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PCD The Partnership for Child Development Imperial College London



HOME-GROWN SCHOOL FEEDING RESOURCE FRAMEWORK

TECHNICAL DOCUMENT

HOME-GROWN SCHOOL FEEDING

RESOURCE FRAMEWORK

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FOREWORD ON BEHALF OF NEPAD

This comprehensive resource framework aims to exploit the potential of school feeding in alleviating rural poverty by supporting the development of home-grown school feeding (HGSF).

HGSF (and nutrition) programmes are designed to stimulate local production: by purchasing the food required from local smallholder farmers and processors they create a stable demand for quality and safe food, stimulate local production, support the development of local skills, and combat malnutrition. By providing initial assistance to local smallholder farmers to develop their capacity for providing a reliable food supply, HGSF programmes can also expand opportunities for smallholder farmers to gain access to markets, and contribute to rural transformation.

In Africa, HGSF is embedded in Pillar III of NEPAD's Comprehensive Africa Agricultural Development Programme (CAADP),¹ which focuses on **ending hunger and malnutrition, stimulating local production and investing in human capital**.

The African Union and NEPAD know about the potential drivers of success of HGSF as jointly developed by WFP, NEPAD, FAO, IFAD, GCNF, the WFP Centre of Excellence, the Partnership for Child Development at the and Imperial College, University of London and NEPAD.

Following a very fruitful cross-learning exercise and consultations carried out by major HGSF actors and partners, we now have a final version of the HGSF resource framework.

It is time to sustain the momentum in order to identify and develop innovative and workable financing mechanisms and new approaches for intensifying advocacy for the mobilization of domestic resources, in addition to existing national institutional funding tools, in support of HGSF and nutrition.

The appeal to all partners, including those in or involved in Africa, is to jointly agree on a set of concrete and strategic actions articulated around the Malabo Declaration² and its road map, including the CAADP and, particularly, the Africa Regional Nutrition Strategy (2015–2025),³ with the African regional economic communities providing the building blocks for the implementation process, with national governments always in the driving seat. Let us form a HGSF Global Alliance to that purpose.

Thereafter, the starting point would be to develop national road maps to translate this framework into concrete deliverables at the country level.

As the first step in developing road maps, regional workshops should be organized for country-designated HGSF focal points in each regional economic community in Africa, with coordination by NEPAD and support from all HGSF Global Alliance members. These workshops should focus on sharing the substance and contents of the resource framework and advocating for HGSF as a key tool in ending hunger and boosting local

¹ NEPAD: <http://www.nepad.org/content/about-nepad>

CAADP: <http://www.nepad.org/cop/comprehensive-africa-agriculture-development-programme-caadp>

² At the African Union Summit in Malabo, Equatorial Guinea in June 2014, heads of state and government adopted the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods with a set of concrete agriculture goals to be attained by 2025.

³ African Union, no date.

production, including through rural transformation. The HGSF focal points participating in the workshops should come from different sectors and be able to promote a national road map and further work towards HGSF at the country level.

For this, as a follow-up to the regional workshops, the focal points should establish government-led national HGSF alliances, which as well as the relevant government sectors should include all HGSF stakeholders, bilateral and multilateral partners, international non-governmental organizations, the private sector and smallholder farmer associations, with a multi-partner coordination mechanism and related transparent and effective governance structures.

As a key step in the promotion of HGSF, a national HGSF alliance could convene a national brainstorming seminar for all partners to discuss freely the feasibility of HGSF and the principles put forward in this resource framework, and potentially to lay down the essential steps in developing a national road map for HGSF. Such a national seminar should also identify additional relevant stakeholders to be invited to join the national HGSF alliance and should map out existing school feeding-related activities in the country.

Not least, each national HGSF alliance should organize a special briefing for relevant national policy-makers and should advocate for the government's engagement in adopting the HGSF concept and mainstreaming it into existing/ongoing school feeding activities. This might imply a review of national agriculture, food security and nutrition investment plans and identification of the conditions required for sustainable HGSF implementation in terms of political willingness, financial commitment, mutual accountability, peer review and reporting and knowledge management.

National HGSF road maps could help to build at the country, regional and pan-African levels contractual agreements between all HGSF global alliance members, combined with regular strategic review meetings on progress, challenges, and required interventions to promote the increased integration and scale-up of HGSF.

Haladou Salha

Ambassador

African Union – New Partnership for Africa's Development



PREFACE

At least 368 million children in the world are fed daily at school through school feeding programmes that are run to varying degrees by national governments. School feeding not only nurtures children and improves their health, but is also key in facilitating access to education by increasing school enrolment, attendance and completion. In addition, the health and educational benefits of school feeding have life-long impacts.

Many governments are increasingly sourcing food for school feeding locally from smallholder farmers, with the aim of boosting local agriculture, strengthening local food systems and moving people out of poverty. Such home-grown school feeding (HGFS) effectively augments the impact of regular school feeding programmes by fostering increased food production and diversification as well as economic benefits for local communities.

In the context of collective efforts and multisector approaches under the 2030 Agenda, HGFS programmes can contribute strongly to the achievement of Sustainable Development Goals (SDGs) in food security, nutrition, education, health and agriculture. Communiqués from the Global Child Nutrition Forum have recommended that governments consider school feeding programmes as an investment rather than an expenditure, and that sustainable school feeding programmes that incorporate nutritious and diverse meals linked to smallholder farmer production be recognized as a key strategy for the achievement of zero hunger. In some cases, as reflected in the recommendations arising from the recently completed zero hunger review in Senegal, it is anticipated that the promotion of school meals beyond modern education systems – for example to embrace the *daara* traditional schools in Senegal – will, by improving children’s access to meals, keep them away from alternative coping strategies including street begging among many others. To promote sustainability, such expansion may involve creative forms of public–private partnership and other innovative approaches.

Many governments are investing increasingly in social protection and safety nets, in which school feeding and HGFS have become integral elements of national long-term strategies to help people move out of poverty. This is well reflected in the commitments of the African Union and the New Partnership for Africa’s Development (NEPAD).

“SCHOOL FEEDING” AND “SCHOOL MEALS”

Different actors use different terminology for the programmes promoted by this framework, and both have good arguments:

“School **feeding**” is the traditional term for programmes that provide food to children or their households through schools or that are conditional on school attendance. Such programmes provide meals, snacks or conditional household transfers in the form of cash, vouchers or in-kind, take-home rations.

The term “school **meals**” is preferred by many actors, mainly as the word “feeding” has a passive connotation that does not seem adequately to reflect that school children are *active* in their school meal programmes as well as other school-based activities.

The partners working on this document have taken a pragmatic approach: while recognizing that the term “meals” avoids implications of passivity, most relevant publications, policies and programmes, not least those of NEPAD and the African Union, use “school feeding”. The resource framework therefore uses the term “school feeding”, unless referring to documents or programmes that use the term “school meals”. The important point is that all interested actors should understand and know how to promote the core principles of what constitutes “*home-grown*” (see [Module 1, section 1.2](#)).

Governments have identified HGSF as a strategy for contributing to achievement of the SDGs on ending poverty (SDG 1) and hunger (SDG 2). HGSF also facilitates inclusive and equitable quality education (SDG 4) and contributes to the empowerment of girls (SDG 5), decent work and economic growth (SDG 8) and the reduction of inequality within and among countries (SDG 10). Finally, HGSF helps forge partnerships for sustainable development (SDG 17).

Designing and implementing an HGSF programme is a complex task. As more national governments initiate and scale up investments in such programmes, global partners are being asked to support these efforts with tools, technical and financial assistance and/or other resources for delivering effective, efficient and high-quality programmes.

The United Nations World Food Programme (WFP), the Food and Agriculture Organization of the United Nations (FAO), the Global Child Nutrition Foundation (GCNF), the Partnership for Child Development (PCD), the International Fund for Agricultural Development (IFAD), NEPAD and the WFP Centre of Excellence in Brazil have joined forces to create a resource framework for the design, implementation and scale-up of country-led HGSF programmes.

The resource framework has been developed for use by programme practitioners, policy-makers, development partners, governments, civil society and community-based organizations and the private sector. It builds on policy directions from a 2009 publication⁴ and capitalizes on lessons from experience with WFP-supported and other programmes and related knowledge products. It is based on a comprehensive review and wide consultations among the partner organizations at the global, regional and country levels, experts, members of governments and other stakeholders at Global Child Nutrition Forum and other venues for learning and policy dialogue.

The resource framework is a knowledge product that harmonizes existing knowledge and tools and builds on the wealth of expertise of partners. It fosters partnerships to help governments achieve their goals and lays the ground for a community of practice in HGSF for achieving impact at scale.

⁴ WFP, 2009.

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The Home-Grown School Feeding Resource Framework is the result of a broad-based collaborative effort initiated, coordinated and facilitated by the World Food Programme (WFP), involving the WFP Centre of Excellence against Hunger in Brazil, the Global Child Nutrition Foundation (GCNF), the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the New Partnership for Africa's Development (NEPAD) and the Partnership for Child Development (PCD).

For the sake of broad institutional ownership, and bearing in mind the shared objectives of user-friendliness and relevance to ongoing or planned interventions that link school meals to local agriculture, this document has gone through an iterative drafting and validation process involving extensive consultations and a multi-disciplinary team bringing together partner agencies, listed as follows in alphabetical order: from FAO, Andrea Polo Galante, Luana Swensson and Florence Tartanac; from GCNF, Arlene Mitchell and Daniel Mumuni; from IFAD, Cheikh Sourang; from PCD, Lesley Drake and Bachir Sarr; from WFP, Omar Benammour, Peter Haag, Svante Helms, Nail Lazrak, Stéphane Méaux, Giacomo Re, David Ryckembusch, Raul Saenz and Emilie Sidaner; and from the WFP Centre of Excellence in Brazil, Christiani Buani and Daniel Melo.

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Multifaceted and coordinated support from the Rome-based agencies (RBAs) has made a great difference, in their capacity as hosts to most of the technical consultations and in their efforts to integrate a mainstreaming agenda into HGSF programmes through substantive inputs from subject matter specialists on, for example, nutrition and access to markets for smallholder farmers; from members of the relevant divisions or thematic teams from FAO, IFAD and WFP; and from members of the RBA working group on nutrition-sensitive value chains.

Special attention has been paid to incorporating contributions and insights from country stakeholders, including delegations to international events over the past two years, and from participants in the many workshops, working sessions, meetings, teleconferences and discussions, which included headquarters-based subject-matter specialists, programme staff in regional bureaux and country offices, researchers, government officials and representatives of non-governmental and private-sector organizations.

