Developing a School Feeding Program

This guide is designed to help food banks create, adapt, or expand school feeding programs to best meet their community's needs.

The **Global** **FoodBanking** Network®

In partnership with
The Global Child Nutrition Foundation

The Global FoodBanking Network collaborates with the Global Child Nutrition Foundation (GCNF) to support school meals and other programs that reduce child hunger and improve nutrition, food access, educational outcomes, and gender equity. The partnership provides technical support to food banking organizations in more than 40 countries that are on the frontlines of fighting food insecurity and hunger. GFN offers its special thanks to GCNF for its support in creating this guide.

The recommendations in this guide are based on research and a comprehensive literature review of best practices for school feeding programs.

The Global Child Nutrition Foundation

The Global Child Nutrition Foundation works with a committed community of governments, civil society, and the private sector to ensure that hunger is not a barrier to learning for any child. Together we advocate for school feeding programs as a powerful investment in every child's human capital; share innovations, challenges, and lessons learned among our peers; and provide support through forging valuable partnerships and connecting resources to meet the needs of our network members.

The Global FoodBanking Network

The Global FoodBanking Network supports community-driven solutions to alleviate hunger in more than 40 countries. While millions struggle to access enough safe and nutritious food, nearly a third of all food produced is lost or wasted. We're changing that. We believe food banks directed by local leaders are key to achieving Zero Hunger and building resilient food systems. For more information, visit *foodbanking.org*.

In this guide

This guide lays out the steps for designing a successful school feeding program. It offers best practices that not only help programs address child hunger and malnutrition, but reduce food waste, increase use of local resources, and create strong stakeholder relationships.

A student opens a school meal provided by Food for All Africa's LunchBox School Feeding Initiative at the Bomigo EP Basic School in Anloga, Ghana. (Photo: Food for All Africa)

Introduction

School feeding programs are a game-changing solution

SCHOOL FEEDING PROGRAMS (SFPs) are a powerful tool to combat child hunger. All around the world SFPs are gaining momentum and support as the multitude of benefits becomes apparent. In addition to tackling hunger, well-planned SFPs have been found to boost school attendance and performance and protect children from all forms of malnutrition, including undernutrition, micronutrient deficiencies, and childhood obesity. Additionally, they can support sustainable food systems, enhance equality, and empower girls and women. Due to these wide-ranging benefits, SFPs are recognized as a game-changing solution to improve food access and education and advance progress toward many of the Sustainable Development Goals (SDGs).

Food banks help fill school feeding program gaps

A GROWING NUMBER of countries have national SFPs, although there is a long way to go to reach every child in need. Food banks play a vital role in supporting these national programs and filling the gaps where national efforts are not yet in place or not meeting demand. Schools offer food banks a direct, strategic, and scalable way to reach children and families facing food insecurity.

Many food banks around the world operate targeted child hunger programs, including school feeding. In 2020, food banks and national networks supported by GFN served 17.6 million children through regular food distributions, including 38 food banks in 35 countries implementing targeted programs for school-age children. In 2020, the outbreak of COVID-19 put millions of children at risk of malnutrition, intensifying the demand for food from food banks around the world.

Through specialized and targeted programs, food banks can reach vulnerable children to improve nutrition and ensure no child is left behind. This guide is designed to help food banks create, adapt, or expand SFPs to best meet their community's needs with the resources they have available.

Why school meals

| **Protect** children from all forms of malnutrition | **Improve** school attendance and performance | **Strengthen** local food systems | **Enhance** gender equality | **Ensure** healthy, well-nourished, and educated children can thrive |
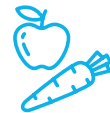
Two girls receive a meal through the Happy Working Families for Change program in partnership with Banco de Alimentos Quito in Ecuador. (Photo: The Global FoodBanking Network/Ana María Buitron)

School feeding programs around the world

In 2021, the Global Child Nutrition Foundation (GCNF) released the Global Survey of School Meal Programs ©. This first-of-its-kind survey reports on large-scale school meal programs from 85 countries that reach more than 297 million children and have an estimated combined budget of US$45 billion. The survey is a valuable tool for planning your own school meal program. Throughout this guide you will find useful information from the survey to help inform your program.

Two boys eat breakfast at school through the Healthy Food For All initiative, which serves economically disadvantaged, Indigenous, and other vulnerable groups. (Photo: Foodbank WA)

Step 1: Needs assessment

THE FIRST STEP in establishing a sustainable SFP is conducting a thorough needs assessment. This will help you understand the nutritional needs of school-aged children, identify opportunities for partnership and collaboration, and assess existing programs and resources to identify where the greatest needs and opportunities are. A good needs assessment will help you identify where to act, why it is important, how to implement, and what approach is needed.

> **SCHOOL FEEDING PROGRAM DATA**
>
> The results of the GCNF Global Survey of School Meal Programs © include 85 individual country reports that can help inform your needs assessment with comprehensive information on existing SFPs.

Your needs assessment can be based on analysis of country/regional/school–level data as well as discussions, interviews, and surveys with potential schools, partners, and recipients.

Each food bank operates in a unique setting, whether at a national, regional, or community level. The reach of the food bank's service area will determine the target area for an SFP. Below are key questions that provide suggested categories and indicators to help you plan your own needs assessment.

What are the priority needs?

- *Food insecurity*—based on reports from schools or official data according to local studies of data linked to SDG Indicator 2.1.2[1,2] and reported in the annual *State of Food Security and Nutrition in the World* report[3]

- *Childhood underweight, overweight, and obesity*—measured using BMI-for-age percentiles[4]

- *Micronutrient deficiency*—nutrients and parameters of particular concern are the prevalence of anemia as well as iron, vitamin A, and zinc deficiencies

- *Food access barriers*—transport, lack of cold storage, lack of fresh food access, lack of cooking facilities, seasonality of food availability, security threats

- *Health and infection*—frequency and types of sickness commonly experienced, particularly malaria and worm infections; the prevalence of food allergens and intolerances should also be evaluated to determine menu planning needs

- *School attendance*—poor attendance; low enrollment, particularly of girls

- *Poverty*—areas affected by poverty that impact children's food security

- *Unhealthy dietary practices*—may include items like skipping breakfast, lack of dietary diversity, low fruit and vegetable intake, nutritional value of commonly consumed foods, nutrients of concern

- *Nutrition knowledge*—may include factors like expressed desire for increased nutrition knowledge, noted lack of knowledge on healthy dietary practices, lack of food and nutrition elements within school curriculum

- *School food environment*—may include data like typical eating patterns of students during the school day, access to food/snacks at school either for free or for sale, type of food available at school, presence of food marketing, school vegetable garden

Information about these indicators may be based on interviews, reports and concerns of school staff,

Complementary school programs

The GCNF Global Survey of School Meal Programs © found that many schools around the world have active health and education programs that complement their SFP. These include, in order of frequency, health programs focused on handwashing, clean drinking water, deworming, water purification, weight and height measurement, menstrual hygiene, dental cleaning, and eye and hearing testing. Complementary education programs include lessons focused on nutrition, hygiene or health, school gardens, physical education, food and agriculture, HIV prevention, and reproductive health.[5]

Three children eat bananas provided by a community organization that receives food from Banco de Alimentos Cali. (Photo: Asociación de Banco de Alimentos de Colombia)

or surveys with children or their parents. Data on many of the indicators may also be available in local and national studies, in grey literature reports, or from global reports and monitoring systems such as the World Health Organization's (WHO) <u>Nutrition Landscape Information System</u> or country profiles from the GCNF Global Survey of School Meal Programs © referenced above. Where available, this information should be reported according to geographical location to allow for the targeting of schools.

How are these needs being met by existing programs?

- Are there any national governmental SFPs, and what are their characteristics and reach?

- Are there any other SFPs in the area (run by schools, churches, civil society, aid organizations), and what are their characteristics and reach?

- Are there any school health and nutrition programs (including deworming, sanitation, and school garden programs)?

- Are there any social protection programs reaching parents (such as use of food banks, cash transfer, food rations)?

- What barriers have past programs encountered?

- Do the schools have any form of food and nutrition program/curriculum?

- Do the schools have any form of complementary health or education programs (such as deworming, clean water, micronutrient supplementation, physical checkups/health screening initiatives)?

What existing policy, guidelines, and regulations can help inform the program?

- Are there national guidelines/recommendations on school meals or food in schools? Is there a related contact or stakeholder committee you can reach out to? Is a monitoring framework available?

- Is there a national plan/strategy for public procurement?

- Do the targeted schools have their own food and nutrition policy?

- What rules and regulations must the program comply with (child safety, food safety, privacy, data considerations)?

- Are there national and local food safety guidelines and resources you can use?

- Are there active national child health, nutrition, or agriculture initiatives your program can partner with or support?

- What regulations on marketing in schools must the program support and comply with?

This data may come from the schools you are targeting, local municipalities, or desk-based research. National policies and initiatives are often documented online and can be found through an internet search or by reaching out to relevant government departments. WHO's GINA database also houses a collection of country-level nutrition <u>policies</u>, <u>actions</u>, and <u>mechanisms</u> that include details on school meal initiatives.

What cultural and social elements need to be considered?

- What locally produced foods can be incorporated into your program?

- What cultural considerations need to be incorporated (traditional foods and food customs)?

- What factors influence gender differences in food access?

- What factors can affect food availability throughout the year (climate conditions, harvest failure, holidays, seasonality of produce)?

- Are there any religious considerations that need to be incorporated (dietary restrictions, periods of fasting)?

