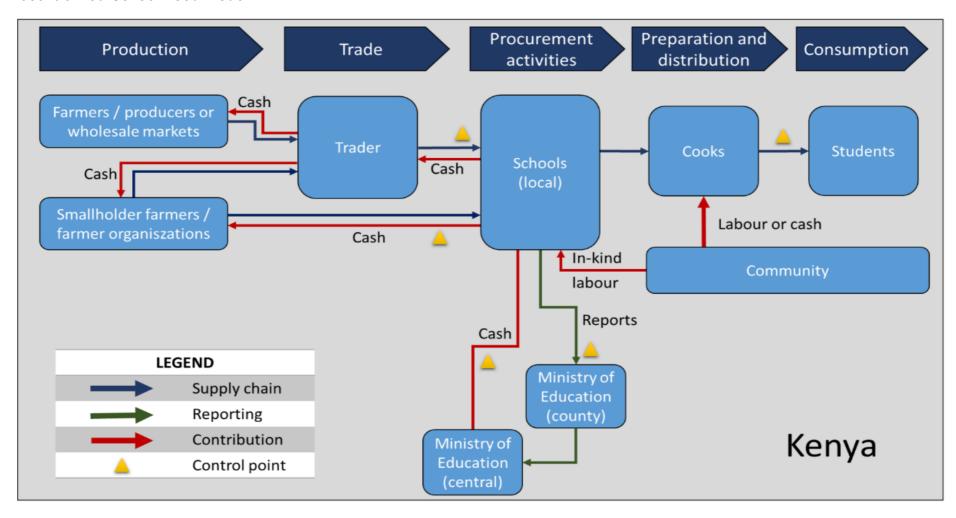
When school meals do not suffice, micronutrient powders can be added to cooked school meals to address micronutrient deficiency among school children.

This amounts to ~30 percent or one third of the daily energy requirements and the dietary diversity needs for a child

⁶⁹⁷ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?_ga=2.65325422.1162278558.1674600892-282763749.1674600892.

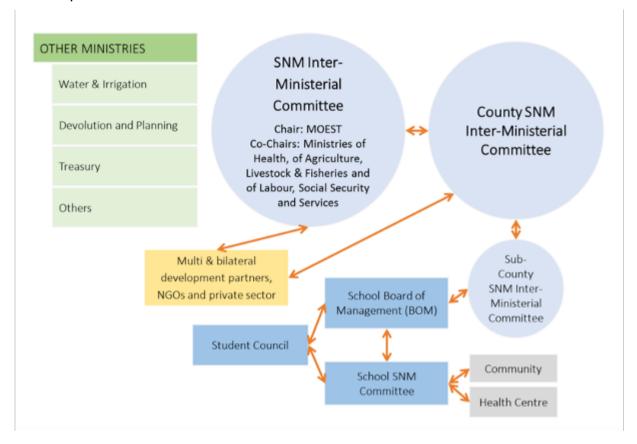
Figure 16

Decentralized School Food Model⁶⁹⁸



⁶⁹⁸ World Food Program (WFP). "Home-Grown School Feeding in Kenya," November 2018. https://docs.wfp.org/api/documents/WFP-0000105578/download/#:~:text=The%20NMK%20program%20provides%20support,fed%20in%20the%20third%20year.

Figure 17
The Proposed Institutional Framework⁶⁹⁹



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⁶⁹⁹ Ministry of Education et al. "National School Meals" p.40

Figure 18Roles and responsibilities for National level⁷⁰⁰

Level	Coordination mechanism	Membership	Roles
National	National School Meal and Nutrition Technical Committee Chair: Director of Basic Education	Ministry of Education Ministry of Agriculture, Livestock and Fisheries Ministry of Health Ministry of East African Community, Labour and Social Protection Treasury, Ministry of Water and Irrigation Ministry of Devolution and Planning County representatives Development partners	 Policy formulation and guidelines Budget preparation and funds disbursement Coordination, collaboration and linkages Support and guidance at regional and local levels Capacity building Resource mobilization Planning, monitoring and evaluation Promotion and support to smallholder farmers
County	County school meal and nutrition inter- ministerial committees Chair: County Director of Education	County directors of education County directors of Teacher Service Commission County directors of agriculture, health, labour, social security and services, water and irrigation County executive officers for education, agriculture and health Procurement officers of the Treasury Development partners	Coordination and oversight Liaison with ministries and development partners Monitoring and evaluation Resource mobilization and complementary funding Technical guidance Capacity building and training Promotion and support to smallholder farmers Overall implementation of programme Prepare procurement plans Advertise and evaluate tenders Record keeping and reporting Receive, inspect and manage food supplies
Sub-county	Sub-county school meal and nutrition inter-ministerial committees Chair: Sub- County Director of Education	Sub-county directors of education, agriculture, health, labour, social security and services, water and irrigation Kenya Primary Schools' Head Teachers' Association Development partners	Coordination and oversight Liaison with counties Monitoring and evaluation Resource mobilization Technical guidance Capacity building Promotion and support to smallholder farmers
School	School meal programme committees	Board of management Parents Teachers Early childhood development centre representative Student council representative	 Implement programme at school level (depending on school meals modality) Record keeping and reporting Receive, inspect and manage food supplies Mobilize and involve parents Monitor food consumption Account to government, community and development partners