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ACRONYMS

CAADP	Comprehensive Africa Agriculture Development Programme
FAO	Food and Agriculture Organization of the United Nations
GAP	good agriculture practices
GCNF	Global Child Nutrition Foundation
GCN Forum	Global Child Nutrition Forum
GDP	gross domestic product
HACCP	Hazard Analysis Critical Control Points
HGSF	home-grown school feeding
ICN2	Second International Conference on Nutrition
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
M&E	monitoring and evaluation
NEPAD	New Partnership for Africa's Development
NGO	non-governmental organization
PAA	<i>Programa de Aquisição de Alimentos</i> (food acquisition programme, Brazil)
PNAE	<i>Programa Nacional de Alimentação Escolar</i> (national school feeding programme, Brazil)
SABER	Systems Approach for Better Education Results
SABER SF	Systems Approach for Better Education Results – School Feeding
SAFE	Safe Access to Fuel and Energy
SDG	Sustainable Development Goal
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene
WFP	World Food Programme
WHO	World Health Organization



INTRODUCTION

A number of innovative approaches to home-grown school feeding (HGSF) have been successfully tested and implemented in various country contexts at different stages of the programming and implementation cycle. While the concept of HGSF is underpinned by years of experience, and many examples of good practice in HGSF have been documented, the resulting outcomes have yet to be leveraged to ensure impact at scale in line with the targets of the 2030 Agenda. In addition, many HGSF programmes have faced financial, institutional and technological barriers and challenges with sustainability, which have limited their replication and expansion.

There is therefore a need for a proactive approach to innovation and learning in order to adapt and scale up existing successful HGSF programmes. Depending on the context, this may require a systematic approach to particular challenges, including how to develop a new HGSF programme and design its implementation in ways that allow scale-up, how to bring a successful HGSF pilot programme to scale, and how to optimize and sustain HGSF programmes that are already operating at scale.

To address these questions, the HGSF Resource Framework aims at fostering the development of a community of practice to support mutual learning for the adaptation and expansion of successful HGSF models. The **main goals of the resource framework** are to:

- ▶ clarify the main concepts, scope and goals of HGSF programmes;
- ▶ harmonize existing materials; and
- ▶ provide a technical reference for governments in order to support the design, implementation and scale-up of effective, efficient and sustainable HGSF programmes.

The framework is meant to provide governments and other interested stakeholders with examples and tools that are specifically relevant to HGSF. It provides a structure within which to consider and address various aspects of the planning, design and implementation of HGSF programmes, and

concrete examples and multiple references that provide more in-depth technical information. These features should allow users of the framework to find inspiration, potential partners and additional technical resources specific to their needs.

The following four modules of the HGSF Resource Framework lay the ground for approaches that support the establishment and scale-up of HGSF programmes and provide a basis for purposeful partnerships for investments, technical assistance, policy dialogue and learning at the local, national and global levels.

Module 1 – Understanding HGSF: defines and explains the concepts, benefits and beneficiaries of HGSF.

Module 2 – Planning for HGSF: provides flexible guidance to the planning of HGSF programmes that are well integrated into the national context and linked to local agriculture and nutrition.

Module 3 – Design and implementation of an HGSF programme: explores different implementation options, including models for linking HGSF to local agriculture and ways of ensuring that programmes are delivered in a nutrition-sensitive manner.

Module 4 – Monitoring and evaluation of and reporting on an HGSF programme: provides a set of generic criteria to be considered when designing a national monitoring, reporting and evaluation system for HGSF, and proposes a set of HGSF-specific outcome and output indicators with guidance on how to obtain data for reporting on these.

While the elements of modules 2, 3 and 4 build logically on each other, this does not mean that all assessments (Module 2) have to be finalized before the designing (Module 3) of an HGSF programme can start. Ideally, a government interested in HGSF will lay out a strategic process that times and links the elements deemed relevant in the most conducive and adequate way.

MODULE 1 UNDERSTANDING HOME-GROWN SCHOOL FEEDING



1.1

FROM SCHOOL FEEDING TO HOME-GROWN SCHOOL FEEDING

*School feeding programmes are generally considered primarily as education interventions that facilitate equal access to education and learning opportunities and, when they are nutrition-sensitive, support the nutrition and health of schoolchildren. Especially when school feeding is part of larger education strategies, it can help maximize the return on investment in education and contribute to reducing poverty in the long term.*⁵

*The 2008 financial crisis and food and fuel price increases reconfirmed that governments also consider these programmes as safety nets, which – in addition to their contribution to education – provide direct support to schoolchildren and their families, especially during crises.*⁶ In the long run, school feeding programmes can promote child development through improved access to education and learning and enhanced nutrition and health, especially for girls and other vulnerable children.

Combining school feeding with other actions such as purchasing commodities from local smallholder farmers; school-based water, sanitation and hygiene (WASH) interventions; deworming and other basic health treatments or assessments; nutrition education; and school gardens and/or agricultural education activities can set off a chain of beneficial impacts that contribute to breaking the cycle of poverty and hunger through better nutrition and education, leading to improved employment opportunities, incomes and dietary and health status throughout life, which in turn lead to better nutrition and educational success for the next generation.

As reflected at the Second International Conference on Nutrition (ICN2), in the Sustainable Development Goals (SDGs) and the Zero Hunger Challenge and during the United Nations Decade of Action on Nutrition, improving child nutrition remains imperative for human development and sustainable development. There has been a focus on health

and nutrition during the critical “first 1 000 days” from conception to 2 years of age, but analysis in the latest edition of *Disease Control Priorities*⁷ shows that there is a continued opportunity throughout the subsequent 7 000 days of early childhood, school age and adolescence (up to the age of 21), during which there is a sequence of other phases with differentiated needs for optimal growth. Of particular interest for school-based nutrition programmes – beyond the current priority given to primary schoolchildren – is reaching two additional groups: preschool-aged children of 3 to 5 years of age and adolescents, to prepare them for parenthood.

Over the years, school feeding programmes have been evolving and are increasingly being institutionalized as part of larger national social protection and education systems. Today, almost every country in the world seeks to provide food to its schoolchildren. Worldwide, at least 368 million children receive school meals, an annual investment estimated to range between USD 47 billion and USD 75 billion, supported mainly by public funds).⁸

Generally, in high- and upper-middle-income countries, all schoolchildren have access to school meals, the most vulnerable children are entitled to free or subsidized meals, and programmes are well institutionalized in national policy frameworks and systems. Programmes are less universal in lower-middle- and low-income countries, although school meals of various kinds are generally available to some children, often supported by donors and programmes implemented by development organizations. Over the last two decades, however, the financing of school feeding in lower-middle- and low-income economies has been changing, with significantly increased investment from national governments in the establishment or scale-up and management of programmes.

Benefits of school feeding can be increased by leveraging the demand associated with school meals in order to support local smallholder farmers’ production by making local purchases.

⁵ For detailed references to evidence for the various benefits of school feeding, please refer to [section 1.3](#).

⁶ Bundy *et al.*, 2009; WFP, 2013; Alderman and Bundy, 2012.

⁷ Bundy *et al.*, 2017.

⁸ WFP, 2013.

BOX 1

THE EMERGENCE OF THE HGSF CONCEPT

2003: The New Partnership for Africa's Development (NEPAD) acknowledges HGSF as an initiative that promotes food security and rural development. African governments decide to include school feeding programmes that source food locally from smallholders in the Comprehensive Africa Agriculture Development Programme (CAADP). NEPAD launches HGSF pilots in 11 countries.

2003: The Government of Brazil launches the Zero Hunger Strategy, which includes the Food Acquisition Programme (*Programa de Aquisição de Alimentos – PAA*).

2005: The Community of Latin American and Caribbean States (CELAC) recognizes HGSF as a core intervention in its Plan for Food and Nutrition Security and the Eradication of Hunger 2025.

2005: The United Nations World Summit recommends the “expansion of local school meals programmes, using home-grown foods where possible” as one of the “quick-impact initiatives” for achieving the Millennium Development Goals.

2005: The Millennium Project's report, a practical plan for achieving the Millennium Development Goals, recommends the “expansion of school meals programmes to cover all children in hunger spots using locally produced food by 2006”.

2009: The Government of Brazil reforms the National School Feeding Programme (*Programa Nacional de Alimentação Escolar – PNAE*) to require that at least 30 percent of the food used is purchased from smallholders.

2015: FAO's *State of Food and Agriculture* report identifies HGSF as a “win-win” solution that supports family farming through social protection.

January 2016: African heads of state declare that “HGSF is a strategy to improve education, boost local economies and smallholder agriculture, and advance the Sustainable Development Goals”.

1 March 2016: The first Africa Day of School Feeding is dedicated to HGSF as a key strategy for achieving the SDGs.

2016: The Committee on World Food Security (CFS) recommends connecting smallholders to markets by implementing institutional procurement programmes for food purchases by public institutions, food assistance programmes and school feeding, including during protracted crises and conflicts.

Since 2003, lower-middle- and low-income economies increasingly see home-grown school feeding (HGSF) programmes as an opportunity to improve the livelihoods of smallholder farmers and local communities and to strengthen the nexus among nutrition, agriculture and social protection (see [Box 1](#)).

There is a growing focus worldwide on delivering healthy meals to children while at the same time stimulating local agriculture and economies through the procurement of food from local, small-scale producers.⁹ Of significance is the ICN2's identification of social protection, including school feeding programmes, as a key sector in tackling

malnutrition in all its forms.¹⁰ Countries increasingly recognize that social protection measures are needed in order to reduce and/or prevent poverty and hunger, and that connecting social protection programmes to agriculture through institutional procurement can further increase benefits, particularly for smallholders or family¹¹ farmers (FAO, 2015).¹²

The innovative element of HGSF is in supporting smallholder farmers to enable them to gain access to a predictable and stable local market and to maximize the benefits that they can derive from such access: school

⁹ Global Panel on Agriculture and Food Systems for Nutrition, 2015.

¹⁰ FAO and WHO, 2014.

¹¹ The terms “smallholder”, “small-scale” and “family farmers” are used interchangeably in this publication.

¹² FAO, 2015; HLPE, 2012.

BOX 2 | PROFILE OF SMALLHOLDER FARMERS

Poor people's reliance on agriculture for their livelihoods, and the high share of their expenditure that poor people dedicate to food make agriculture key to the success of poverty and hunger alleviation interventions. Almost 75 percent of farms in low- and middle-income countries are smaller than 1 hectare.

Smallholders provide more than 80 percent of the food consumed in much of the developing world. In spite of this, however, they remain marginalized through their lack of access, in varying degrees, to resources, information, technology, education opportunities, capital and assets, and through other unfavourable conditions such as price volatility, lack of access to appropriate markets including financial markets, lack of collective bargaining power and high transaction costs.

The poorest farming households are net food buyers, and food accounts for a large share of the budgets of poor households, whether or not they farm. Food price increases therefore have a dramatic effect on the poor and poorest farmers.

Source: FAO, 2015; HLPE, 2013; Murphy, 2010; World Bank, 2008; Zezza *et al.*, 2008.

BOX 3 | EXAMPLE: THE PROGRAMA NACIONAL DE ALIMENTAÇÃO ESCOLAR (PNAE) IN BRAZIL

Brazil's National School Feeding Programme (PNAE aims to purchase at least 30 percent of the food for school meals from local small-scale farmers. The programme, which reached 41.5 million children in 2015, is part of the broader Food and Nutrition Security Policy and is backed by and coherent with the right to food enshrined in the country's constitution. Additional key success factors of PNAE are its inclusive policy and smallholder-friendly procurement procedures, which facilitate small-scale farmers' participation, and the strong coordination it fosters among the ministries of education, agrarian development, social development, agriculture and health.

feeding programmes that are linked to local agricultural production can create structured and predictable markets for local and smallholder produce, reducing smallholders' uncertainty regarding market engagement and the risks they face in investing in improved and diversified production. This may encourage investments in improved food production and quality, leading to improved income, food security and resilience for farmers.¹³

Smallholder farms are the backbone of agriculture in low- and middle-income countries, but many of them are small and poor (see [Box 2](#)).