A young boy enjoys food provided as part of Food for All Africa's 2021 LunchBox School Feeding Initiative at the Bomigo EP Basic School in Anloga, Ghana. (Photo: Food for All Africa)

- Are there any security considerations that need to be incorporated?
- Are there healthy traditional meals you can incorporate into your program?
- Are there foods that should be avoided due to beliefs/customs?

What food system opportunities are there?

- What does local food production look like? Are there farms you might be able to partner with? Are there locally produced nutritious crops you can promote? Are there common surplus crops that may be used?
- Are there any food price and nutritional composition databases that can assist with menu planning (see more in step 5)?
- Are there any local crops that could be used in the supply of school meals? Are they available in your target area? What are their nutritional properties?
- Are there any local crops that are currently undervalued but would satisfy both cultural preferences and nutrition needs?
- What is the availability and use of fortified foods?

What enabling factors are there?

- Are there schools requesting assistance?
- Are there school food initiatives like school gardening that could complement your program?
- Do the targeted schools have existing food services?

- Are their opportunities to partner with food providers (to redirect surplus produce or distribute healthy products)?

- Are there any volunteers willing to assist with the program?

What is the institutional capacity for the SFP?

- What funding is available?

- Are there staff and funding available for program coordination, delivery, and monitoring?

- Are there existing networks and partners as well as potential partners that can help with implementation?

- What are the staff training needs (internally and at the school level)?

- If cooked meals are planned, which production model is more feasible: (1) a centralized model (large, factory-like kitchen with meals transported to schools) or (2) decentralized model (small, dispersed kitchens at each school)?

- Is it feasible to prepare safe and nutritious meals? Are the necessary food preparation facilities and equipment such as refrigeration, ovens, and stoves available on site at the schools or at another location with safe transport to schools?

- Is it feasible to safely transport and serve food to students? Are bains-marie, service utensils, plates, bowls, cutlery, and food packaging material available?

Who are the stakeholders?
(see more in step 4)

- Government health, education, and agriculture partners

- National/regional school meal multisectoral steering committee/school meal management unit

- Food industry partners

- Schools and their networks (parent-teacher associations, parent groups, student groups, faith-based groups)

- Local farmers and food producers

- Volunteer groups

- Transport partners

- Potential and confirmed program funding sources

- Civil society organizations

- International/national aid/development organizations

> **Your needs assessment is often the first stage of interaction with your intended stakeholders. It is a great tool for building partnerships to maximize impact.**

The indicators above are generalized suggestions. You can tailor your needs assessment to your unique setting. Even if specific schools reach out to you with an identified need, it is a good idea to conduct at least a small needs assessment to document the needs and baseline information.

Your needs assessment is often the first stage of interaction with your intended stakeholders. In addition to informing your program planning, it is a great tool for building partnerships to maximize impact. Your needs assessment is also an opportunity to obtain baseline data for your program's monitoring and evaluation (step 6).

A girl picks out fruit with the help of employees from the Center for Children and Adolescents in São Paulo, Brazil. (Photo: The Global FoodBanking Network/Carlos Macedo)

Step 2: Program design

IT IS NOW TIME to translate the findings from your needs assessment into a plan for action. SFPs work best when the purpose behind them is clearly understood and based on identified needs.

Comprehensive SFPs seek to:

- Tackle malnutrition in all its forms
- Deliver consistently nutritious foods on a reliable schedule
- Focus on locally produced foods
- Maximize partnerships and collaboration

Below are three steps to help you choose the right design for your SFP. For reference, a selection of food banks around the world that have active SFPs is listed in the "Resources" section. GFN can help put you in touch with these programs to gain further insights.

Develop a gaps and opportunities list

WITH THE RESULTS of your needs assessment in hand, it is a good idea to compile these into a list of priorities for meeting the identified needs with your existing resources and capacity.

Your needs assessment may also uncover the need or potential for complementary programs in the schools you are targeting. This could include a deworming program if there are high rates of infection, a provision of clean drinking water at schools, or the planting of a school garden.

Particularly when you are starting a new program, it is important to stay within the scope of your objectives and avoid spreading your resources

Example of gaps and opportunities list

Priority needs	Opportunities
Three schools fall outside of the area of the national SFP, and teachers report many children not bringing any food to school	Provide a midday meal for children attending these schools three days a week
Local farmers report a high wastage rate of mangos	Incorporate mango dishes into the meal program
Approximately 80 percent of students are Muslim and require halal diets	Partner with local farmers to provide food for these meals The food bank has a regular donation of legumes
The schools only have basic kitchen facilities	The Red Cross has available funding to equip schools with cooking facilities An existing food bank partner has a large kitchen available for meal preparation
Girls in the region show: • Lower rates of school attendance • High levels of food insecurity • High rates of anemia	The food bank has an existing partnership with a cereal manufacturer that offers iron-enriched breakfast cereals
Schools have minimal kitchen space and no source of refrigeration	A nearby partner organization has a large kitchen available, and volunteers are available to cook and safely transport meals to the school
High student numbers and limited funding mean the provision of full midday meals is not feasible	A local farmer is willing to donate fruit that can be provided as a midmorning snack

too thin. To meet the identified needs, it is a good idea to reach out to partner organizations that could potentially help implement programs complementary to your SFP. More details on this can be found in Step 4: Stakeholder engagement under "Donors, food providers, and civil society organizations."

Set objectives

THE OVERALL OBJECTIVE of child feeding programs is for food banks to help provide food access to children where it does not already exist or to strengthen it where it does.

Well-designed SFPs translate the findings of their needs assessment into specific objectives. Objectives can focus on nutrition, social protection, the environment, education, and/or community engagement to suit the scope of your program. The national, state, or school policy documents you identified in your needs assessment may have objectives and goals you can also work to support. The objectives are a guide for your program. They determine its design, implementation, and evaluation. Well-planned objectives ensure maximum impact.

Here are some examples of program objectives:

• *Social protection*—Provide food support to children in need, support government SFPs, support local food producers, contribute to the achievement of SDG 2 to end hunger and achieve food security.

• *Nutrition*—Provide one meal a day, reduce prevalence of underweight, provide healthy sustainable foods, increase fruit intake, improve dietary diversity, improve diet quality, prevent childhood obesity, contribute to the achievement of SDG 3 to ensure healthy lives and well-being for all.

• *Environment*—Enhance use of locally sourced foods, source 30 percent of food from local smallholder farmers, increase biodiversity of children's diets, reduce food waste, minimize packaging waste, contribute to the achievement

of SDG 12 to ensure sustainable consumption and production patterns.

- *Education*—Improve school attendance, improve attendance of girls, improve nutrition knowledge, improve school performance, contribute to the achievement of SDG 4 to ensure inclusive and equitable quality education.

Once you have selected the general topics for your objectives, translate them into SMART objectives. This means they should be:

- Specific
- Measurable
- Achievable
- Relevant and realistic
- Time-bound and transparent

Examples of SMART objectives

SMART objective to tackle malnutrition

Provide 20 percent of children's energy, protein, and iron requirements and one serving of fruit three days a week for one year.

SMART objective to improve attendance

Increase the attendance of girls aged 6 to 10 years by 20 percent within six months of implementation.

School feeding program objectives around the world

The results of the GCNF Global Survey of School Meal Programs © show that 93 percent of global SFPs included educational goals, 88 percent had nutrition and/or health goals, 73 percent aimed to serve as a social safety net, 35 percent included agricultural goals, and 25 percent included the goal to prevent or mitigate obesity. These results highlight the strong educational and nutrition focus of SFPs as well as the need for SFPs to serve double duty on nutrition goals, addressing both undernutrition and overweight/obesity while realizing their potential to strengthen local agriculture.[5]

A group of girls receives breakfast kits from FoodCycle Indonesia to celebrate World Food Day 2020 in Bekasi, Indonesia. (Photo: The Global FoodBanking Network/Dody Kusuma)

Select the program(s) you will implement

YOU CAN CHOOSE to support or develop many different types of SFPs. Determining the best fit for your food bank requires matching the priority needs and opportunities you have identified and the objectives you set to the resources you have available. A wide range of program approaches can be tailored to your situation and the results of your needs assessment. Examples of common in-school meal and food assistance programs are provided below.

Common forms of in-school meal and food assistance programs

Program design	Advantages for food banks
Support an existing national program Your needs assessment may reveal that the best course of action is to support an existing SFP. This could be through the provision of additional ingredients or by establishing one of the programs listed here to support additional nutrition for children. National SFPs are government-run programs that take many different forms. Examples include the provision of a midday meal, a breakfast program, or the provision of ready-to-eat snacks.	• Enhances cohesiveness, coverage, data collection, and impact of national programs. • Maximizes partnerships. • Reduces administrative requirements by providing a clear program plan, reporting structures, and legal coverage for working in schools that are accounted for within existing program structures. • Allows for tailoring of a food bank's program design to best complement the national program and meet the needs of children and adolescents.
School breakfast program Provides breakfast to children before school starts. Programs either reach all children, target a selection of age groups, or run as an optional service for children to help start their day nourished and able to learn.	• Is less resource intensive than lunch programs in relation to kitchen equipment, food preparation, and staffing in most cases. • Can use easily standardized recipes for breakfast options and ingredients with a long shelf life that are fiber rich, allowing for smooth program forecasting and consistent delivery. • Can be easily adapted to include seasonal fruit and vegetables when available. • Can include many breakfast options such as cereals, breads, and milk that can be fortified with iron, B vitamins, and vitamin A, helping address common micronutrient deficiencies in children and adolescents. • Provides opportunities for food industry partners to donate nutritious breakfast foods.
School snack program Provides children with a nutritious snack during the school day.	• Minimizes the need for food preparation, utensils, and staffing. • Can include ready-to-eat snacks that often have a long shelf life and are fortified with important nutrients. • Can include nutritious, locally produced snacks such as whole grain crackers with cheese as well as fruits and vegetables. • Can support healthy eating behaviors by including snacks that are not high in calories, saturated or trans fatty acids, sugars, or sodium.