⁷⁰⁰ Ministry of Education, Ministry of Health, and Ministry of Agriculture. "National School Meals and Nutrition Strategy 2017-2022." Kenya, 2017. https://docs.wfp.org/api/documents/WFP-0000070917/download/?ga=2.65325422.1162278558.1674600892-282763749.1674600892. p.35-36

Glossary

A-Level Courses: In the United Kingdom, A-Level Courses are "advanced level qualifications or A-Levels are subject-based qualifications that British students aged 16 or older must get if they plan to do the following.

- Enroll in higher education studies. The majority of universities ask for specific A levels of qualifications.
- Training in a specific field.
- Get prepared for a future job.⁷⁰¹

Categorically eligible: "considered income eligible for free meals or free milk, as applicable, based on documentation that a child is a member of a *Family*, as defined in this section, and one or more children in that family are receiving assistance under *SNAP*, *FDPIR* or the *TANF* program, as defined in this section. A *Foster child*, *Homeless child*, a *Migrant child*, a *Head Start child* and a *Runaway child*, as defined in this section, are also categorically eligible." ⁷⁰²

Community food system: All the people, processes and places involved with moving food from the seed the farmer plants to your dinner table, your local restaurant or the cafeteria lunch line. For a community food system to be sustainable and enhance the vitality of the community it needs to integrate the seven components of a food system. The components include growing food/producing, processing, preparing, eating, retailing, distributing and waste management.⁷⁰³

In contrast to the linear and hierarchical relationships in a globalized industrial food system where farmers and eaters are firmly separated, a community food system envisions a value chain where farmers are as important as consumers, distributors, processors and retailers.⁷⁰⁴

In addition, there are several aspects of a community food system that distinguish it from the globalized food system. In a community food system, the food chain is shortened. Often consumers can purchase food directly from those who grow it. Relatedly, a higher percentage of food that is purchased is grown in the region. Proponents of community food systems typically share an intentional effort to help get locally grown food into the hands and mouths of underserved residents. A community food system also strives for self-reliance. When the food that is grown in the region is also processed, sold and consumed in the region, a greater share of a consumer's food dollar stays and is re-spent in the community, thereby insulating the region better from the ups and downs of the global economy. A community food system is sustainable, farms are profitable, and food is produced in a way that minimizes environmental degradation and strengthens the rural fabric of

 $^{^{701}}$ Studyingintheuk.com. 2023. A-Levels in the UK. Study in the UK. From: A Levels in UK (2023 Guide)- Study in UK

 ⁷⁰² eCFR. 2025. Code of Federal Regulations. National Archives. 7 CFR 245.2. From: https://www.ecfr.gov/current/title-7/subtitle-B/chapter-II/subchapter-A/part-245/section-245.2
 ⁷⁰³ Klavinski, R. 2012. What is a community food system? Michigan State University Extension. November 13, 2012. From: What is a community food system? - MSU Extension
 ⁷⁰⁴ Sirrine, R. 2013. How is a community food system different than the globalized food system? Michigan State University Extension. February 28, 2013. From: How is a community food system different than the globalized food system? - MSU Extension
 ⁷⁰⁵ Ibid.

communities.⁷⁰⁶ To be sustainable and enhance the vitality of the community, the local food system needs to integrate the seven components of a food system. The components include growing food/producing, processing, preparing, eating, retailing, distributing and waste management.

Cook & Serve Model: A traditional conventional food production model where food is served just after cooking (e.g., in a conventional restaurant). Cook & Chill (chilled food) model is a food production system where food is produced, chilled, and kept for service at a later time (in a commissary or multi-unit restaurant model). Cook & Freeze (frozen food) model is the same as cook & chill except the food is frozen after cooking and can be kept longer before being served (e.g., also in a commissary or fast-food restaurant model). and the Cook & Hold (warm food) model is when food is cooked and held hot to serve a short time after production (e.g., for a banquet)⁷⁰⁷.