To address the obstacles faced by smallholders, governments can give priority to linking smallholder farmers to domestic, national and regional markets, including institutional procurement schemes that

rely on smallholders for the procurement of food for school and institutional feeding programmes. The predictable and stable demand from schools for a diversified and nutritious food basket **can stimulate the diversification of agricultural production and increase the consumption of locally produced food.** Local procurement can also be a strategy for diversifying school meals with fresh, nutritious and indigenous food commodities and for promoting healthy eating habits among schoolchildren, when combined with nutrition education.

Several high- and middle-income countries, such as Brazil, Finland and the United Kingdom, have demonstrated the relevance of local purchases in stimulating the local economy and improving the nutrition benefits of the food offered in schools (see [Box 3](#)). The United States of America has been linking school meal programmes to agricultural objectives for decades, but even these programmes have been refined in recent years to focus increasingly on fresh foods, foods grown within a

¹³ Mitchell, 2011; Sumburg and Sabates-Wheeler, 2011.

certain radius of the schools, organic produce or other specific agricultural, nutrition or community development goals.

Developing these market linkages also requires investment in small- and medium-sized food processors and small-scale traders at the retail and wholesale levels. **HGSF programmes enable the development of nutrition-sensitive and inclusive food value chains,¹⁴ that maximize benefits for all stakeholders and that can play an important role in shaping sustainable local and national food systems¹⁵** (see [section 1.3](#)).

Linking school feeding programmes to local production and development also increases community involvement and support, and therefore enhances **the programmes' sustainability.¹⁶ For most governments this is a critical element in moving to sustainable national programmes.** HGSF programmes are usually developed progressively and build on existing programmes. Especially in Africa, the evolution into HGSF is part of the gradual transition from externally supported programmes – for which the food may have been procured locally or otherwise – to national programmes.

However, procuring food locally and introducing perishable foods, particularly animal-based products, presents additional challenges to guaranteeing food safety and the stability of food supply throughout the year, and may lead to additional costs. Programmes are often implemented in food-insecure areas where nutrition deficiencies among schoolchildren are serious and local food production is of limited quantity and diversity. Seasonal shortages can be an issue. Many countries are therefore seeking hybrid solutions in which centralized and decentralized procurement models coexist, and fortified staples and processed foods complement foods procured locally from smallholders. These issues are discussed further in [Module 3](#).

Defining a national strategy for HGSF (see [Module 3](#)) **can help identify entry points in policies and investments for mainstreaming nutrition-sensitive interventions along the**

value chain – considering how the food is produced, processed, marketed, distributed and consumed – and the collective and individual roles and responsibilities of different stakeholders. As HGSF programmes are often designed as part of a comprehensive package for addressing multiple needs identified by governments, a national HGSF strategy can also help integrate HGSF into national safety nets and social protection programmes.

The use of food that has been fortified or biofortified (often at the central level) **can be a necessary and cost-effective option for guaranteeing the micronutrient content of the food, depending on the context and the country's particularities and needs. Assessments may be conducted to specify the benefits of and/or need for fortification in each case.** Fortifying with multiple micronutrients may be more effective than with single micronutrients.¹⁷ Home-grown programmes can combine a staple that is centrally or locally (bio-)fortified with local fresh and diverse foods.¹⁸

1.2 CONCEPT

“School feeding” is the traditional term for programmes that provide food to children or their households through schools or that are conditional on school attendance. These programmes can provide food through in-school meals and snacks, which children eat at school and/or household incentives, which are take-home food rations or cash-based transfers for procuring food and are provided to families if their children attend school regularly.

Although the design and scope of HGSF programmes differ in each context, depending on the specific implementation model used to link schools to food

¹⁴ Gelli *et al.*, 2015; De la Peña, Garrett and Gelli (forthcoming).

¹⁵ CFS, 2016a.

¹⁶ NEPAD, 2003.

¹⁷ Best *et al.*, 2011.

¹⁸ However, as stressed by the United Nations Special Rapporteur on the Right to Food, the use of (bio-)fortification technologies could result in long-term dependency on the provider of such technologies if the technologies are protected by intellectual property rights. In addition, opportunities and market access for local farmers could be reduced if the use of fortified products results in markets being captured by the economic actors that introduce such technologies. United Nations Human Rights Council, 2011.

production and, not least, the specific objectives that the programme is intended to achieve (see [section 3](#)), the **distinctive link between school meals and local (particularly smallholders') production** is a feature of the different definitions of HGSF given in the examples provided in [Box 4](#).

In order to harmonize the different concepts and establish a common understanding of HGSD, this resource framework uses the following definition:

HGSF constitutes a school feeding model that is designed to provide children in schools with safe, diverse and nutritious food, sourced locally from smallholders.

The core elements of this definition can be detailed as follows:

“Sourced locally from smallholders” means that HGSF programmes:

- ▶ maximize benefits for smallholder farmers by linking schools to local food production;
- ▶ strengthen the capacities of smallholder farmers and communities to produce food;
- ▶ contribute to rural transformation.

“Safe, diverse and nutritious food” means that HGSF programmes:

- ▶ promote the design and adoption of quality and safety standards for fresh and local foods;
- ▶ support crop and dietary diversification;
- ▶ integrate food and nutrition education to promote behavioural change and support healthy and culturally appropriate eating habits.

Even if only a percentage of food is purchased locally from smallholder farmers, a programme can be considered as “home-grown” provided that procurement is designed to support and foster local food markets and that this objective is taken into consideration during programme design and implementation and institutionalized in related policies and regulations.

HGSF programmes support smallholder farmers and agriculture in two main ways: by establishing or creating a structured demand for and strategic procurement of locally produced food; and by building synergies with complementary interventions in order to enable smallholder farmers to participate in school feeding markets.

BOX 4 SOME DEFINITIONS OF HGSF

In its Pillar 3 “Food supply and hunger”, NEPAD’s Comprehensive Africa Agriculture Development Programme (CAADP) describes HGSF as:

...designed to link school feeding to agricultural development through the purchase and use of locally and domestically produced food.

H.E. Dr Nkosazana Dlamini, Chair of the **African Union Commission**, during the 2016 first Africa Day of School Feeding, which focused on “Home-Grown School Feeding: A Conduit for Africa’s Sustainable Development”, defined HGSF as:

...the link with local food production (...) a new approach which is actually a safety net that may be used in accessing food and stimulating local markets. It helps households to invest in productive activities and participate in human development, particularly in the form of financial assistance.

Sumberg and Sabates-Wheeler (2010) define HGSF objectives as:

...conceived of as combining two distinct policy objectives: the first is a social protection objective focused on the health and nutritional status of school-aged children, while the second focuses on the economic and technical transformation of small scale agriculture.

WFP (2009) has defined HGSF as:

In the broadest sense, HGSF is a school feeding programme that provides food produced and purchased within a country to the extent possible.

Source: AU-NEPAD, 2009; Sumberg and Sabates-Wheeler, 2010; WFP, 2009.

BOX 5 SUPPORT TO CAPACITY AND SCALE-UP

IFAD has developed practical hands-on “how to do” toolkits that:

- ▶ help build the capacity of project design and implementation teams in various thematic areas;
- ▶ support the scale-up of successful initiatives; and
- ▶ support policy dialogue.

These modular toolkits are composed of three documents, a “Teaser”, “How to do notes” and “Lessons learned”, serving different purposes and audiences, including stakeholders involved in various segments of the value chains for school meals. The toolkits can provide useful guidance on a wide range of topics during project design, implementation and evidence-based policy dialogue on HGSF programmes, with special reference to climate and environment issues, conservation agriculture, country-level policy engagement, farmer organizations, food and nutrition security, free, prior and informed consent (especially for indigenous peoples), household methodologies, land, livestock and rangeland, targeting, reducing women’s domestic workload, rural finance, rural institutions, scale-up, value chains and young people.

Source: IFAD. How to do toolkits. Available at: www.ifad.org/-/how-to-do-toolkits

Complementary interventions for farmers and communities typically seek to increase farmers’ access to productive assets – means of production, knowledge and skills, tools for their organizations – that help them achieve sustainable and diverse surplus production, mitigate risks, maximize the benefits from food sales and increasingly strengthen other opportunities for commercialization and market linkages, for the smallholders themselves and for other stakeholders along the value chain.

1.3

BENEFITS OF HGSF

School feeding programmes normally pursue educational, social protection and nutrition goals, or a combination of these. HGSF programmes also generate additional benefits, not only for schoolchildren and their households, but also for the farmers who provide the food, for local communities and for other stakeholders. Figure 1 shows the benefits of HGSF (in yellow) compared with traditional school feeding programmes.

The potential benefits that HGSF can generate are maximized when programmes are designed as multisector interventions that are integrated into broader national strategies and systems. HGSF programmes have good potential to be part of a comprehensive package of interventions aimed at addressing multiple needs identified by governments. They can also

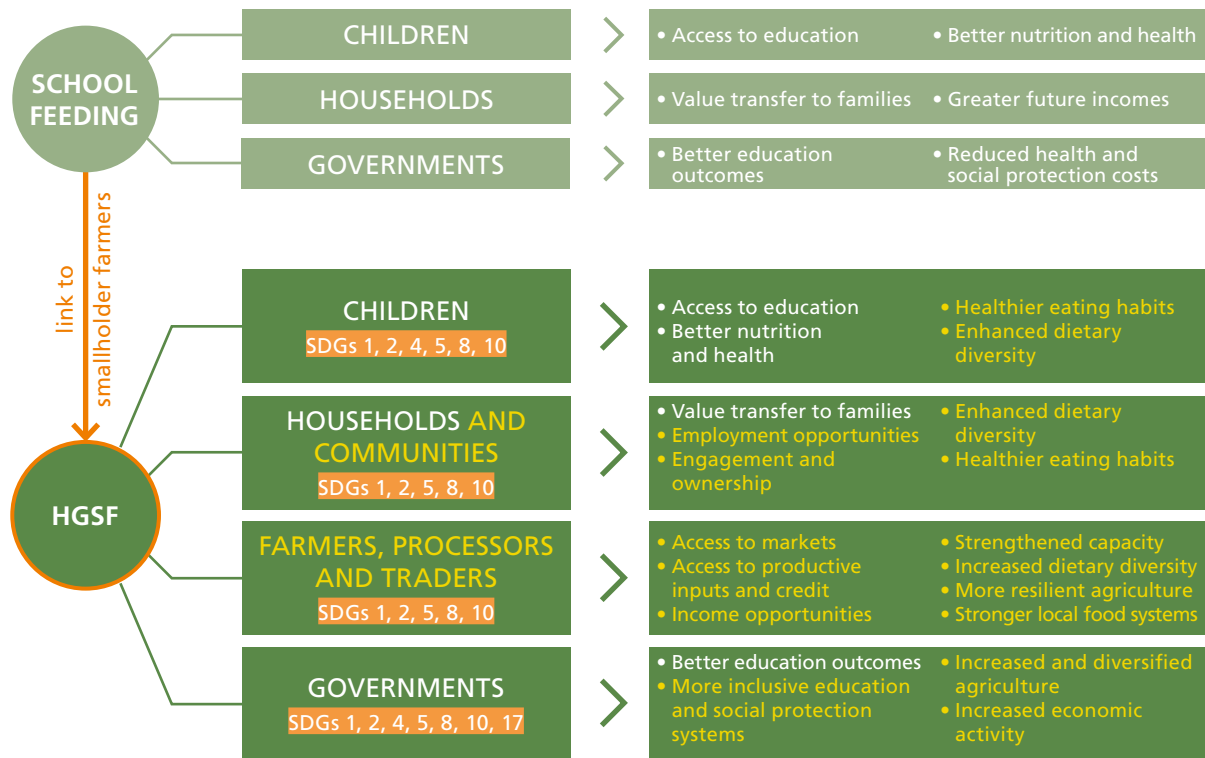
be integrated into national social protection strategies for fighting poverty, hunger and malnutrition. Governments are therefore increasingly investing in HGSF programmes as a strategy for accelerating development by combining benefits in education, health, nutrition, agriculture and trade, social and economic development and intergenerational well-being.