Program design	Advantages for food banks
School lunch program Traditional form of SFP that provides a midday meal to children during the school day.	• Requires food preparation facilities (either centralized or based in schools) and staffing, which creates local employment opportunities. • Creates opportunities for food donation from many different food suppliers, including local producers and smallholder farmers.
Home-Grown School Feeding (HGSF) program Creates value chains for local producers and promotes healthy, sustainable foods by linking local food producers to SFPs.	• Strengthens partnerships with local stakeholders. • Broadens benefits of SFPs to reach local communities, particularly smallholder farmers and rural, low-income families. • Works toward sustainable food system transformation by shortening supply chains and ensuring school meals prioritize fresh, nutritious foods suited to local climates.
After-school snacks/meal program Provides children with snacks, a cooked meal, or a take-home dinner after the school day has ended.	• Allows for targeting of programs to children and adolescents who are food insecure at home. • Creates a safe space or activity for children and adolescents to partake in. • Creates opportunities to collaborate with local government and NGO-led after-school programs.
Backpack/weekend program Focuses on providing children and their families with take-home rations for the weekend when there is no access to school meals. Some programs also offer in-person meals over the weekend.	• Allows for targeting of programs to children, adolescents, and families who live in food-insecure households. • Broadens the program beneficiaries to households and ensures children and adolescents do not go hungry over the weekend while still creating an incentive to attend school. • Strengthens involvement of parents and communities.
Summer/holiday program Provides meals or snacks during the summer holidays to fill a gap when children do not have access to school meals.	• Allows for targeting of programs to children and adolescents who are food insecure at home. • Creates opportunities to collaborate with local government and NGO-led programs to reach children and adolescents outside of school.
School pantry Maintains a supply of staple grocery items at school to ensure they are available to students and their family members when needed at no cost.	• Allows for targeting of programs to children and adolescents who are food insecure at home. • Strengthens engagement of parents and communities with both the food bank and schools. • Eliminates the need for food preparation facilities and intensive staffing. • Uses long shelf life items, which allows for smooth program forecasting and consistent delivery. • Can include seasonal fruit and vegetables when available. • Provides opportunities for food industry partners to donate nutritious options.
Emergency support Supports the provision and delivery of foods to school-age children when schools are closed.	• Fulfills a vital need to protect children from all forms of malnutrition during times of emergency. • Creates new opportunities to collaborate with NGOs and international aid organizations.

A young girl eats a cookie provided by Aso Desarrollo Lucha de los Pobres in Quito, Ecuador. (Photo: The Global FoodBanking Network/ Ana María Buitro)

Step 3: Program planning

ONCE YOU HAVE set your objectives and decided on a program design, it is time to start planning the logistical elements of your program.

Key considerations for planning a program

1. Consistency and scheduling

Consistency and reliability are core pillars of SFPs. Programs should be delivered on a consistent schedule to the same children to ensure those children can rely on it as a source of food. Your SFP should also provide a consistent standard of nutritious foods (step 5). This helps programs maximize their potential to increase education outcomes and protect children from malnutrition.

The program schedule will depend on the type of SFP you choose and the resources you have available. For example, it may be a breakfast meal every school day, a midday meal every Monday and Wednesday, or a backpack program every Friday ahead of the weekend. It is important for this schedule to be consistent and communicated to all stakeholders.

Undertaking an SFP is a substantial investment, and your program is likely to undergo a period of refinement and improvement when first implemented. Some food banks first conduct a pilot of at least six months before moving to full implementation. Within your program plan it is important to identify a specific time of commitment for your pilot or SFP that considers the duration of available funding and resources.

2. Coverage and targeting

The location of your program will depend on your catchment area, the needs of children within that area, the willingness of schools to engage with the program, and logistical considerations (funding, transport, and food preparation facilities). Once you define your target area, you can calculate how many children attend the school or program you will be partnering with. Then compare this with your funding and food delivery resources to determine the number of children your program can reach.

In most circumstances, resource and funding constraints make it impossible to reach all children. Targeting is therefore a key step in program planning. Depending on the context and available resources, you may need to limit your program's reach to certain schools within your area or to certain children within your schools. This can be determined by the findings of your needs assessment as well as in-depth discussions with teachers and parent groups. To achieve sustained nutrition and education outcomes, it is important

> **To achieve sustained nutrition and education outcomes, it is important that the same children can rely on your program consistently.**

that you serve the same children so they can rely on your program consistently rather than rotate the children you deliver to. It is a good idea to target groups of children that are most vulnerable to food insecurity rather than individual children to avoid any stigmas associated with the program. Programs could deliver to specific classrooms, genders, or age groups. Some programs also operate on a drop-in basis such as breakfast clubs that children can choose to attend before school. It is important to set objective and transparent criteria for participation in your program in a sensitive manner and ensure they are included in all program documentation.

3. Permissions

Once you have identified the schools and children you hope to reach, it is important to obtain all needed permissions. This could include permission from the ministry of education, the local municipality, school principals, and parents of children who will be involved. Your contacts in school administration and in national SFPs are a good way to find out what permissions are necessary. Permissions should be documented and archived to ensure compliance with child safety laws. If you plan to take photographs of the children for donor reports or to promote your program for fundraising, you should request signed permission from the parents to be able to use the photos.

4. Food acquisition

Food acquisition for your program may come from passive/regular donations to your food bank, from strategic/program-specific donations from food industry partners, or through purchasing. Ensuring consistent program delivery requires reliable sources of food and adherence to your program's nutrition policy (step 5). SFPs have taken a variety of approaches to ensure this, from campaigning for the donation of specific foods at supermarkets to partnering with local food producers to pick up excess crops and with industry partners to supply foodstuffs. For consistency, create written contracts with donors to ensure the regular provision of food and financial contributions as well as good communication channels to ensure any disruptions are identified early.

5. Food preparation and service logistics

The need for food preparation facilities will depend on your program design, though some key considerations include the availability of clean water for drinking and food preparation; food storage and preparation areas; cooking facilities that comply with food safety requirements; cleaning materials; and food service equipment and utensils. You may be able to secure partners that can contribute to one-off costs for setting up basic cooking facilities. This could include paying for or donating refrigerators, tables, fuel-efficient stoves, fuel, electric bills, solar-

powered refrigerators/freezers, cooking utensils, and bains-marie. Developing a list of your kitchen needs is a good way to help guide contributions.

6. Budget and financial arrangements

Determine one-off startup costs and ongoing program costs. Items including staff, transportation/fuel, infrastructure, training, food, cleaning supplies, service utensils, printing, and electricity should be considered. The source of funding, incoming and outgoing payment schedules, and the management of financial arrangements should be documented.

7. Workforce needs

For good governance and coordination, establish clear, documented roles and responsibilities. Roles can include menu design and recipe development, food sourcing, financial management, partnership management, funding and advocacy, monitoring and evaluation, inspections, school liaison, food preparation, transport, and stakeholder engagement. See more in step 4 on stakeholder engagement.

8. Workforce capacity

Before commencing the program, ensure all stakeholders are aligned and have the information and resources they need. This will likely require informational sessions and training. The table to the right provides a nonexhaustive list of stakeholder's potential capacity needs.

9. Complaints procedures

It is possible that throughout the course of your SFP you will receive complaints from partners, parents, children, or community members. Adequate and regular stakeholder engagement is a good preventative measure, although it is also important to plan a procedure and establish a point of contact for investigating and responding to complaints.

10. Stakeholder engagement (step 4)

11. Monitoring and evaluation (step 6)

Potential stakeholder capacity needs

Stakeholder	Capacity needs
Teachers	• Nutrition knowledge/training • How to communicate and teach nutrition concepts
Students	• Nutrition knowledge • How to engage with/inform the SFP
Parents	• Sensitization to the importance of nutrition, identification of challenges and opportunities to improve nutrition • How to engage with/inform the SFP • Collaborative opportunities • Recipe contribution
Food preparation and service staff/ volunteers	• Nutrition knowledge • Food safety training • Recipe and menu development • Food handling, preparation, and service training
Farmers/local food producers for school meals	• Nutrition knowledge • Food safety training • Logistical knowledge of the SFP's delivery, frequency, and reach
Donors/partners	• Nutrition knowledge, specifically your program's objectives and nutrition policy • Logistical knowledge of the SFP's delivery, frequency, and reach • Marketing restrictions • Monitoring and evaluation results

12. Emergency protocols

The global COVID-19 pandemic has revealed the risk that public health emergencies and school closures pose for SFPs and children's nutrition. GFN and GCNF have partnered to develop *Responding to an Emergency: A Guide for Food Banks and School Meal Programs.* GFN recommends that you incorporate emergency protocols into your SFP planning to allow for rapid adaptation in case of emergency.