Cookery subject lead: A teacher qualified to teach cooking and nutrition in the UK at all levels.

Culturally appropriate: To be responsive to one's cultural beliefs and values, ethnic norms, language needs, religion, and individual differences. Farm to Cafeteria Canada defines Culturally Appropriate Food as an important part of a person's cultural identity. Certain foods have specific meanings in different cultures. The term culturally appropriate food (or culturally responsive food) is used to describe many things related to cultural foods, such as how foods are prepared and shared, if the foods are familiar, diet or religious restrictions, and how food knowledge and skills are shared. In a school setting, the foods served, grown, and learned about should be culturally appropriate and help students to feel that they belong.⁷⁰⁸

Duty of Care: A legal obligation requiring individuals and organizations to act with a standard of reasonable care to avoid causing harm to others. This concept is fundamental in tort law and is essential for establishing negligence. For schools, student duty of care is the responsibility that schools and educational institutions must ensure the safety and well-being of their students. This duty involves taking reasonable steps to prevent harm and protect students from foreseeable risks.⁷⁰⁹

Farm to School: An approach that brings healthy, local food into schools, and provides students with hands-on learning opportunities that foster food literacy, all while strengthening the local food system and enhancing school and community connectedness. Farm to School empowers students and school communities to make informed food choices while contributing to vibrant, sustainable, economically viable regional food systems that support the health of people, place and planet. Farm to School looks different in each school throughout Canada and new models

⁷⁰⁷ DITTMER, p. r., Keefe, J. D., Hoyer, G., Foster, T. 2014. Principles of Food, Beverage, and Labour Cost Controls, 2nd Canadian Edition. ISBN: 978-1-118-79817-

https://www.farmtocafeteriacanada.ca/glossary/#school

⁷⁰⁶ Ibid.

⁷⁰⁸ Farmtocafeteriacanada.ca. n.d. Glossary of Terms. From:

⁷⁰⁹ Chang, Y. and Piel, J. 2024. University's Duty to Protect Students. Journal of the American Academy of Psychiatry and the Law Online. September 2024, 52 (3) 387-389; DOI: https://doi.org/10.29158/JAAPL.240063-24; Bryden, D. and Storey, I. Duty of care and medical negligence. Continuing Education in Anaesthesia Critical Care & Pain, Volume 11, Issue 4, August 2011, Pg. 124. From: https://doi.org/10.1093/bjaceaccp/mkr016

are continually emerging based on the creativity and existing partnerships in school communities". 710

Food literacy: Understanding where food comes from, how to grow and prepare it, and how to make healthy and nourishing choices about food. It also means understanding how food impacts health, economics, and the environment.⁷¹¹ It includes knowledge of cooking nutrition, food systems, and everything to do with food. Both theoretical and hands-on learning such as growing, harvesting, preserving, and cooking food, are important methods of teaching food literacy.

Food security: "When all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life." ⁷¹²

Foodstuffs: A substance with food value, specifically, the raw material of food before or after processing.⁷¹³

Means test(ed): A measurement of how much income a person has in order to decide if they should receive money from the government.⁷¹⁴

Principal of health (in all policies) or "**Health in All Policies**": An approach that systematically considers the health and social implications of policies contemplated by all sectors of government — aiming for synergistic benefits and to minimize social and health-related harms.⁷¹⁵

Proportionate universalism: A strategy to help reduce social health inequalities. It refers to the resourcing and delivering of universal services and interventions at a scale and intensity proportionate to the degree of the need of the target group.⁷¹⁶

Reception year: Reception (also known as *Year R*, *Year 0*, or *FS2* for *foundation second year*) is the first year of primary school in England and Wales. It comes after nursery and before Year One.⁷¹⁷

Re-thermalized: The process by which prepackaged food that is either frozen or chilled is brought to hot temperatures safely and effectively.⁷¹⁸

⁷¹⁰ Farmtocafeteriacanada.ca. n.d. What is Farm to School? From:

https://www.farmtocafeteriacanada.ca/get-started/farm-to-school-canada/

⁷¹¹ Farmtocafeteriacanada.ca. n.d. Glossary of Terms. From:

https://www.farmtocafeteriacanada.ca/glossary/#school

⁷¹² FAO.org. 2008. An Introduction to the Basic Concepts of Food Security. From: https://www.fao.org/4/al936e/al936e00.pdf

⁷¹³ Merriam-Webster.com. 2025. "Foodstuff." Merriam-Webster Dictionary. From:

https://www.merriam-webster.com/dictionary/foodstuff.