There is a large and growing body of evidence on the multiple benefits of school feeding programmes.¹⁹ By linking school feeding to smallholder farmers and local economies, HGSF programmes contribute particularly to accelerating progress towards zero hunger (SDG 2). They also contribute to other SDGs in the 2030 Agenda, including SDGs 1 on ending poverty, 4 on quality education, 5 on gender equality, 8 on decent work and economic growth, 10 on reduced inequality and 17 on partnerships for achieving the goals.

HGSF programmes rely on national policies, institutions, norms and resources that can sustain them and facilitate their smooth implementation. In addition, the benefits of HGSF vary according to the objectives, design, targeting and

¹⁹ Bundy *et al.* (2009) provide a thorough review of the evidence on the benefits of and gaps in school feeding programmes. Recent overviews can be found in WFP, 2017b; Global Panel on Agriculture and Food Systems for Nutrition, 2015; Alderman, 2015.

FIGURE 1 Beneficiaries and potential benefits of school feeding and HGSF



Sources: authors' elaboration.

implementation strategy of the specific HGSF programme. Potential trade-offs in programme design need to be carefully assessed. These issues are explored further in the following sections of this module and in [Module 3](#).

The following sections explore in more detail the core benefits of HGSF programmes with respect to food security, nutrition and agriculture; social protection and poverty reduction; education; and gender equality and reduced inequality. It is important to note that the benefits of school feeding in different sectors are intertwined and affect one another. The feedback loop between nutrition and education, for instance, is well documented and the potential health and nutrition outcomes from school feeding programmes complement education and learning outcomes.

SDG 1

SOCIAL PROTECTION AND POVERTY REDUCTION

School feeding programmes have proved to be an essential instrument in social protection and, according to the World Bank, are the most widely used safety net in the world.²⁰ In the short term, they assist low-income and vulnerable families with children by transferring to them the value of the food distributed, thereby contributing to hunger reduction and food security, income security and social inclusion. In the long term, they support child development and contribute to building human capital through improved access to education and learning, and enhanced nutrition.

School feeding, particularly HGSF, can be a strong component of broader social protection programmes

²⁰ World Bank, 2015.

BOX 6 SOCIAL PROTECTION

Social protection is defined as the “set of policies or programmes aimed at preventing or protecting all people against poverty, vulnerability, and social exclusion throughout their life cycles, with a particular emphasis on vulnerable groups” and the “set of all initiatives, both formal and informal, that provide: social assistance to extremely poor individuals and households; social services to groups who need special care or would otherwise be denied access to basic services; social insurance to protect people against the risks and consequences of livelihood shocks; and social equity to protect people against social risks such as discrimination or abuse.”

Social protection is generally seen as encompassing four dimensions:

- ▶ **Protection:** It provides relief and alleviates poverty and hunger.
- ▶ **Prevention:** It prevents poverty and hunger, helps people cope with shocks and avoids the adoption of negative coping strategies, such as removing children from school, during times of economic stress or crisis.
- ▶ **Promotion:** It helps enhance the incomes and human capital needed to overcome poverty and build resilience and future livelihoods by facilitating education, health and nutrition outcomes for beneficiary families.
- ▶ **Transformation:** It has the potential to transform local economies, social relations and behaviours.

Source: World Bank, 2015; Devereux and Sabates-Wheeler, 2004.

to address food insecurity²¹ and foster resilience and more inclusive development pathways. School feeding programmes are best leveraged as social protection instruments when they are included in social protection strategies, policies and budgets, and when the coordination body responsible for social protection includes them in its agenda.

School feeding, particularly when integrated into a national social protection scheme, can contribute to the four dimensions of social protection: as part of a lifecycle approach, associating school feeding with other social assistance programmes such as scholarships, unconditional transfers and public works provides opportunities to address the multidimensional social and economic vulnerabilities faced by children and their families and helps to reinforce the impact of these programmes. In this way, HGSF can bring benefits to significantly wider groups, including farming households, caterers and communities.²² Social protection programmes are more successful in addressing nutrition if they are accompanied by a food and nutrition education component.²³

SDG 2

FOOD SECURITY, NUTRITION AND SUSTAINABLE AGRICULTURE

a. Enhanced food security and nutrition of schoolchildren and their communities

Problems of food insecurity, undernutrition, micronutrient deficiencies and obesity increasingly coexist in all regions of the world, affecting people at all stages of life. School feeding programmes have an important role in the fight against hunger and malnutrition in all its forms.

Many school feeding programmes have a direct effect on schoolchildren’s food consumption, dietary diversity and nutrition status. Positive effects in these areas can be achieved by granting access to nutritious foods and providing the macro- and micronutrients that are often missing from the diets of children. When promoting healthy diets, in combination with consistent food and nutrition education the programmes also provide an opportunity to address childhood overweight and obesity and can help promote life-long and intergenerational healthy eating habits.

HGSF programmes also offer the opportunity to enhance food security and nutrition benefits for schoolchildren, smallholders and other actors who sell food to the programmes, and their

²¹ HLPE, 2012a.

²² Devereux, Sabates-Wheeler and Martínez, 2010.

²³ Global Panel on Agriculture and Food Systems for Nutrition.

households, through increased and diversified food production, consumption and incomes:

- ▶ **HGSF programmes may contribute to increased dietary diversity by relying on a diverse range of local products.** Empirical evidence from Brazil suggests that linking the national school feeding programme to local smallholder producers increased the variety and quantity of healthy foods, such as vegetables and fruits, served in schools.²⁴ Local procurement has also helped to diversify the food basket with fresh fruits, vegetables and eggs in Honduras and other countries. To the extent that HGSF programmes provide a well-balanced diet and use a diverse range of products, including those from animal sources, such as milk and eggs, they also contribute to improved micronutrient intake among students. The demand for diversified and nutritious products for HGSF may also lead to diversified production, and subsequently to increased dietary diversity for farmers and their households.
- ▶ **Schoolchildren can benefit from meals that correspond better to local tastes and preferences and are indigenous to their culture.** HGSF programmes value regional diversity and traditional crops that are often rich in micronutrients.
- ▶ All school feeding programmes can provide a platform for enhancing nutrition-related knowledge through an integrated package of interventions that support nutrition, including food and nutrition education, school gardens, behaviour change communication, deworming, health promotion and investments in healthy school environments. Food and nutrition education and other behaviour change strategies associated with HGSF aim to facilitate the voluntary adoption of long-lasting, healthy perceptions, practices and habits related to food, which promote resilience and are conducive to better health and well-being. To be effective, food and nutrition education should comprise a combination of evidence-based and behaviour-focused education strategies that match the specific context,

involve the active participation of all relevant agents of change – schoolchildren, parents, school staff, local smallholder farmers and rural enterprises, community leaders, etc. – and are reinforced by an enabling school environment. In addition, HGSF programmes that use local crops are particularly suited **to conveying skills and practices related to food choices and promoting healthy eating and hygiene habits among schoolchildren and their families.**

b. Smallholder farmers' productivity and income

While the importance of inclusive food systems for smallholder farmers is widely recognized, rural communities and smallholders still face important social and economic barriers to participating in these systems adequately (see [Box 2](#)). The structured and stable market for locally produced food that HGSF programmes represent, especially when they are implemented at scale, can provide enabling conditions for increasing smallholders' market engagement. It can encourage, facilitate and reduce the risk of investments in increased and diversified agricultural production that aims to produce greater surpluses, or in increased efficiency and improved post-harvest handling of food, leading to improved quality and productivity.

Coordinating HGSF and its structured demand with complementary interventions can enable smallholder farmers to participate in food markets. In this way, HGSF programmes can provide an effective long-term pathway to increased productivity, increased and stable incomes, and ultimately poverty reduction.

Specific benefits can include the following:

- ▶ **Income effects from increased and diversified demand:** Ensuring a market for the sale of surplus production helps address income volatility and may encourage farmers to increase their investments, increase and/or diversify their production and engage in additional markets. This indirectly contributes to improving households' food security.
- ▶ **Stable demand:** Predictability of the market is a key factor in farmers' decisions regarding investments in producing surpluses (beyond their families' needs) for sale. With careful planning, the school food market can be structured to be consistent

²⁴ Sidaner, Balaban and Burlandy, 2013; Soares *et al.*, 2017.

and predictable in the amounts and types of food needed, and the timing of these needs, to fit with growing seasons, etc. The more that farmers understand the needs of school feeding and can plan ahead to organize production that meets – but not greatly exceeds – market demand, the more they will be willing to invest in labour, better tools and seeds, etc.

- ▶ **Price stability:** The secure market offered by schools may help reduce price volatility, allowing for better and longer-term planning and investments, particularly when programmes are implemented at scale and integrated into national strategies.
- ▶ **Farmer organizations:** Structured demand tends to promote cooperatives or farmer associations, which enhance farmers' ability to connect with markets. Cooperatives and associations for small farmers enable their members to aggregate sufficient quantities of food to be able to participate in demanding markets. Such associations can also provide, or act as channels for, training of farmers, monitoring, food safety and quality assurance, value addition, etc. They can reduce farmers' reliance on, or strengthen their bargaining power with, local traders. Not least, they can reduce risk and income uncertainty, especially when linked to insurance schemes. Many farmer organizations also provide their members with access to credit, allowing them to invest in more efficient technologies. Altogether, farmer organizations can play a strong, catalytic role in achieving and sustaining development.
- ▶ **Enhanced capacity to provide quality and safe food:** School feeding programmes require strict food safety and quality control as well as management and planning capacities. When farmers have to produce higher-quality food and strengthen their capacities to meet standards, they not only grow better food, but can also achieve higher prices when selling any surplus in other formal markets.
- ▶ **Reduction of post-harvest losses:** Particularly for perishable commodities, there is less wastage when food is purchased and prepared locally for schoolchildren.
- ▶ **Access to other formal and private**

markets: To the extent that HGSF programmes strengthen the capacity of farmers to produce more, better-quality and more diversified products, they will also enhance farmers' opportunities to gain access to other markets.