Document your plan

Now that you have a plan, remember to write it all down. Creating a program guide is essential to ensure consistent delivery, efficient coordination, and universal alignment to the program plan by all stakeholders. It is also a key communication tool to share with new partners, government bodies, and potential donors. Some essential components to include in the program guide are:

- Program objectives
- Program design and scheduling
- Location specifics
- Number and targeting of students
- Sources of food and purchase/donation schedules
- Nutrition policy and its application (step 5)
- Infrastructure needs, plans, and maintenance schedules
- Preparation/service/transport/delivery of meals
- Stakeholders, partnerships, and donors (step 4) and the engagement/communication schedule
- Staffing and volunteer arrangements and task delegation, including contracts and payment/reimbursement procedures
- Budget and financial management
- Complaint procedures
- Monitoring and evaluation procedure (step 6)

Young children eat a nutritious snack provided by Lagos Food Bank Initiative's Education Enhancement Intervention for Food Insecure Students (EDUFOOD) program in Lagos, Nigeria. (Photo: Lagos Food Bank Initiative)

A young girl receives a meal from The Yiza Ekhaya Soup Kitchen in Cape Town, South Africa. (Photo: The Global FoodBanking Network/Anna Lusty)

Step 4: Stakeholder engagement

STAKEHOLDER ENGAGEMENT is a crucial element of successful SFPs. Your SFP can reach and involve a wide range of stakeholders that play very different and important roles. Some key stakeholders include:

- The students receiving and informing the SFP
- Parents benefiting from/contributing to the SFP
- Teachers and school staff often delivering and supporting the SFP
- Donors contributing foodstuffs or funding the SFP
- Government or civil society organizations that may be partnering with the SFP or delivering programs you aim to support
- Your workforce and volunteer groups supporting the SFP delivery

Your needs will evolve as your program develops from planning to implementation and monitoring.

Below are a collection of ideas and considerations for effective stakeholder engagement. Early consultation with students, parents, and schools in the design of your program helps ensure a bottom-up approach that will best fit the needs of the students.

To ensure sustained engagement, schedule regular contact with your stakeholders and record this schedule in your program plan. Possible approaches include scheduling monthly meetings, establishing regular communication platforms/processes, and disseminating implementation reports.

Students

AS THE RECIPIENTS of SFPs, students are vital stakeholders. SFPs around the world, including those led by food banks, are using creative ways to

involve children in the design and improvement of SFPs. Ideas include holding brainstorming sessions with students to plan programs, conducting surveys, arranging taste-testing sessions for new recipes, and tracking children's enjoyment and uptake of programs. Programs such as Brazil's National School Feeding Program (PNAE) even use mobile phone applications to obtain continual feedback from children receiving school meals.

> **SFPs around the world are using creative ways to involve children in the design and improvement of their programs.**

Schools may also have complementary programs such as food and nutrition curricula or school gardens. These provide great opportunities to collaborate with and engage students.

Parents

PARENTS ARE A RICH resource for SFPs. Their involvement can come in many different forms, including identifying priority needs, providing connections to smallholder farmers, informing program design, providing recipes, and volunteering in the program delivery. Identifying avenues to connect with parents should be a priority within your needs assessment and scoping activities. Schools are a key resource for this and can link you with parent groups. Inviting parents to planning and information sessions is a great way to gain support. It is also important to communicate the program design, schedule, nutrition policy, and implementation progress with the parents through information sessions, written material, or a combination of both. Initiatives such as recipe competitions are a great way to garner their input and strengthen your program. As the program progresses, gaining parent feedback should also be incorporated as a monitoring and evaluation strategy.

Schools

IT IS A GOOD IDEA to engage with potential schools you hope to work with at the earliest possible time. This should be during your needs assessment once you have identified schools that could benefit from some form of SFP. Schools can play many different roles and be engaged at many different levels in your program, from simply serving as a platform for program delivery to preparing and implementing the SFP. Establish a key point of contact within the schools you are working with—whether the principal or a very engaged teacher. School staff can then help establish connections with parent groups to garner support and inform both the needs assessment and program design.

Keys to success with schools include establishing clear expectations, including them in your monitoring and evaluation plans, and scheduling regular meetings to foster good relations. Having a signed contract/memorandum of understanding with schools ensures both parties are aligned on the services, procedures, and joint responsibilities of the SFP.

Donors, food providers, and civil society organizations

DONOR ORGANIZATIONS (financial and in-kind) and food providers are crucial stakeholders for SFPs. Food banks can take many different approaches to engaging with them. This includes establishing regular contributions of specified foodstuffs such as milk or healthy breakfast cereals to supply school breakfast programs, developing relationships with local fruit and vegetable producers to purchase or collect surplus produce, requesting the donation of certain food products at large supermarkets, and obtaining one-off or regular financial or resource donations. Your nutrition policy (step 5) will be a key tool in stakeholder relations to avoid conflicts of interest and prevent negative influences on school food environments.

Having a signed contract/memorandum of understanding with donors and partners ensures all parties are aligned on the services, policies, and procedures of the SFP. Once implemented, it is important to establish regular contact with your donors to ensure the consistent provision of foodstuffs and the early identification of supply issues. Identifying a key point of contact within your food bank and the donor organization is a good step in relationship management. You can then arrange regular meetings and updates to share monitoring and evaluation results as well as strategize about program expansion or product diversification.

Many SFPs partner with other civil society organizations (CSOs) to assist in food preparation, the delivery of programs, or the implementation of complementary programs such as deworming or water and sanitation. CSOs can include formal CSOs in your local area, active community groups, and nongovernmental stakeholders. If they are involved with the food preparation and delivery, they should be consulted in the development

and enforcement of your nutrition policy and monitoring and evaluation strategies.

SFPs have been identified by the United Nations (UN) as a priority action for sustainable development and food system transformation. Many UN agencies are active in the area of school feeding and have developed an inventory of agency action. You can use the UNSCN School Nutrition Inventory to identify which agency to contact for technical assistance or partnership opportunities.[6]

If your needs assessment identified a need or opportunity for complementary programs such as nutrition education, deworming, clean drinking water, or school gardens, you can search for local, national, and international NGOs, government departments, and UN agencies to help implement these. This will vary based on the type of program and existing in-country initiatives. For example, Save the Children works on a host of health-related programs in schools; national ministries of health and WHO are working on deworming and child measurement initiatives as part of "Health Promoting Schools"; UNICEF and water/

Opportunities for women around the world

The GCNF Global Survey of School Meal Programs © revealed the multiple opportunities SFPs are creating for women around the world. For example, the most common type of employment created by SFPs is for cooks and food preparers, with 78 percent of these roles filled by women. A focus on creating jobs or learning opportunities for women was reported by 67 percent of programs.[5]

A mother and her child pose with a meal kit provided by Lagos Food Bank Initiative in Lagos, Nigeria. (Photo: Lagos Food Bank Initiative)

sanitation/hygiene–focused NGOs are working on the provision of clean water; and the Food and Agriculture Organization of the United Nations (FAO) and NGOs such as Helen Keller International are working on school gardening initiatives. Potential complementary programs are detailed in the FRESH Evaluation guidance that was developed by agencies active in these programs.[7]

Government

IF A NATIONAL government SFP exists, each country will have a unique arrangement of government contacts involved in school meal provision. Often the central contact point is in the ministry of education or health, and a multisector committee may be active in overseeing the SFP. If your country does not have an existing national SFP, the ministry of education remains an important stakeholder to engage with to ensure your program aligns to school regulations. Depending on your context,

consider also reaching out to the local authorities and district school boards. The schools you are targeting may be able to provide guidance and points of contact.

Staff and volunteers

DEPENDING ON the design and plan of your program, you may have both a paid and volunteer workforce to support its delivery. Many programs work with existing parent, church, and community volunteer groups to help with food preparation and delivery. This is a great way to strengthen ties with the community and enhance ownership of the program. It is important to keep your paid and volunteer workforces engaged and empowered by allocating clear responsibilities, seeking regular feedback, and including them wherever possible in decision-making processes. Involving them in program planning and having clear, written protocols for program delivery can also help improve delivery and streamline

Three children eat breakfast at school in Guatemala City, Guatemala. (Photo: Banco de Alimentos de Guatemala)

processes, reducing the workload of volunteers. As detailed in the "Workforce capacity" section above, the training needs of your workforce should be addressed before implementation, including training on nutrition and food safety protocols. In many settings SFPs reward their volunteer workforce by providing their meals. Often volunteers have the best insights into program delivery, as they are cooking the recipes and have face-to-face interaction with students during delivery of meals. It is important to recognize and capture these insights to inform the program's development and modifications.

Many SFPs have used innovative approaches to create employment and income opportunities for women. This often makes up a relatively small proportion of the program budget, yet it has huge potential to advance gender equality and poverty reduction. Examples include Nigeria's Osun SFP, which partnered with UNICEF to empower more than 3,000 women through training and employment as caterers. Linking SFPs to local providers can also empower women by creating regular income streams for smallholder farmers, a large proportion of which are often women.[8,9] In Guatemala a pilot project is seeking to create equal employment opportunities by encouraging female farmers to supply the national SFP. The SFP is required by law to source 50 percent of food from smallholder farmers.[10]

Local food producers and smallholder farmers

HOME-GROWN SCHOOL FEEDING (HGSF) programs have gained popularity all over the world, particularly in South America and Africa. In addition to achieving the educational and nutrition benefits of traditional SFPs, HGSF programs extend these benefits to local food producers and smallholder farmers by ensuring SFPs purchase a proportion of their foods from local sources. This creates reliable income for local producers and smallholder farmers, helps alleviate poverty, strengthens local food systems to lower environmental impact, and enhances the biodiversity of nutritious foods served in SFPs. Many food banks

> **Home-Grown School Feeding programs extend the benefits of SFPs to local food producers and smallholder farmers by ensuring a proportion of their food is purchased from local sources.**

are also using innovative strategies to reduce food waste by partnering with local food producers and farmers to repurpose excess products. To realize the many benefits of using locally sourced foods in your program requires thorough planning, mapping of potential suppliers, and early engagement with local food producers. Many SFPs also work to increase smallholder farmers' capacity to reliably provide for SFPs through training and workshops. The Home-Grown School Feeding Resource Framework, compiled by international experts and organizations working to implement successful programs, is a comprehensive guide to developing HGSF programs and working with smallholder farmers.[11]

The Global FoodBanking Network

GFN CAN SERVE as a supportive stakeholder for your SFP through financial grants to implement SFPs; formal technical guidance; organizational partnerships; and a knowledge network to share lessons and best practices with other food banks.