⁷¹⁴ Cambridge Dictionary. n.d. Means test. From:

https://dictionary.cambridge.org/dictionary/english/means-test#google vignette

⁷¹⁵ Tonelli, M., Tang, K-C., Forest, P-G. 2020. Canada needs a "Health in All Policies" action plan now CMAJ Jan 2020, 192 (3) E61-E67; DOI: 10.1503/cmaj.190517

⁷¹⁶ Brussel, L. V. Putting proportionate universalism into practice: challenges and tools. International Journal of Integrated Care. Volume 23, Page/Article 370. December 28, 2023. https://doi.org/10.5334/ijic.ICIC23480

⁷¹⁷ Wikipedia. 2024. Reception (School). From:

https://en.wikipedia.org/wiki/Reception_(school)#:~:text=Reception%20(also%20known%20as%20Year,when%20they%20start%20primary%20school.

⁷¹⁸ Winstin Food Service. n.d. Rethermalization of Prepared Foods in Bulk. From:

https://foodservice.winstonind.com/school-cat/rethermalizing-prepared-

foods/#:~:text=What%20is%20Rethermalizing?,and%20Chart%204%2DB.)

Ring-fenced: To put (an amount of money) aside for a specific purpose. "The money was *ring-fenced* for education programs." ⁷¹⁹

School Meals Schemes: Another term for student nutrition programs that provide meals and snacks to children and youth at school.

Smallholder farms: Small-scale operations where farmers, pastoralists, forest keepers, fishers who manage areas varying from less than one hectare to 10 hectares. Smallholders are characterized by family-focused motives such as favouring the stability of the farm household system, using mainly family labour for production and using part of the produce for family consumption.⁷²⁰

Social capital: A set of shared values or resources that allows individuals to work together in a group to effectively achieve a common purpose. Social capital can also be thought of as the potential ability to obtain resources, favors, or information from one's personal connections.⁷²¹

Staged responsibility (the principle of): Refers to the gradual increase of responsibilities given to children as they grow and develop. This approach helps children build independence, self-regulation, and a sense of contribution. ⁷²²

Universality: The quality of involving or being shared by all people or things in the world or in a particular group. In Ontario, Sustain Ontario defines universal as a Student Nutrition Program that all children and youth have the opportunity to participate in. "Universal" means that no child is turned away based on their family's ability to pay, fundraise or volunteer with the program.⁷²³

Whole school approach: A whole school approach (WSA) aims to raise quality and standards across the entire school. For this approach to be effective, schools need to identify and address the needs of the school community and engage in continuous, cyclical processes for improvement. WSAs are customized to the education environment and constantly evolve to meet the learning environment's needs. A WSA includes all school staff, students and community partners, and links with all aspects of school life. The goal is that "everyone in the school or learning environment feels safe and welcome, no matter their ability, disability, language, cultural background, sexual orientation, gender identity, gender expression or age". WSAs have been used to promote education in many areas including, but not limited

⁷¹⁹ Merriam-Webster.com. 2025. "Ring-fence." Merriam-Webster Dictionary. From: https://www.merriam-webster.com/dictionary/ring-fence.

⁷²⁰ FAO. 2013. Family Farming Knowledge Platform. From: https://www.fao.org/family-farming/detail/en/c/273864/#:~:text=Smallholders%20are%20small%2Dscale%20farmers,handle/20.5 00.14283/ar588e

⁷²¹ Kenton, W. 2024. What Is Social Capital? Definition, Types, and Examples. Invesptopedia.com. August 08, 2024. From:

https://www.investopedia.com/terms/s/socialcapital.asp#:~:text=Social%20capital%20is%20a%20set,information%20from%20one's%20personal%20connections.

⁷²² Penn State Extension. 2016. Children's learning: The gift of shared responsibility. From: https://bkc-od-media.vmhost.psu.edu/documents/TIPS1504.pdf

⁷²³ Sustainontario.com. n.d. What is Meant by a "Universal Student Nutrition Program"? From: https://sustainontario.com/greenhouse/custom/uploads/2016/09/What-is-meant-by-universal-student-nutrition.pdf

T24 European Commission. 2015. A WHOLE SCHOOL APPROACH to Tackling Early School Leaving. From: https://ec.europa.eu/programmes/erasmus-plus/project-result-content/360e3a02-40e9-4c17-b4f9-ca552f0cd970/A%20Whole%20School%20Approach.pdf



⁷²⁵ Open Learning Unesco. N.d. Whole School Approach. Global Citizenship Education. Training Tools for Curriculum Development: A Resource Pack for Gender-Responsive STEM Education. Module 6.