- ▶ **Access to credit** is a traditional bottleneck for small stakeholders in the food sector. As well as formal requirements, such as possession of a valid identification card or other paperwork, the main obstacles to obtaining access to credit for smallholder farmers are short repayment periods, high interest rates and the farmers' lack of collateral, as they often lack adequate titles to the land they cultivate and have few or no other items of value to serve as collateral. HGSF can play a positive role in this respect by providing a stable demand for producers, reducing their need for unaffordable credit. In addition, having a forward contract with an institutional buyer such as an HGSF programme can constitute a form of security for creditors, helping to reduce interest rates. Understanding of the specific situation in the area, and the options available – such as forward contracting, which may alleviate farmers' need to borrow – can inform design choices related to procurement.

A major challenge for HGSF programmes is that they require smallholder farmers to have the minimum levels of capacity and reliability needed to deliver the required quantities and quality of food on time. In some cases, this may mean that the very poorest and most vulnerable family farmers have difficulties – at least initially – in participating in the HGSF programme and benefiting from increased market access. In these cases, it is important that an **HGSF programme is complemented by specific programmes aiming to increase smallholder farmers' production and bring them into the HGSF programme.** This is addressed in more detail in [Module 3](#).

c. Sustainable food systems

A specific **benefit of HGSF is the development and strengthening of local** food systems and value chains that support safe, nutritious and sustainably produced diets (see [Box 7](#)).

BOX 7 FOOD SYSTEMS AND FOOD VALUE CHAINS

A food system consists of all the elements – environment, people, inputs, processes, infrastructure, institutions, etc. – and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outcomes of these activities: nutrition and health status, socio-economic growth and equity, and environmental sustainability. Every aspect of a food system influences the availability and accessibility of diverse, nutritious foods and thus the ability of consumers to choose healthy diets.

A food value chain consists of all the stakeholders who participate in the coordinated production and value-adding activities that are needed to make food products. In a value chain, the emphasis is on the value (usually economic) accrued or lost by actors at different stages in the chain, and the value produced through the functioning of the whole chain.

Value chain analysis examines each step from production to consumption and provides an inclusive framework for characterizing many dimensions of a food system, including agricultural production, the diversity of the food supply and food affordability.

Example of a HGSF value chain



Home-grown approaches may foster local economic and agricultural development, contribute to diversifying local production, introduce environmentally friendly and nutrition-sensitive agricultural practices and ensure that local dietary habits and ingredients are valued, ultimately contributing to building robust and efficient food systems.

Providing locally produced food can also help to promote and integrate into local diets neglected or underutilized nutritious foods that are linked to different cultures. Valuing regional dietary habits can diversify the foods available to communities, provide lower-cost options and increase resilience. Some local, traditional foods are rich in nutrients and more resilient to the instability of markets and weather conditions than other foods. Research, especially from nationally based institutions, can be instrumental in mapping and acknowledging the existence and potential of such local foods, and the planning and development of school feeding programmes provide a great opportunity to establish partnerships in this regard.

When designed accordingly, HGSF can also support agroecological approaches that **promote organic products and increased biodiversity**. Enhancing smallholder farmers' productivity and value addition can provide an entry point for enabling them to enter a cycle of **sustainable and nutrition-sensitive agricultural production and livelihoods**.

However, developing or restructuring food systems usually requires investments in specialized infrastructure, institutional change and regulatory reform.²⁵ Any national approach will have to be defined to fit the specific context, opportunities and needs in the country.

Benefits for actors along the value chain

In addition to smallholder farmers, HGSF programmes may generate sustainable benefits for a range of other stakeholders along the value chain:

- ▶ The benefits to local communities may include local job creation in support of food delivery and preparation of school meals,

²⁵ FAO, 2016.

and at other points in the value chain.²⁶ For example, in Ghana and Togo, the provision of school meals is outsourced to caterers, who are often local women. In Jordan, the Healthy Kitchen Project provides freshly baked snacks that include fresh vegetables and fruits and are prepared in kitchens operated by charity-based organizations, creating jobs for vulnerable women and men. In Osun State, Nigeria, the O'Meals HGSF programme has been used as a job training and employment programme for young people and women.²⁷

- ▶ Where there are few opportunities for collective marketing and aggregation and where transport and marketing infrastructure and information systems are weak, small traders may constitute an important link between smallholder farmers and schools and other formal markets. Especially in these cases, traders may provide smallholders with access to credit and advice, arrange transport, add value through aggregation and transfer market information up and down the value chain.²⁸ It is important to ensure, however, that the benefits achieved through access to HGSF markets actually reach the smallholder farmers.²⁹
- ▶ HGSF can also constitute an important market opportunity for small processors and small and medium rural enterprises, which may supply schools with nutritious processed food products such as bread, biscuits and fruit jelly. In Brazil, for instance, the national school feeding programme requires that at least 30 percent of its food demand is supplied from either family farmers or family rural entrepreneurs (Law 11.947/2009).
- ▶ In many contexts, small family farmers and entrepreneurs are poor rural actors who may benefit greatly from HGSF market opportunities, including through increased turnover and profits. In addition, depending on the local cultural context, small traders,

processors and small and medium rural enterprises are often women, or companies that are owned by women. In these cases, HGSF may promote increased gender equity.³⁰

- ▶ For the purchasing entity, depending on the implementation model, purchasing from farmers in the vicinity of schools can reduce the costs and complications related to transport.
- ▶ School feeding programmes can also promote domestic and local production of micronutrient-fortified products, which might then be made accessible to the wider population. The already large and growing volume of in-country food processing represents an opportunity for schools to procure easily handled and prepared products. In Malawi, about 35 percent of schoolchildren benefit from a school feeding programme, and more than 95 percent of such programmes are based on the direct supply of a national fortified blended flour.³¹

Because of its multisector benefits, especially when it is combined with nutrition-sensitive agriculture, social protection and poverty reduction, HGSF has strong potential in encouraging good coordination among ministries of health, education, agriculture and social protection, among others, in order to ensure that all relevant stakeholders – from the local to the national level – are involved in programme development and implementation to maximize the benefits.

SDG 4 EDUCATION

When school feeding programmes are part of a package of investments in education, they can help maximize the return on these investments because they promote access to school and may increase children's attendance and learning capacity through reduced short-term hunger and improved nutrition, health and cognitive development.

²⁶ Global Panel on Agriculture and Food Systems for Nutrition, 2015.

²⁷ GCNF, 2015.

²⁸ FAO, 2007; Kelly and Swensson, 2017.

²⁹ Kelly and Swensson 2017; GCNF, 2015.

³⁰ ITC, 2014.

³¹ Global Panel on Agriculture and Food Systems for Nutrition, 2015. The concerns regarding potential market capture expressed in footnote 17 should, however, be considered.

A systematic review of 216 education programmes in 52 low- and middle-income countries³² found that school feeding programmes are one of the few education interventions that show positive impacts in both school participation – enrolment, attendance and completion – and learning in terms of scores in cognitive, language and maths tests.

A meta-analysis of school feeding programmes in 32 sub-Saharan African countries showed an average increase in enrolment of 10 percent in schools with a school feeding programme.³³

In addition, by providing the poorest children with an incentive to attend school, school feeding programmes that are appropriately designed can open a channel for a range of professionals from other sectors to reach these children and their families. For example, healthy school meals in conjunction with effective food and nutrition education and educational school gardens often promote lasting healthy eating behaviours.

The impacts on learning depend on the quality of the food provided and whether it provides the nutrients that a child needs to develop and learn. Thus, the impacts of home-grown programmes will rely on the programmes' ability to provide nutritious and healthy foods and to connect to other school interventions in support of children's nutrition and learning.

A study published by the United States National Bureau of Economic Research indicated that there is a positive correlation between improved quality of school lunches, including high micronutrient content and diet diversity, and learning outcomes at school.³⁴

School feeding programmes enhanced with a food and nutrition education component can support the achievement of SDG targets 4.2 and 4.7. Learning about food and nutrition supports children's health in the long term (target 4.2) by providing future parents with the skills to support the next generation, and is also a subject that helps instil a sense of global citizenship (target 4.7) in addressing the world's food challenges.

It has not yet been established whether and to what extent HGSF programmes have greater impact on children's education than normal school feeding programmes.

SDG 5

GENDER EQUALITY

and

SDG 10

REDUCED INEQUALITY

When adequately designed and implemented, school feeding programmes can contribute to narrowing gender gaps in access to education and help break the vicious cycle of discrimination against girls and other vulnerable groups, contributing to more inclusive development pathways.

The meta-analysis of school feeding programmes in 32 sub-Saharan countries cited in the previous section found that onsite meals combined with take-home rations for girls are particularly effective: in such programmes, the increase in enrolment of girls, who were otherwise underrepresented in school, was about 12 percent greater than the change in boys' enrolment.³⁵

HGSF can also support rural women's agricultural production, off-farm employment and incomes, foster women's participation in farmer organizations, and reinforce rural women's self-confidence, knowledge and skills through training and learning. Women can be engaged as food handlers, quality control agents, processors, cooks and cooks' helpers. Ideally, they are paid for their work, even if the only compensation possible is in-kind commodities or services. These roles, combined with relevant training, can confer status to women and involve them in decision-making, even if they cannot be paid wages during the early stages of an HGSF programme. Experience in middle- and high-income economies demonstrates that over time, these roles for women, which often begin as voluntary, evolve into paid positions.

School feeding programmes can thus help to build women's leadership, promote equitable sharing of resources and income, and transform unequal power relations.

³² Zie, 2016.

³³ Gelli, 2015.

³⁴ Anderson, Gallagher and Ramirez Ritchie, 2017.

³⁵ Gelli, 2015.

In Guinea, for instance, WFP has been operating an HGSF project since 2015, providing equipment to farmer cooperatives and training women farmers in food storage, packaging and transportation. To date, 900 tonnes of parboiled rice have been purchased locally by the project in Forest Guinea, and 1 800 women farmers from nine farmer unions have participated. The initiative also contributes to building social safety nets for both schoolchildren and smallholder farmers, and reduces the likelihood of girls dropping out of school.