Multistakeholder groups

DEPENDING ON the size and vision of your program, you may find it beneficial to form a multistakeholder working group. This group can help design and implement your program. By formalizing the group, you can ensure all relevant stakeholders are adequately consulted and given opportunity to provide input on the program.

A nutritionist prepares a large meal at The Association Casa de Acolhimento Lar Maanaim in Guarujá, São Paulo, Brazil. (Photo: The Global FoodBanking Network/Carlos Macedo)

Step 5: Nutritious menu planning

The importance of nutrition

NO COUNTRY IS IMMUNE to the burden of malnutrition. When looking at reducing malnutrition through an SFP, it is important to look at all forms of malnutrition, including undernutrition, micronutrient deficiencies, and overweight and obesity. SFPs are a unique and powerful tool for tackling malnutrition, as they can serve triple duty, addressing all three forms of malnutrition at the same time.[12]

In the past, the sole focus on providing children with food (without considering factors such as quality and dietary diversity) has meant some SFPs have inadvertently contributed to unhealthy eating patterns and childhood obesity. However, today we know that well-planned SFPs can prevent childhood obesity and establish healthy eating habits for life.

Preventing undernutrition and micronutrient deficiencies within SFPs provides children the nourishment they need for healthy growth, helps protect them from illnesses, and gives them the energy to learn and thrive.

Preventing overweight and obesity within SFPs helps create healthy dietary patterns and protects children from long-term health consequences like obesity, type 2 diabetes, heart disease, and some forms of cancer.

Setting a nutrition policy

A SOUND NUTRITION POLICY can help you achieve your nutrition objectives, ensure delivery of nutritious meals, engage stakeholders consistently, and avoid

The global burden of malnutrition in school-aged children (aged 5 to 19)

UNDERWEIGHT	OVERWEIGHT/OBESE	ANEMIC
75 million girls and **117 million boys** are moderately to severely underweight[13]	**213 million children** are overweight, and an additional **50 million girls** and **74 million boys** are obese[13]	**269 million children** suffer from anemia[14] *(measured in children under 5)*

conflicts of interest. While your program's primary nutrition objective will depend on the results of your needs assessment, including measures that target all forms of malnutrition in your nutrition policy is a good practice.

Benefits of a nutrition policy

- Provides clarity and consistency in your program definition of a nutritious school meal

- Serves as a guide for procurement and distribution decisions by food bank staff

- Provides a clear communication tool for partners, including schools, parents, and children in the program as well as those looking to collaborate and contribute to the program

- Ensures your programming aligns to nutrition objectives and monitoring

- Ensures consistency in the delivery of nutritious foods and institutional memory in case of staff changes

Nutrition policy best practices

There is no one-size-fits-all solution to setting your nutrition policy, as it must align to your program's objectives, composition, and the context in which you are working. Nevertheless, there are some best practices you can apply when setting your nutrition policy.

- If your needs assessment identified any national, state, or school nutrition policies that cover your school(s), these must be applied and incorporated into your nutrition policy.

- Your country's food-based dietary guidelines (FBDGs) should inform and shape your nutrition policy. FBDGs typically provide clear, culturally appropriate advice on which food groups should

be included and which should be restricted. Foods that should be restricted in quantity are typically those that are high in saturated fat, added sugar, and salt. Current food and nutrition guidance by FAO and WHO that can be applied to your nutrition policy, if suitable, is shown on . Most country-level FBDGs are also in line with this guidance.

- SFPs are just one way to tackle malnutrition in school settings and should complement wider activities to create healthy school food environments. For example, your nutrition policy can promote the provision of clean drinking water and restrict the marketing and sale of food and drinks that are high in saturated fat, added sugar, or salt.

- Your nutrition policy is best developed in consultation with both internal food bank staff and program recipients (school staff, parents, children) to ensure its feasibility and support. Obtaining the support of a nutritionist is also a great way to ensure the nutrition policy is evidence-based and practical.

Contents of a nutrition policy

Once you have developed your nutrition policy, it is important to document your policy and share it with all stakeholders. Your food and nutrition policy should be comprehensive and can include the following items:

- *Rationale*—including the nutrition needs of the students and your program objectives

- *Method of development*—including the research and consultation/partnership/approval procedures undertaken to develop the policy

- *Referenced nutrition standards that the policy upholds*—including global, national, regional, or school standards/policies

- *Core principles of your policy*—for example, foods that will be prioritized, deprioritized, or banned from your SFP; procurement standards linked to nutrient composition; minimum and maximum level of nutrients in meals/snacks served; marketing regulations; food safety protocols; and criteria for locally sourced foods

- *Monitoring and evaluation of nutrition policy*—including what indicators you will measure and how often you will measure them

- *Point of contact*—the contact specifically related to the nutrition policy, for example, your food bank's nutritionist or program coordinator

While this information is intended to guide your SFP's nutrition policy, it can also help you establish an overarching nutrition policy for your food bank to guide decisions on sourcing and distributing food.

The following summary of global food- and nutrient-based guidance can help inform your nutrition policy.

Global nutrition guidance

MANY GLOBAL GUIDANCE documents are available. WHO has simplified the core principles of healthy diets into these five points:[15–17]

1. Limit the intake of free sugars.
2. Shift fat consumption away from saturated fats to unsaturated fats and eliminate industrially produced trans fats.
3. Limit sodium consumption and ensure that salt is iodized.
4. Increase consumption of whole grains, vegetables, fruits, nuts, and pulses.
5. Ensure the availability of free, safe drinking water.

FAO and WHO have also moved toward promoting sustainable healthy diets[18] to ensure that dietary measures to promote people's health also protect the planet's health (see below).

Sustainable healthy diets

According to the *Guiding Principles for Sustainable Healthy Diets* released by FAO and WHO, sustainable healthy diets are "dietary patterns that promote all dimensions of individuals' health and well-being; have low environmental pressure and impact; are accessible, affordable, safe, and equitable; and are culturally acceptable."[18] Among the specific *Guiding Principles* are the following. Sustainable healthy diets:

- Are based on a great variety of unprocessed or minimally processed foods balanced across food groups while restricting highly processed food and drink products
- Include whole grains, legumes, nuts, and an abundance and variety of fruits and vegetables (not including potatoes, sweet potatoes, cassava, and other starchy root crops)
- Can include moderate amounts of eggs, dairy, poultry, and fish and small amounts of red meat
- Include safe and clean drinking water as the fluid of choice
- Are adequate (reaching but not exceeding needs) in energy and nutrients for growth and development and to meet the needs for an active and healthy life across the lifecycle
- Contain minimal levels, or none if possible, of pathogens, toxins, and other agents that cause foodborne disease
- Preserve biodiversity, including that of crops, livestock, forest-derived foods, and aquatic genetic resources, and avoid overfishing and overhunting
- Minimize the use of antibiotics and hormones in food production
- Minimize the use of plastics and derivatives in food packaging

Children pose for a photo at an organization that receives food from a local food bank in Magdalena, Colombia. (Photo: Asociación de Banco de Alimentos de Colombia)

- Reduce food loss and waste
- Are accessible and desirable
- Avoid adverse gender-related impacts, especially with regard to time allocation (e.g., for buying and preparing food, water, and fuel acquisition)[18]

Many countries are now working to incorporate sustainability into their food-based dietary guidelines. SFPs can play an important part by applying these principles. For example, more and more countries are implementing Home-Grown School Feeding (HGSF) programs, which purchase food locally to strengthen local supply chains, enhance the diversity and biodiversity of foods, alleviate poverty, and combat malnutrition. *The Home-Grown School Feeding Resource Framework* is a comprehensive guide to creating HGSF programs released by the World Food Programme (WFP) and FAO.[11] Elements of HGSF programs are also integrated throughout this guide, such as the focus on using local crops and connecting with farmers.

Nutrient guidelines

Tables 1 and 2 show the daily nutrient requirements, as recommended by FAO and WFP, for school-aged children and can help guide the nutrient targets of your SFP. The recommended intake of macro- and micronutrients can vary by country, so it is also important to review national dietary guidelines for your country. Energy and protein are essential to prevent undernutrition, while limiting saturated fat and sugar are key to prevent excessive consumption and promote healthy dietary patterns. A diet deficient in micronutrients—especially iron, vitamin A, iodine, zinc, and calcium—can hinder children's learning and growth.

Table 1

Estimated required daily energy and macronutrient intake for schoolchildren and adolescents[11]

EDUCATION LEVEL	AGE (years)	ENERGY (kcal)[a]	PROTEIN (10–15% of energy)(g)	FAT (15–30% of energy)(g)
Preprimary	3–6	1,300	33–49	22–43
Primary	6–12	1,850	46–69	35–62
Lower Secondary	12–16	2,600	65–98	44–88

[a] Based on the average of daily requirements for boys and girls.

Source: Data from FAO, WHO, and UNU, *Human Energy Requirements: A Report of a Joint FAO/WHO/UNU Expert Consultation,* Food and Nutrition Technical Report Series (Rome: Food and Agriculture Organization of the United Nations, World Health Organization, and United Nations University, 2001), http://www.fao.org/3/a-y5686e.pdf; R. Bhatia, *Operational Guidance on Menu Planning* (London: Partnership for Child Development, 2013).