Multiplier effects

In addition to the benefits for specific groups highlighted in the previous sections, it is important to note that HGSF can also have additional, positive multiplier effects for more diffuse groups of people, such as small farmers, traders, small and medium rural enterprises or other actors along the value chain who achieve higher incomes. The more local these actors are, the more they will spend the additional income in the local economy, increasing business for other providers of goods and services. In addition, as they increase their businesses, they generate spin-off benefits such as increased turnover and profits for other actors such as traders and transporters, and possibly employment and income for additional staff. Investments in infrastructure to complement HGSF and to increase local production and processing capacities will also benefit the wider community. Increased capacities to produce stable food surplus and more diversified food for HGSF can reduce overall dietary gaps in communities, with benefits in the form of more stable and diversified food supply and reduced seasonal fluctuations in prices. These benefits can all combine to contribute to economic development, political stability and the development of a sustainable tax base. This is another argument for viewing the costs of HGSF as investments rather than expenses.³⁶

The local economy-wide impact evaluation methodology is designed to quantify the full impact of projects such as HGSF on local economies, including the impacts on businesses and households that are not directly affected by the project. When an HGSF programme purchases products from businesses that are owned and operated locally, it

helps to infuse money into the local economy, where it produces multiplier effects: the local producer and employees spend the money on goods and services provided by other local producers, thus creating more income, production and employment.³⁷

Combination of benefits

As outlined in the previous section, HGSF programmes can have multiple different benefits for many different groups and sectors. Many of these benefits could be partially achieved through other programmes in a more cost-efficient way, but only as individual benefits. It is the **combination of many benefits** from the same programme that constitutes the real strength of HGSF: by combining different benefits, school feeding – including HGSF programmes – can achieve very high **cost-effectiveness and benefit–cost ratios, and the marginal costs of achieving additional benefits are comparatively low** when compared with pursuing these benefits through specific, individual interventions.³⁸ Ongoing multi-benefit programmes offer an opportunity for exploring whether interventions with combined benefits may achieve broader impacts in the short, medium and long terms than those achieved by the sum of impacts from single interventions. Appropriate methodologies should be used to do this.

The combination of benefits of HGSF can best be promoted by devising a programme, applying a process and establishing coordination mechanisms that bring out the multisector character of HGSF and in which each sector both contributes to and benefits from the programme. This is illustrated in [Figure 2](#).

The **education sector** provides a channel for and the infrastructure in which an HGSF programme can function. It also provides the curricula, teachers and institutional structure required for children's effective learning. In return, an HGSF or other school feeding programme helps children to gain access to, participate in and benefit from schooling.

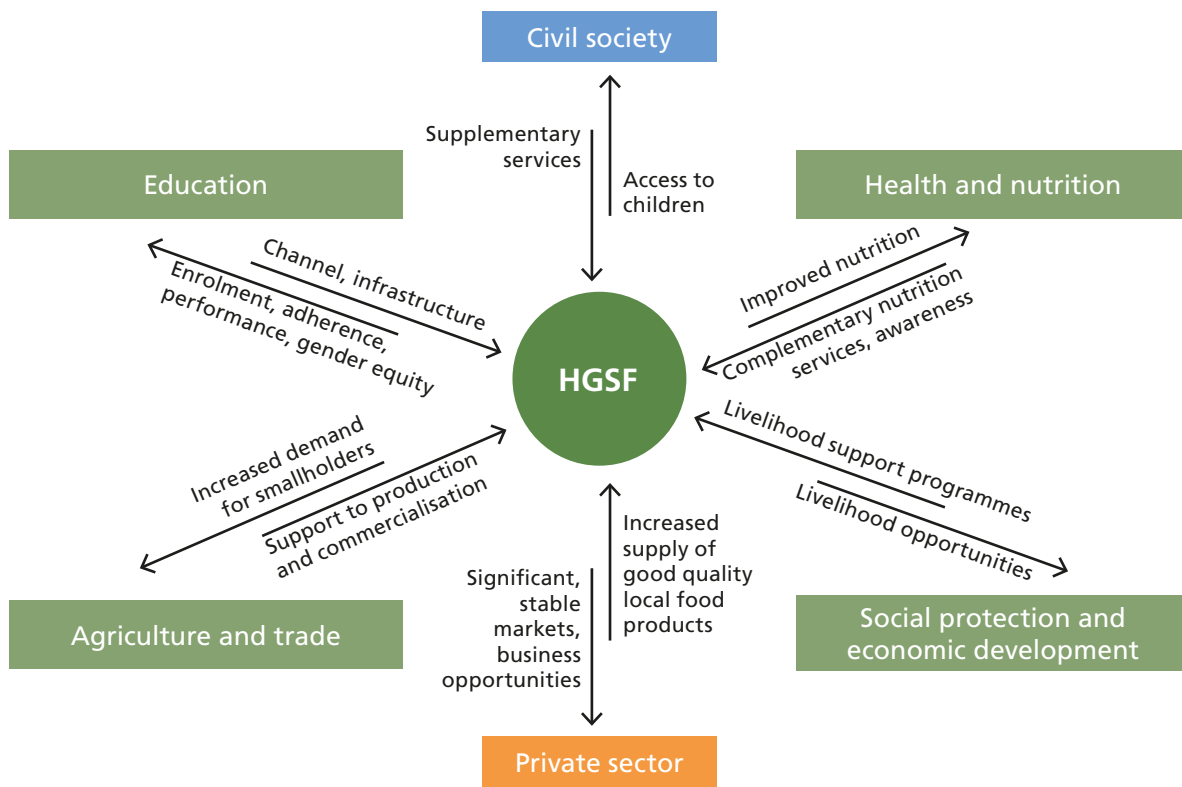
The **health and nutrition sector** provides important complementary services including health and nutrition monitoring of children, vaccinations

³⁶ Schutter, 2014.

³⁷ Taylor and Filipowski, 2014.

³⁸ Bundy *et al.*, 2017.

FIGURE 2 Multisector character and benefits of HGSF



Source: authors' elaboration.

and deworming. In return, an HGSF programme can improve the nutrition of schoolchildren and their families by strengthening the linkages among local procurement, meal standards, food and nutrition education and health services.

The sectors of **agriculture** and **trade** can provide supply-side support in helping farmers and small local entrepreneurs to engage in formal markets and provide goods and services of adequate quantity and quality. In return, an HGSF programme can provide the stable demand that such players may need to be able to invest, reduce risks and obtain better access to markets.

Social and economic development programmes can provide households with the livelihood support that enables them to let their children participate in school. In return, an HGSF programme provides livelihood opportunities through demand and payment for services.

Not least, the **private sector** – farmers, processors, their organizations, traders, etc. – provides increased quantities and more diverse, safe and good-quality food. In return, an HGSF programme provides a stable market and increased business opportunities, with multiplier benefits for the entire local economy.

Being explicit about such potential benefits can help mobilize multisector and sustainable political support and participation and leverage increased investments from other sectors.

MODULE 2 PLANNING HOME-GROWN SCHOOL FEEDING



2.1

OVERVIEW

Module 2 focuses on two main preparatory steps required for planning sustainable and effective HGSF programmes that respond to the needs of the population and take into consideration the priorities and capacities of the government and other stakeholders:

- ▶ long-term **vision and political commitment** – defining the broad and long-term changes that stakeholders, particularly the government, aim to achieve with HGSF; and
- ▶ adequate and precise **context analysis and assessments** – exploring the needs that can be addressed by HGSF in the country, and developing an understanding of the different existing environments and opportunities that can support the vision.

HGSF is a point of convergence for many initiatives and sectors including, for example, education, agriculture and agribusiness, health and nutrition, labour markets and employment, commerce and trade, and social protection. Context analysis and assessments should thus be multisector and explore three main aspects:

- ▶ **What are the needs of the population that the programme could address, and to what extent are these needs addressed by existing policies and programmes?** This aspect encompasses identification of the determinants of poverty, food insecurity and malnutrition and vulnerability, and understanding of the existing social protection, education, food security and nutrition environments and how they can both support the vision and be strengthened by programme implementation. It also includes a **review of the wider framework of existing social protection and other development policies, strategies and programmes** targeting the same population and/or pursuing comparable objectives; assessing whether school feeding

is sufficiently integrated into these; and, if not, identifying what would be required to achieve greater integration of HGSF into the wider policy framework.

▶ **What opportunities in local food production for existing food systems could be used by the programme?**

This part of the analysis identifies the characteristics and production potential of local agriculture and smallholders, analyses food markets, and identifies the food value chains involving smallholder farmers that are relevant to school feeding. This is the starting point for designing an HGSF programme and a pro-smallholder local sourcing strategy. A good understanding of the local food system and goals for strengthening it also helps to identify the needs and opportunities for technical support on the supply side. This analysis can be combined with a **review of opportunities for formally linking HGSF to the ministry of agriculture or other ministries and to the programmes of government, non-governmental organizations (NGO) or the private sector**, which could lead to concrete cooperation and/or allocations of financial or in-kind resources in support of HGSF.

- ▶ **Which existing national capacities can be built on? A review of existing capacities relevant to school feeding** helps to ensure that the HGSF programme designed is feasible and builds on existing experience and to identify potential weaknesses and possibilities for addressing them through investments in an enabling environment for a multisector, well-integrated HGSF programme.

- ▶ **What is the best timing of interventions to cover the core components for achieving long-term goals?** It will not be possible to implement interventions that cover all the core components at optimum levels from the outset; it will be necessary to plan how to phase and time each intervention

**Module 2**

for success. Based on results of the other analyses, it is also helpful to consider the best timing for strengthening or expanding existing components and successfully phasing in new elements over time.

In addition to these assessments, a number of more specific in-depth analyses can be carried out if required for specific aspects of the programme.

A **multi-stakeholder consultative process** involving all the main actors is an important tool for building ownership and generating consensus regarding the relevance, vision, objectives, scope and feasibility of HGSF, and the investments, actions and realistic timelines for its implementation, continuous strengthening and sustainability.

Ideally, a **single multi-stakeholder task force** or **inter-ministerial committee** will lead the entire process to ensure continuity and national ownership. Establishing a clear process and rules for participation and decision-making should facilitate the meaningful engagement of stakeholders that are important to the programme's success. Depending on the specific model, stakeholders will include appropriate government, national and international entities, civil society organizations, community and school representatives, the private sector, and targeted beneficiary groups: students, their parents, smallholders and farmer organizations. The consultation and involvement of stakeholders are most fruitful when the stakeholders are engaged from the outset – prior to the programme design stage – and during implementation. Such engagement can be facilitated by the use of planning methodologies for the local level and school management committees, depending on the HGSF operating model chosen (see [Module 3](#)). It is never too late to engage stakeholders, however, with the most critical moments being when considering changes to the programme.

The following sections explore the elements for a successful consultative process, drawing from experiences in countries and starting with a discussion of the elements that can contribute by informing the national vision and building political commitment (section 2.2). Section 2.3 provides more details on the three aspects of this context analysis.

2.2

VISION, LEADERSHIP AND POLITICAL COMMITMENT

Vision, leadership and steady commitment are essential to ensuring that an HGSF programme can be developed and implemented, that significant changes can be achieved and that the long-term goals envisioned by the government are met. In order to adopt the necessary institutional and operational measures, stakeholders in each country need to develop a shared national vision of how agriculture and school feeding can work together to move people gradually out of poverty and hunger.

Governments develop their visions and political commitment for a specific programme based on evidence of multiple, tangible benefits and the assurance that that the programme is feasible and “can be done”. They obtain this evidence by collecting and exchanging information and experiences, including best practices.

South–South and triangular cooperation (SSTC) is one of the main routes for facilitating the sharing of knowledge and experiences that contributes to the strengthening of country capacities, opening national multi-stakeholder dialogue and building strong national ownership. It can take place through different channels, including:

- ▶ international and regional fora and events such as the Global Child Nutrition Fora (GCN Fora; see [Box 8](#)) or the WFP Centres of Excellence regional and national workshops;
- ▶ regional and sub-regional communities of practice such as the Pan-African School Feeding Network and similar networks in Asia and Latin America and the Caribbean;
- ▶ technical assistance and policy advice; and
- ▶ peer-to-peer study visits.

The United Nations conceptualizes South–South cooperation as the process whereby two or more non-donor developing countries, which may or may not be facilitated by the United Nations, pursue their individual and/or shared objectives through exchanges of knowledge, skills, resources and technical expertise, and through regional and interregional collective actions – including partnerships involving governments, regional organizations, civil society, academia and the private sector – for their individual and/or mutual benefit within and among regions. Triangular cooperation

BOX 8

GLOBAL CHILD NUTRITION FORUMS: A VEHICLE FOR SOUTH–SOUTH AND TRIANGULAR COOPERATION

For 20 years, annual GCN Fora have contributed to South–South and triangular cooperation. The forums, convened by the Global Child Nutrition Foundation (GCNF) and – since 2013 – co-organized by the WFP Centre of Excellence against Hunger in Brazil, have played major roles in advocating for the establishment of HGSF programmes around the world, and are a main vehicle for sharing and learning by conveying evidence, knowledge and information on this type of programme. The forums and the GCNF have also helped create regional networks and foster bilateral collaboration between countries.

GCN Fora facilitate the sharing of knowledge and experiences from HGSF “champions” and comparable countries, providing governments with a realistic overview of the potential impacts of an HGSF programme, a chance to review the different models operating around the world and their respective associated risks and challenges, and an opportunity jointly to develop advocacy strategies. The forums can also foster political commitment and provide an entry point for assistance to the development of enhanced policies, where these are lacking.

Source: <http://gcnf.org/events/forum/>

is a modality whereby a donor country alongside a United Nations agency facilitates Southern initiatives through the provision of funding, training, management, technological systems and other forms of support.

Regional and sub-regional communities of practice facilitate more long-standing partnerships among practitioners in different countries as they provide a common frame of reference and can gather and share relevant experiences in considerable detail.

Policy and technical assistance provided through South–South and triangular cooperation draws on the experiences and expertise gained by “pioneer countries” within groups of countries in which conditions are otherwise similar. This means that the pioneer countries can share relevant evidence, advice, examples and models that have been tried in practice, and that they have identified likely challenges and, where possible, addressed them. In a complex, multisector operation such as HGSF, many such challenges will appear only when programme implementation is under way. Other countries interested in establishing or expanding HGSF can benefit greatly from the experiences of their pioneer peers. At the same time, engaging in policy advice and technical assistance provides a useful framework for pioneer countries systematically to gather, organize and articulate their own experiences.

Study visits to other countries represent a valuable tool for mobilizing governments’ commitment. They can demonstrate successful practices in

programme implementation while exposing participants to the daily challenges that practitioners face, and potential solutions to these challenges. Study visits can have great value for at least two reasons: they enable a group of crucial national stakeholders to spend time together focusing on one theme – HGSF; and this group can witness first-hand the experiences of another country with similar conditions and see what a functioning HGSF programme looks like, demonstrating that “it can be done”.

As well as South–South and triangular cooperation, several other approaches can help to establish a widely shared national long-term vision and political commitment.

The implementation of **pilot programmes** allows the testing of different approaches, identification of major issues and challenges, and learning from direct experience. Experience of the tangible benefits of HGSF and careful monitoring and evaluation (M&E) of HGSF programmes can build national support, inform future strategic choices and help governments cultivate long-term plans. For instance, Honduras is experimenting with several approaches to identify the best and bring them to scale (see [Box 9](#)); Haiti is piloting an HGSF model in one area before testing it at a larger scale. Piloting is not essential for policy-making, however, and countries can establish a national framework for HGSF in preparation for each sub-national region to develop and implement HGSF at its own pace, according to its situation.

BOX 9 SCALING UP HGSF MODELS IN HONDURAS

The Government of Honduras has a clear vision for strengthening the link between school feeding and local agriculture in order to maximize the benefits of its national school feeding programme. It has invested about USD 1.3 million in complementing the regular food basket of the national programme with local fresh produce – seasonal vegetables and fruits, and eggs – supplied primarily by local smallholder producers and reaching more than 142 000 pre-primary and primary schoolchildren in 2016. The inclusion of dairy products is being tested in Choluteca Province.

With the support of WFP and other partners, the Government is incorporating different home-grown models into the national school feeding programme, which covers 1.3 million children:

- ▶ **Direct cash transfers to schools:** Cash is transferred to schools so that they can buy the fresh produce that they need. This scheme is currently being piloted in 133 primary schools in one province, benefiting 8 000 schoolchildren with fresh vegetables and eggs. School directors, together with or endorsed by the representatives of school committees, withdraw the cash from the school's bank account and use it for food procurement.
- ▶ **Mancomunidades:** This model entails an intermediary role for the *mancomunidades* – local authorities comprising groups of municipalities. Through this scheme, resources are transferred to this intermediate level to link the central government to schools. The *mancomunidades* plan their demand for fresh food products based on what is available locally, and are in charge of signing agreements with smallholder producers, coordination and distribution to schools. WFP is currently working with six *mancomunidades* in three provinces.
- ▶ **Municipalities:** This model is very similar to the *mancomunidades* model, but in this case the intermediaries linking central government, schools and local producers are two municipalities.
- ▶ **Cajas rurales:** In this model, WFP and the Government have signed agreements with three *cajas rurales* – small self-financing socio-economic organizations active in rural communities. The *cajas rurales* are responsible for buying fresh food from smallholder farmers and local producers who include both members and non-members of the *caja* itself.

A country-specific **cost–benefit analysis of school feeding** calculates the net present value of the indirect transfer to each household and the returns on investment in terms of saved assets, longer education, better health, reduced expenditures and gender equality.³⁹ It can illustrate to governments and donors the various pathways along which a school feeding programme creates value for a country's gross domestic product (GDP), compared with the cost. This analysis shows that school feeding is an investment in human capital and a productive safety net with multiple, interlinked, long-term benefits aligned with the SDGs and that it provides a positive benefit–cost ratio.

Finally, **the multi-stakeholder consultation process** itself, through its various analyses, assessments national consultations and workshops, contributes to strengthening political commitment and leadership, including cross-ministerial engagement.

2.3 CONTEXT ANALYSIS

A comprehensive context analysis helps to establish or review the objectives of an HGSF programme, its targeting, food basket and nutrition issues, and to determine the appropriateness and feasibility of different implementation models. It also helps identify the existing potential for developing or scaling up to reach larger numbers of vulnerable beneficiaries while recognizing associated risks.

A context analysis should also identify how an HGSF programme that is sourced – at least to some extent – locally from smallholder farmers could complement and enhance synergies with other strategies and programmes, especially those

³⁹ In collaboration with the Boston Consulting Group, the World Bank and private-sector partner MasterCard, WFP has developed a standard methodology for cost–benefit analysis of school feeding. The tool provides an economic model that is supported by academic literature, country-specific indicators of nutrition, health and education and information collected at the local level.

that target school-aged children and smallholder farmers, in order to address identified needs.

As schools are an excellent platform for reaching school-aged children and adolescents, an HGSF programme can take advantage of opportunities for leveraging complementary, mutually supporting interventions at the school level through integrated programmes. A comprehensive context analysis will assist in identifying opportunities and facilitating advocacy for greater integration and complementarity of national policies, strategies, programmes and investments. Context analyses can also facilitate the development of helpful processes and the achievement of maximum benefits for all the sectors involved.

A comprehensive context analysis can rely on primary data collected through surveys and interviews, and

secondary data from relevant ministries, United Nations agencies, research institutes and other stakeholders. Additional useful resources are national policy and strategic documents such as national development plans, and – not least – any type of impact evaluation assessing the outcomes of such plans. Pulling together relevant information from such reliable sources can contribute to establishing a solid understanding of the country situation and the existing gaps, opportunities and challenges.

In most countries, potential data sources include:

- ▶ national development plans and poverty reduction strategies;
- ▶ laws, policies, sector plans and sector reviews related to education, nutrition and food security, agriculture and social protection;

BOX 10

WHY IS A CONTEXT ANALYSIS USEFUL TO THE PLANNING OF HGSF?

As for any school feeding programme, a solid understanding of the context in which an HGSF programme will operate is necessary in order to:

- ▶ **identify the needs of the population, particularly school-aged children and smallholder farmers, and define the potential roles of school feeding and HGSF approaches in addressing these needs** in the country or in subnational areas; depending on the context, the analysis should consider the potential of school feeding:
 - in providing an effective safety net for schoolchildren and vulnerable households in times of hardship, in response to shocks and for addressing poverty;
 - in addressing problems with school attendance, retention and academic performance and providing an incentive for the education of girls and other vulnerable children;
 - in contributing to nutrition outcomes, for example, by enhancing dietary diversity, promoting healthier diets and reducing micronutrient deficiencies among schoolchildren; and
 - in increasing market opportunities for smallholder farmers – men and women – and small businesses, and increasing their productivity and incomes;
- ▶ **establish or review the objectives of an HGSF programme, ensuring that they** respond to the needs and are in line with national priorities;
- ▶ **establish or review school feeding modalities, food baskets and nutrition norms**, based on schoolchildren's nutrition needs and the food commodities that can be supplied locally from smallholders;
- ▶ **establish or review targeting** in response to the needs identified and with a view to avoiding overlaps and enhancing synergies with other programmes; among other aspects, targeting takes into account the age groups or school levels to be covered – pre-primary, primary, secondary; the geographic areas in which HGSF will be provided, according to vulnerability and production capacity criteria; and the type(s) of farmers to be targeted;
- ▶ **assess the appropriateness and feasibility of different implementation models, identify potential trade-offs** and, in particular, assess the potential for sourcing food locally from smallholders and for linking school feeding to local economies while providing an adequate food basket all year; and
- ▶ **identify the preliminary risks associated with** the scale-up and/or optimization of an HGSF programme, and the other complementary activities needed to meet the objectives.

In addition, the participatory and inclusive process recommended in this document contributes to strengthening national capacities and building consensus.

- ▶ budget allocations and any pooled funding such as the Global Partnership for Education Catalytic Fund and multilateral funding streams;
- ▶ social and economic assessments, including the assessments and reports of United Nations agencies in normal or emergency contexts;
- ▶ World Bank country reviews⁴⁰ and data,⁴¹ and data from United Nations agencies;
- ▶ legal instruments and policy and strategy documents related to school feeding and school health and nutrition, project documents and operational plans, and implementation guidelines;
- ▶ documentation related to any current or prior school feeding activities in the country;
- ▶ analyses, assessments and evaluations related to school feeding and studies on HGFSF and local food sourcing, such as WFP's Purchase for Progress assessments; and
- ▶ interviews with government officials at the policy-making level in relevant ministries, such as those of education, health and social protection, donors and development partners.