Table 2

Estimated daily micronutrient requirements for children and adolescents[a][11]

AGE (years)	VITAMIN A (µg RE)[b]	IRON, BASED ON BIOAVAILABILITY (mg)[c] LOW[d]	IRON, BASED ON BIOAVAILABILITY (mg)[c] VERY LOW[e]	IODINE (µg)	CALCIUM (mg)
1–3	400	5.8	11.6	90	500
4–6	450	6.3	12.6	90	600
7–9	500	8.9	17.8	120[h]	700
10–16	600	31.9[f], 16.7[g]	63.7[f], 33.4[g]	150[i]	1,300

[a] Average of requirements for boys and girls.

[b] µg RE = µg equivalent retinol; 1 mg retinol = 1 RE.

[c] Iron is especially important for adolescent girls who are at a greater risk of anemia. Your program could target this with iron-rich foods such as meat, legumes like red kidney beans or soybeans, and fortified cereal products. Bioavailability is low (10 percent) in developing countries and very low (5 percent) in developing countries where diets are low in meat.[11] There may be national variations in bioavailability, thus it is recommended that you review national guidelines in your country.

[d] Bioavailability of 10 percent in developing countries.

[e] Bioavailability of 5 percent for diets with low meat intake in developing countries.

[f] Girls aged 11–17 years.

[g] Boys aged 11–17 years.

[h] Boys and girls aged 6–12 years.

[i] Boys and girls aged 13–18 years.

Source: Data from FAO and WHO, *Expert Consultation on Human Vitamin and Mineral Requirements* (Rome: Food and Agriculture Organization of the United Nations and World Health Organization, 2004).

Table 3

General proportion of macro- and micronutrient daily requirements to be met during the school day[11]

AMOUNT OF TIME THE CHILD SPENDS AT SCHOOL	SHARE OF TOTAL DAILY NUTRIENT REQUIREMENTS THAT COULD BE MET BY SFPS (%)[b]	MEALS THAT COULD BE PROVIDED TO MEET NUTRIENT REQUIREMENTS (suggestion only)
Half day	30–45	One meal
Full day	60–75	One meal and two snacks, or two meals
Boarding	100	Three meals and two snacks

[a] All school menus with a nutrition-sensitive objective should provide healthy, diversified foods.

Sources: Data from WFP, *School Feeding Handbook* (New York: Inter-Agency Network for Education in Emergencies (INEE), 2000), https://inee.org/system/files/resources/doc_1_89_School_Feeding_Handbook.pdf; R. Bhatia, *Operational Guidance on Menu Planning* (London: Partnership for Child Development, 2013).

Table 3 provides the recommended contribution of school meals to daily nutrient intakes based on the length of the school day. In practice, there is a lot of variation in these targets based on the context and resources available to an SFP. Global analysis has shown that the majority of SFPs seek to provide 30 percent of daily calories during the midday/lunch meal and between 20 and 25 percent for snacks and breakfast. Protein goals are commonly set at 20 to 30 percent of total daily needs for lunch.[19] Iron, vitamin A, and zinc are set at 30 percent of daily needs during the lunch meal.[19] In addition, to avoid excess consumption, it is recommended that your school meals do not contain more than 10 percent of total energy from saturated fat or sugar.[16,18,20]

Food group provision

YOUR COUNTRY'S FBDGs are likely to focus on food group targets to ensure different population groups achieve their daily nutrient requirements. Some examples of food group–based guidelines for your nutrition policy include:

- Each meal should consist of different foods from at least four food groups.[11]

- Drinks with added sugar should not be included in school meals.

- You should incorporate whole grains where possible, such as using whole wheat bread.

- Fruit should be offered three times a week and vegetables daily.

- Only iodized salt should be used.

Marketing

CHILDREN ARE especially vulnerable to marketing of food and drink products. Today they are exposed to more marketing than ever before, the majority of which is for products high in saturated fat, free sugars, or salt. These advertisements can influence children's food preferences and eating habits. To protect children from health risks associated with childhood overweight and obesity and to promote healthy dietary choices, schools should not allow any on-site marketing of food and drink products high in saturated fat, free sugars, and salt.[21] It is recommended that your nutrition policy explicitly state what marketing is or is not allowed. This can have an impact on donor relationships if the donation of foodstuffs is made on the condition that marketing materials such as advertisements or branded cooking facilities and refrigeration be used in program delivery.

Local procurement

PRIORITIZING LOCAL procurement can help strengthen local food systems, prevent food waste, and protect food sovereignty. Some SFPs stipulate, for example, that "30 percent of the food served must be sourced from local suppliers" or "all fruit and vegetables served must be sourced from local producers." An increased focus on environmental sustainability and the empowerment of domestic smallholder farmers within SFPs has proven nutritional benefits, including increased intake of fresh, nutritious foods and greater dietary diversity than with foreign in-kind donations.[5,11]

Food safety

FOOD SAFETY is critical to achieving the objectives of your program and ensuring the safety of the children you serve. Food-borne illness and food poisoning are substantial threats to children's health, particularly those already suffering from malnutrition.

Food safety and hygiene considerations that span the sourcing, storage, preparation, and serving of food must be incorporated into your nutrition policy, standardized procedures, staff training, and monitoring and evaluation protocols. The specific food safety elements of your program should be determined by a risk- and context-based approach that applies national standards to the needs of your unique SFP setting.

Your food safety protocols should cover the five keys to safer food:[22]

- Keep clean
- Separate raw and cooked foods
- Cook thoroughly
- Keep food at safe temperatures
- Use safe water and raw materials

The food safety protocols should also capture necessary food allergen and intolerance considerations, guided by your needs assessment and translated into your menu planning.

A young girl holds a breakfast kit provided by FoodCycle Indonesia to celebrate World Food Day in Tangerang, Indonesia. (Photo: The Global FoodBanking Network/ Dody Kusuma)

Menu planning

MENU PLANNING IS A KEY PART of program development that helps with planning costs, forecasting, and consistent delivery that meet children's nutritional needs in an appealing way.

Key considerations for menu planning include food availability, nutrition, children's likes and dislikes, local availability of products, cost, variety, and culturally appropriate foods/practices.

To ensure variety and provide desirable and nutritious foods, most SFPs plan two-to-four-week seasonal menu cycles. You can find a selection of tools and sample menus from SFPs in the "Resources" section.

An example of how FBDGs can be translated into menu planning and serving suggestions is shown in table 4.[11]

Table 4

Example of applying FBDGs as a meal planning tool

FOOD GROUPS	DESCRIPTION	AVERAGE SERVING SIZE[a]23	MINIMUM NUMBER OF SERVINGS PER DAILY LUNCH MEAL[b]			
			Preschool	Age 5–10	Age 11–14	Age 15–18
Fruits	All whole fruits, including fresh, frozen, and canned fruit with no added fat, sugar, or salt. Emphasis on locally sourced fruits.	One serving is 80g/3 ounces/ 1 apple or orange/ 1 cup chopped fruit	½ serving	½ serving	½ serving	1 serving
Vegetables	All fresh vegetables, including dark green, red, orange, and other vegetables. Can include frozen and canned options with no added fat, sugar, or salt. Emphasis on locally sourced vegetables.	One serving is 80g/3 ounces/ 1 carrot or tomato/ ½ cup cooked vegetables or 1 cup of green leafy vegetables	1 serving	1 serving	1½ servings	1½ servings
Grains and starchy vegetables	Breads, pasta, rice, grain products, and starchy crops like potatoes and tubers. Aim for at least half of grain products to be whole grain.	One serving is 1 slice of bread/ ½ cup cooked rice, pasta, quinoa, or porridge/120 calories (500kJ)	1 serving	1 serving	2 servings	2 servings

Table 4 (continued)

Example of applying FBDGs as a meal planning tool

FOOD GROUPS	DESCRIPTION	AVERAGE SERVING SIZE[a]23	MINIMUM NUMBER OF SERVINGS PER DAILY LUNCH MEAL[b]			
			Preschool	Age 5–10	Age 11–14	Age 15–18
Protein foods	Meat, seafood, eggs, nuts, seeds, soy products, peas, beans, and lentils	One serving is 1 cup legumes/ 30g nuts/ 80g cooked meat/ 100g cooked fish/2 eggs/ 120 calories (500kJ)	½ serving	½ serving	1 serving	1½ servings
Dairy products	Milk, yogurt, cheese, and lactose-free/ plant-based alternatives	One serving is 1 cup of milk/ 40g cheese/ ¾ cup yogurt	½ serving	1 serving	1 serving	1 serving
			NUTRIENT TARGETS (PER SCHOOL LUNCH MEAL)[b]			
Min–max calories (kcal)			390–580	555–830	780–1,170	780–1,170
Saturated fat (g)	Less than 10% total energy		<6	<8	<12	<12
Sugar (g)	Less than 10% total energy		<13	<18	<26	<28
Sodium (g)	Use only iodized salt		<0.3	≤0.8	≤1	≤1
Iron (g)			>2.4	>2.5	>12.4	>12.4
Vitamin A	(µg RE)		>100	>180	>200	>240

[a] There is a global gap in data of suggested serving sizes and number of daily recommended servings for children. Examples of serving sizes are provided based on the U.S. and Australian FBDGs. It is recommended that you refer to your country's FBDGs to determine the serving size and number of recommended servings per day/meal.
[b] These are not official recommendations and are estimates based on the example serving sizes. They are matched to energy requirements for school-aged children. Serving sizes, food groups, and recommendations are likely to vary based on your country's FBDGs.

Menu planning tools

Several organizations have developed tools and software programs to help you translate nutrient and food group requirements into menus and recipes or to calculate the nutrient content of recipes.[11]

- *WHO Nutrient Profile Models:* Developed for different regions, these models provide nutrient-based criteria for food categories that should not be marketed. They can also help you determine which foods should be restricted and excluded from SFPs. See the "Resources" section at the end of this toolkit to find the link to your region's Nutrient Profile Model.

- *Food composition tables:* Provide the nutrient values of common foods. FAO hosts an international database of food composition tables.

- *NutVal:* Calculates the nutrient contents of meals and how they compare to nutrient requirements.

- *The School Meals Planner:* Developed for Ghana's national SFP and adaptable to other settings.

- *Cost of the Diet Tool:* Developed by Save the Children UK and applied around the world to analyze local foods and calculate optimal combinations to meet nutrition requirements.

- *Optifood:* Analyzes foods against nutritional requirements to specify the lowest-cost combination of local foods that will meet or come as close as possible to meeting the nutrient needs of target groups.

- *WFP's Plus School Meals:* A digital solution to optimize school meals by making them more nutritious, cost-efficient, and locally sourced.

Links to all of these can be found in the "Resources" section at the end of this toolkit.

Recipe development

Recipe development checklist

As you select your recipes, it is a good idea to ensure:

- The recipe is complete and includes a full ingredients list, easy-to-follow preparation steps, time estimates, and number of servings.

- The ingredients list is given in metric and household measures.

- Ingredients are aligned to your nutrition policy.

- The use of locally sourced and seasonal fruits and vegetables is maximized, if local procurement is one of your program objectives.

- Recipes provide clear information on allergens to help schools and caterers provide for students with allergies and intolerances (this includes eggs, lactose, fish, crustaceans, mollusks, peanuts, tree nuts, sesame seeds, cereals containing gluten, soya).

- The recipe provides details on portion sizes of carbohydrates, vegetables, fruits, protein sources, and dairy in line with your country's FBDGs.

Ideas for recipe development

- Parent groups can be a great asset in developing recipes for your program.

- Students are great taste testers. Trying out new recipes on a group of students is a great way to check their suitability.

- There may be an existing school meals recipe book in your country. WFP developed a range of school meal cookbooks with its partners in many countries.

- Recipe competitions are a great way to engage the community and develop a recipe database.

- There are many national and international events and days that celebrate certain foods and food cultures/traditions. It can be fun to incorporate these into your SFP with themed recipes as a special addition to your program.

Schoolchildren eat a meal provided by Banco de Alimentos de Guatemala in Guatemala City. (Photo: Banco de Alimentos de Guatemala)

Step 6: Monitoring and evaluation

REGULAR MONITORING AND EVALUATION (M&E) is important to track implementation status and whether the program is meeting its objectives. M&E helps identify challenges, needs, and opportunities early to improve the program. Additionally, the information gained can be used to create a powerful advocacy tool for promoting your SFP.

Your M&E framework should be developed during the program planning stage, and the results of your needs assessment can help inform your baseline data.

Steps in developing your M&E framework

- *Developing output indicators*: These indicators track the program's progress toward carrying out specific deliverables/activities. Examples

include the number of meals served, number of children attending, calorie and nutrient content of delivered meals, number of fruit and vegetable servings delivered, proportion of food sourced from local producers, etc.

- *Developing outcome indicators*: These indicators should link to your objectives and can include cumulative counts of the output indicators as well as indicators related to the results/ changes that you expect after implementing the project activities. Examples include the prevalence of malnutrition (see page 33 for special considerations of anthropometric measures), school attendance and performance, and the income of local farmers supplying food to your SFP. To allow for the recognition and incorporation of your program's impact within national and global SFP initiatives, align your indicators to those in your country's national

SFP and the list of global monitoring initiatives/reports starting on page 34.

- *Plan data collection protocols*: To match the reporting needs of your project, plan the data collection methods and timeline. For output indicators this could include daily checklists that record the number of meals served and their nutritional value taken from recipe details. Outcome indicators may be calculated at longer intervals such as biannually or annually. It is important to clearly delegate responsibilities and provide clear instructions and processes for data collection such as paper-based daily recording, data entry, and analysis.

- *Data management*: Ensure you have a clear plan for handling, storing, and collating the indicator data you collect in a secure manner. This should comply with national data protection regulations.

- *Ensure relevant permissions*: It is essential to gain approval from stakeholders on your M&E plan. If data on individual children will be collected (e.g.,

surveys, anthropometric data), permission from their parental guardians needs to be obtained and documented. The storing and use of data must be in line with your country's data protection regulations.

- *Establishing feedback loops*: Incorporate feedback loops into your program so all stakeholders, including students, parents, schools, program delivery staff, and donors, can provide feedback on the program and update your program coordinator. For example, the program delivery staff may need to modify a recipe or change the menu based on local availability of food. An established feedback mechanism (which could be as simple as email) can help facilitate this. Another idea is to periodically send surveys to stakeholders or hold group or one-one-one consultations to gather insights about the program, how it is meeting its objectives, and potential modifications to improve program delivery. Many programs also periodically assess their own effectiveness by having a

Two boys in Nairobi, Kenya eat bananas at Mwamko Children's Home, a community organization that receives food from Food Banking Kenya. (Photo: The Global FoodBanking Network/Brian Otieno)

Taking students' anthropometric measurements

Promoting healthy nutrition and preventing both underweight and overweight/obesity are key objectives for SFPs. While measuring changes in children's height and weight can provide very useful data on the program's impact, it is a very sensitive area that requires careful consideration.

If your program will measure children's height and weight, ensure a safe and supportive environment and avoid negative connotations for the child. Specialized training can help ensure safeguards are in place. Ensure transparency and clarity for students and parents on how the data will be used, whether for programmatic and surveillance purposes only or for screening and individualized follow-up.[24] If severe cases of malnutrition are detected and your program has the capacity to refer the child to

a health clinic for further support, ensure that this is communicated to the parents from the beginning. It is possible that the schools you are working with already have an active internal or partner-led program to measure child height/weight. In this case, it would be beneficial to share data rather than duplicate the procedure.

There are many other ways to measure progress and impact without taking students' anthropometric measurements. Alternative measures include monitoring dietary diversity, the amount of macro- or micronutrients provided, saturated fat and sugar content, and servings of fruits and vegetables provided in meals.

Note: Tailoring the delivery of SFPs based on individual child height/weight measurements is not recommended.

representative analyze the processes, from food sourcing to the clean up after students have eaten. These feedback loops should be planned as part of your data collection protocols.

- *Data sharing:* Results of the monitoring should be shared and discussed with participating schools and donors. This will help strengthen the connection and collaboration. Together with the school, you can establish a regular system to share the progress with parents and students. This, combined with on-the-ground results, can feed a sense of enthusiasm. Governments and private-sector organizations like to see evidence-based achievements to justify their support. Donor organizations also want to know how their money is spent and what kind of impact it has had. Sharing your program's success can attract further funding.

- *Process for recording lessons learned:* Despite best efforts, there will inevitably be mistakes or components of the program that do not work perfectly. Problem solving to respond to these situations is a valuable learning experience. At the same time, other aspects of a program may succeed better than expected and can be replicated or scaled up. All these valuable learnings should be documented.

- *Celebrating success:* It is important to celebrate your program's successes and share them with your stakeholders. Documenting the successes based on the results of your M&E creates an invaluable advocacy tool to attract new schools, partners, and donors.

Global monitoring mechanisms

THIS SECTION LISTS key global monitoring initiatives that gather country-level data on SFPs and can help inform your choice of indicators and reporting cycles. There are many overlapping indicators between these global efforts. Aligning your program indicators to these is a great way to contribute to the global data pool and increase the likelihood that your program and monitoring indicators are consistent with

government initiatives. A selection of indicators is listed along with each initiative for you to consider.

The GCNF Global Survey of School Meal Programs ©[5]

The GCNF Global Survey of School Meal Programs © is conducted every two to three years and aims to capture information on the scope of SFPs, government involvement, agriculture and private-sector engagement, nutrition, education, and gender. Indicators used in the survey include:

- Number of children enrolled in schools/receiving SFP benefits

- SFP coverage, duration, design, and focus of objectives (e.g., to meet nutrition targets or reduce obesity)

- Program beneficiaries (by age and gender)

- Guiding regulations (SFP, nutrition, food safety, and agriculture policies and regulations)

- Budget and sources of funding

- Infrastructure (e.g., electricity, clean water, dedicated eating spaces/cafeterias, and kitchens)

- Food groups served/prohibited/restricted within SFPs and diversity of food groups served

- Source of food served (domestically purchased or in-kind foreign/domestic donations)

- Funding (e.g., government, international donors, private sector) and expenditure (e.g., food costs, handling/storage/transportation, fixed costs)

- Management (national, regional, local government, CSO, international donor agency)

- Nutrition components of SFPs (objectives, involvement of nutritionists, fortified foods, nutrition training for staff, use of micronutrient supplements, use of biofortified foods)

- Obesity-specific measures (prevalence of overweight/obesity, efforts to address obesity through nutrition education, nutrition standards, food restrictions)

- Complementary programs (e.g., handwashing, drinking water, deworming, water purification, menstrual hygiene, dental hygiene, school gardens)

- Efforts to reduce food/packaging waste

- Involvement of farmers and the private sector

- Staffing composition

FRESH Monitoring and Evaluation Guidance for School Health Programs[7]

Focusing Resources on Effective School Health (FRESH) is an intersectional framework and global partnership. The FRESH M&E guidance provides a menu of more than 250 school health–related indicators drawn largely from existing M&E guidance and arranged by health topic (or thematic area):

- National school nutrition policy and curriculum standards for health education with a focus on nutrition

- Schools with a written policy/guideline/rule about the type of foods provided in school meals

- Food storage and/or preparation to minimize the risk of disease transmission and food preparation staff requirements to follow the *Five Keys to Safer Food*

- Healthy diet and nutrition-focused curriculum and student knowledge on nutrition

- Provision of micronutrient supplementation/ school meals

- Planned and delivered provision of kilocalories and micronutrients

- Cost of school meal per child per year

- Children's dietary behaviors (intake of fruits, vegetables, carbonated drinks, calories, micronutrients)

- Impact on nutrition status (BMI for age, overweight/obesity, micronutrient deficiencies)

Complementary program indicators:

- Oral health (consumption of sugary foods and drinks at school)

- Sanitation and hygiene (access to clean drinking water for students)

- Worms (deworming program coverage and preventative practices)

Global Nutrition Policy Review[25]

WHO's *Global Nutrition Policy Review* is published every five years and includes a dedicated section on school health and nutrition programs that reports on global and regional progress toward the following parameters:

- Standards/policy on types of food and beverages available in schools

- Nutrition in the school curriculum

- Hygienic cooking facilities and clean eating environment

- Provision of school meals

- School fruit and vegetable scheme

- School milk scheme

- Distribution of take-home rations

- Monitoring of children's growth in schools

- School gardens

Global School-Based Student Health Survey[26]

WHO's Global School-Based Student Health Survey (GSHS) measures risk factors and protective factors related to noncommunicable diseases via self-administered questionnaires to adolescents aged 13 to 17 years. Diet-related fields in the questionnaire include:

- Frequency of breakfast consumption

- Reasons for skipping breakfast

- How often breakfast/lunch was offered at school

- Frequency of intake relating to milk/milk products, carbonated soft drinks, fruits, fruit juice, vegetables, salty foods, high fat foods, diet foods/products, or less food with the intention of losing weight

Additional parameters to consider measuring:

- Number and types of partnerships

- Types and amounts of donations

- Completed staff trainings

Endnotes

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Resources

Country examples and tools

IN ITS REPORT *Healthy Nations Start with Healthy Children*, The Global FoodBanking Network compiled country case studies of food bank–led SFPs from Australia, Canada, Colombia, Ecuador, Mexico, South Africa, and the United Kingdom.

The GCNF global survey country reports provide valuable data on the reach and composition of national SFPs.

🦘 Australia

Food Bank Western Australia runs a number of school-based initiatives. These include the School Fruit Van, Food Sensations (a nutrition education program), and a school breakfast program. Its website contains a host of information on these programs, including a School Breakfast Program Toolkit.[27]

🦜 Brazil

Brazil's National School Feeding Program (PNAE)[28] reaches more than 40 million children in public schools throughout the country and is the world's largest HGSF program. The program is embedded in national law, which stipulates that meals must be approved by nutritionists and at least 30 percent of food must be purchased from local smallholder farmers. Food banks are noted as a key partner to the program to support the logistics and execution of PNAE.[29] The national network of food banks, Mesa Brasil-SESC, collects surplus food from rural producers, wholesalers, and retailers and redistributes it to social institutions.

🗺 Ghana

Food for All Africa's Lunchbox School Feeding Initiative provides a daily hot lunch to children in schools that are not supported by the government's SFP. Food for All Africa establishes on-site kitchens and provides cooking and nutrition workshops for the students' mothers. The best cooks are then hired as kitchen chefs, and others are hired as supervisors. Each woman is paid a monthly salary.[30]

🌵 Guatemala

In Guatemala the Desarrollo en Movimiento (DEM) food bank runs the DEMos Desayunos Escolares program, which works with food industry partners and farmers to deliver school breakfasts to children aged 2 to 12 years. DEM has also run extensive staff training initiatives on serving Indigenous populations, allowing them to adapt the program delivery to reach vulnerable, Indigenous populations with unique dietary practices and needs.[31] The program complements the Guatemalan School Feeding Law passed in 2017, which guarantees a school meal to primary children in public schools. DEM's program helps fill the gap by supporting two private schools that are not included in the government school meal program.[10]

🗺 Nigeria

The Lagos Food Bank Initiative runs the Education Enhancement Intervention for Food Insecure Students (EDUFOOD). This program aims to provide nutritious meals to food-insecure and undernourished students attending low-cost private schools in low-income communities.[32] The cost of the program, opportunities for engagement, and outcome indicators are outlined on the food bank's website.

Developing school feeding programs

- FAO and WFP. _Home-Grown School Feeding Resource Framework_. Brings together available guidance and resources from a range of international actors for establishing HGSF programs.

- AUDA-NEPAD. _Home-Grown School Meal Handbook_. Details lessons from implementation of HGSF programs in Africa.

- FoodCorps. _Program Guide_. Provides a comprehensive guide from US-based Food Corps designed to help create school food and nutrition programs, including school meals, gardens, and classroom sessions.

- Saskatchewan Alliance for Youth and Community Well-being (SAYCW). Provides tools and resources (available in English and French) for planning food and nutrition initiatives in schools.

Needs assessment

- FAO and WFP. _Home-Grown School Feeding Resource Framework_. Module 2: Capacity Assessment and Annex 1: Conducting a context analysis.

- Global Child Nutrition Foundation. 2010. _School Feeding Toolkit_.

Nutrition guidelines

- FAO. Food Based Dietary Guidelines. Provides a database of guidelines by country.

- Feeding America. Nutrition in Food Banking Toolkit. Includes a guide and online course to assist in policy development.

- Healthy Eating Research. _Nutrition Guidelines for Ranking Charitable Food_. Provides very specific

Volunteers in Hua Hin, Thailand distribute baked goods and beverages to children at a local school. (Photo: Scholars of Sustenance Thailand)

suggested nutrient cut-offs for food groups, categorizing foods as "choose often," "choose sometimes," and "choose rarely."

- WHO. _Public Food Procurement and Service Policies for a Healthy Diet_. Provides an "action framework" for developing healthy public food procurement and service policies. Includes guidance on the development, implementation, compliance monitoring, and evaluation of the policies. It is intended for government policymakers, but it can be a useful resource as you think about developing policies for your SFP.

- WHO Euro. 2006. _Food and Nutrition Policy for Schools_. Provides recommendations on how schools can promote good health through education and good nutrition.

- Departments of Education, Health, Social Services and Public Safety and the Public Health Agency, UK. _School Food: Top Marks – Nutritional Standards for School Lunches: A Guide for Implementation_. Shows an example of a nutrition standards/policy document for an SFP in the United Kingdom.

- WHO. _Regional Nutrient Profile Models_. Nutrient profiles provide a tool to classify food and drink products according to their nutrient composition to help control the marketing of food and beverages. African Region, Americas, Eastern Mediterranean Region, Europe, South-East Asia, and Western Pacific.

Food safety

- WHO. 2006. _Five Keys to Safer Food Manual_. This training manual can be adapted to school settings and includes posters and evaluation forms.

- National Coalition for Food Safe Schools. _Food-Safe Schools: Needs Assessment and Planning Guide_. This guide helps schools review and improve their food safety policies and practices.

Menu planning

- FAO. _Food Composition Tables_. This international database provides the nutrient values of common foods.

- NutVal. Calculates the nutrient contents of meals and compares them to nutrient requirements.

The following menu planning tools are not yet available online, but you can contact the institutions if you are interested in using them for your program.

- Imperial College London. _The School Meals Planner_. Developed for Ghana's national SFP and adaptable to other settings.

- Save the Children UK. _Cost of the Diet Tool_. Applied around the world to analyze local foods and calculate optimal combinations to meet nutrition requirements.

- WHO. _Optifood_. Analyzes nutritional value of local diets and recommends a combination of foods that meet the nutrient needs of targeted groups as closely as possible and at the lowest cost.

- WFP. _Plus School Meals_. Software that helps schools design cost-efficient meal plans that meet nutritional requirements through locally sourced food.

Menu development

- The Lunch Box, Tools for School Food Change. These tools provide a wide array of recipes (which could be adapted to your cultural context) and a guide on how to plan menu cycles. School Recipe Collection and Menu Development.

- US federal and state governments. Examples of applying FBDGs to menu planning. USDA, Washington, Florida.

Monitoring and evaluation

- Global Child Nutrition Foundation. Global Survey of School Meal Programs ©. Provides a baseline database of school meal programs in many countries around the world.

- FRESH Partnership, 2014. _FRESH Monitoring and Evaluation Guidance for School Health Programs_. This document provides thematic indicators for a variety of school health projects. Chapter 3 provides indicators for school feeding and other food and nutrition programs.

- Centers for Disease Control and Prevention. _BMI Measurements in Schools_. Provides guidance and considerations on whether to include BMI/anthropometric measurements in your program and what safeguards to put in place to help reduce the risk of negative consequences for children.

- WHO. _BMI-for-Age Cutoffs (5-19 Years)_. Provides reference standards for BMI categories.

- WHO. _Overweight and Obesity in School-Age Children and Adolescents_. Global database.

Complementary programs

- WHO. _Nutrition Friendly Schools Initiative_, including the latest evidence review. In 2006, WHO and partners launched the Nutrition-Friendly Schools Initiative (NFSI) to provide a framework for ensuring that school-based food programs focus on improved nutrition to address the health issues that stem from undernutrition and overweight/obesity. This document reviews the five components and the 26 essential criteria of the NFSI.

- FAO. _Healthy Food Environment and School Food_. This resource discusses the importance of a healthy school food environment, including the spaces, infrastructure, and conditions inside and around the school where food is available.

- Lao PDR. _School Community Manual: Implementing Hygiene Activities in Early Childhood Education_. This manual outlines a variety of complementary programs that could be implemented to foster healthy school environments.