To provide a solid basis for targeting and other aspects of programme design or redesign, where possible, data should be disaggregated by geographic area, age group, gender and other relevant criteria such as ethnic group, refugee and displaced person status and specific nutrition deficiencies.

It is important to note that the data collected during this phase will be useful not only during the analysis, but also during subsequent steps of planning, design, implementation and adaptation of a new or ongoing HGFSF programme. For instance, the targeting and re-targeting of HGFSF programmes should respond to the (changing) needs of the population, while avoiding overlaps and enhancing synergies with other programmes.

When it becomes available, new information – such as a new multi-indicator cluster survey, demographic and health survey or evaluation of the outcomes

and impacts of a national development or poverty reduction plan – is useful for the periodic review of an HGFSF programme with a view to assessing the need for adjustments to, for example, the food basket and products provided, geographic targeting and the complementary contributions required.

2.3.1 Needs assessment

An analysis of the needs and the country's priorities is essential to determining the objectives and feasibility of a school feeding programme and informing its design or redesign.

The most valuable context analyses provide a comprehensive understanding of the prevailing situation in the country, including the **needs of the population**, particularly preschool- and school-aged children and adolescents, smallholders and other poor households potentially involved in supplying school feeding programmes, and **the extent to which existing policies and programmes are addressing these needs**. Any trends or significant changes in the prevailing situation that are identified can also be incorporated into these assessments.

Any school feeding programme is multisector by nature, and should therefore include a needs assessment encompassing an array of different aspects. Annex 1 provides more detailed guidance on assessing needs and gaps, including indicators that can be used and lists of sources of essential information on:

- ▶ food security and nutrition;
- ▶ poverty, inequality, gender issues and social protection;
- ▶ agriculture;⁴²
- ▶ labour markets and employment opportunities;
- ▶ education; and
- ▶ health, particularly among schoolchildren.

For home-grown approaches, the analysis should have a strong focus on food security and nutrition and include the needs of a larger group of potential beneficiaries, including smallholder farmers and other poor households potentially involved in supplying school feeding programmes.

⁴⁰ World Bank country reviews are available at: <http://www.worldbank.org/en/where-we-work>

⁴¹ World Bank data are available at: <http://data.worldbank.org/country>

⁴² For additional aspects of opportunities and local food systems, see [section 2.3.2](#).

BOX 11

GUIDING QUESTIONS FOR FORMULATING RECOMMENDATIONS THAT AIM TO IMPROVE INTEGRATION

- ▶ How do the different problems affecting school-aged children and adolescents and smallholders interact? Which children, households and communities are most affected?
- ▶ How can better integration of strategies and programmes enhance the achievement of common objectives?
- ▶ How can these programmes be scaled up in parallel in order to reach additional beneficiaries?
- ▶ How can these programmes integrate food systems and local food production and chains for better achieving common objectives?
- ▶ What mechanisms are used to deliver social protection, nutrition and health interventions for different age-groups – health centres, schools, community centres the media? What interventions are delivered through the school system?
- ▶ Should school feeding pursue additional objectives and include additional target groups in order to reinforce the impacts of specific social protection and development programmes?
- ▶ What is required in order to achieve these additional benefits?

A needs assessment in the areas listed above would normally encompass information on:

- ▶ the prevailing situation, trends and whether they are improving or worsening, seasonality – variations during the year – and the underlying causes and drivers of, for example, food insecurity and malnutrition;
- ▶ regional disparities and rural development;
- ▶ gender and social inequalities: some groups may be particularly affected, such as pastoralists, specific ethnic groups, orphans, internally displaced persons and refugees; and
- ▶ other determinants of vulnerability.

Following a lifecycle approach that takes into account the needs and situations of the different potential direct and indirect beneficiaries of the HGSF programme – from early childhood to adulthood – can be a good way to avoid the development of gaps or overlaps in the different programmes being implemented and to maximize synergies among them, thus achieving more impact with the same or fewer resources.

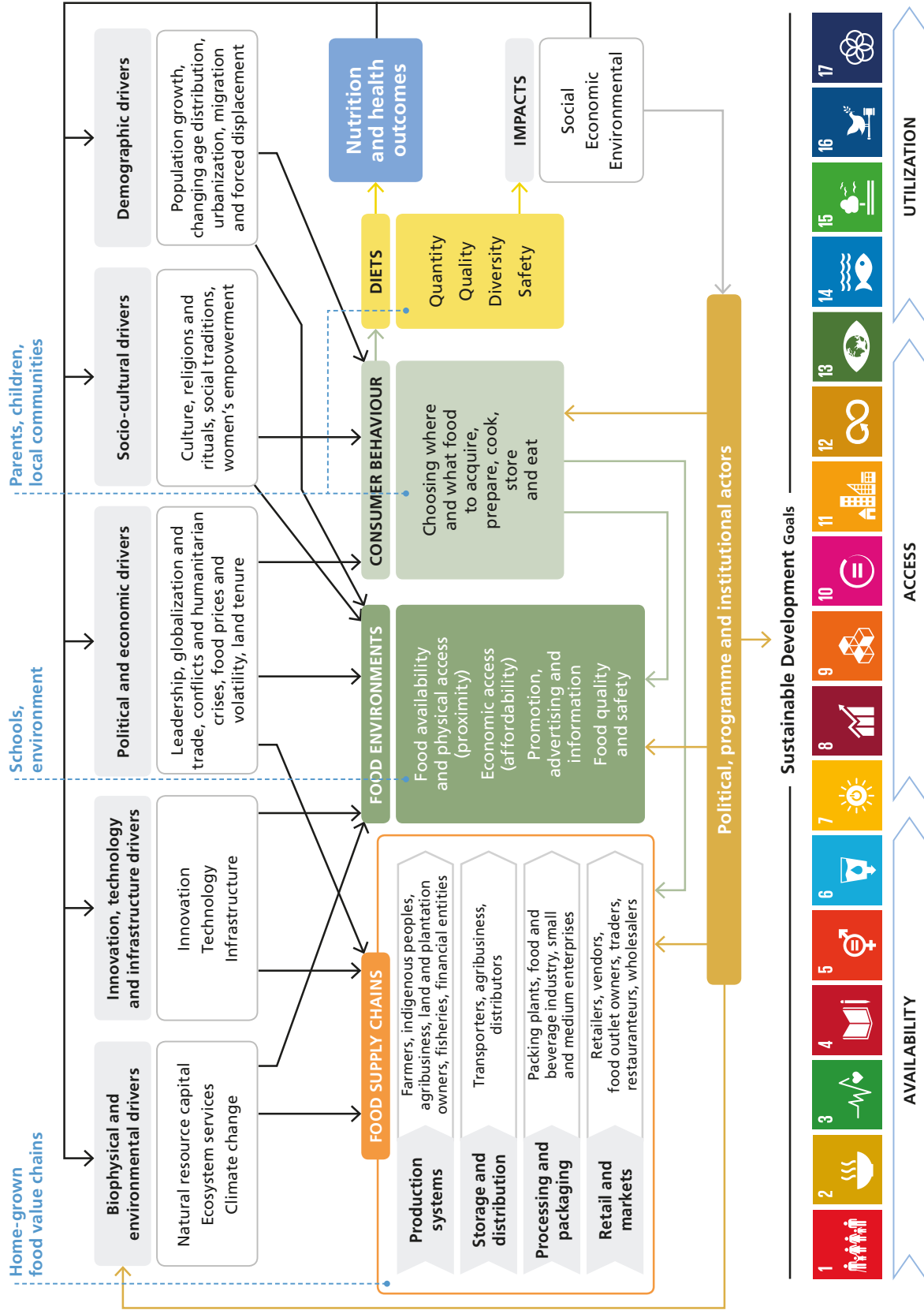
Of **specific relevance to HGSF**, the analysis in each of the areas mentioned above should focus on identifying **how increasing the sourcing from local, smallholder producers of food for a school feeding programme can help to address the identified needs or the identified gaps in existing policies and programmes?**

Examples of the benefits of HGSF could include:

- ▶ increased diversity of food consumed by schoolchildren;
- ▶ promotion of healthy eating habits;
- ▶ promotion of local and traditional foods;
- ▶ promotion of increased and more diverse food production – through having a stable market – contributing to increased resilience;
- ▶ increased access to markets – complementing supply-side interventions with demand-side results;
- ▶ additional employment and income opportunities;
- ▶ increased community engagement in and ownership of school feeding programmes;
- ▶ strengthened capacities of farmers, processors and traders;
- ▶ strengthened food systems; and
- ▶ better integrated and more inclusive programmes and systems.

For example, because of the importance of the agriculture sector to overall GDP in low- and lower-middle-income countries, and its potential as a source of increased income for poor rural people, agricultural development and growth are key instruments for reducing rural poverty. Synergies between activities to satisfy the food demand of an HGSF programme and to implement national development strategies for agricultural production could be identified. As a result, an HGSF programme associated with agronomic interventions that resolve technical bottlenecks such as food losses, low yields and

FIGURE 3 Food systems and their entry points into HGSF



Source: adapted from HLPE. 2017. Nutrition and food systems.

poor access to credit will have a higher return on investment than a programme that does not address agricultural development goals. Synergies with, for example, social protection and health and nutrition policies and programmes should also be proactively sought.

Defining ways of achieving these potential benefits in the specific context will be helpful for the formulation of objectives and guiding principles for the HGSF programme, and can be an important element for rallying political, in-kind, financial and/or other support for the programme from multiple sectors, levels and actors.

2.3.2 Opportunities: local food production in food systems

A food system links all the elements – environment, people, inputs, processes, infrastructure, institutions, etc. – and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outcomes of these activities: nutrition and health status, socio-economic growth and equity, and environmental sustainability.⁴³ This is illustrated in [Figure 3](#).

Sustainable food systems positively influence social, environmental and economic aspects, and ensure food security and nutrition for all in ways that avoid compromising the economic, social and environmental bases from which to generate the food security and nutrition of future generations.⁴⁴

Food value chains consist of the full range of farms and firms and their successive coordinated value-adding activities that produce raw agricultural materials and transform them into particular food products that are sold to final consumers.⁴⁵

HGSF has the potential to constitute a promising entry point for increasing nutrition-sensitive outcomes from value chains and contributing to sustainable food systems as a whole. For an HGSF programme, four domains of food systems in particular deserve closer analysis with a view to identifying the potential of existing food systems to

provide the food required in sufficient quantities, quality and diversity for the programme. These domains are:

- ▶ food production;
- ▶ food handling, storage and processing;
- ▶ food trade and marketing; and
- ▶ consumers' demand, food preparation practices and preferences.

While an HGSF programme can strengthen local food systems, it has to start with the food systems in their current state and build on the potential for their improvement.

The most important aspect in this context is current and potential food production from local smallholder farmers, as the design of school menus (in terms of composition and quantities) has to be ensure both that the food basket is nutritious and that local farmers can actually supply the desired food when needed and in adequate quantities, now and in the medium-term future. However, it is also important to understand other aspects of the food system, such as markets and aggregation systems, in order to select the most conducive operating model for a programme.

[Table 1](#) provides an overview of aspects that can usefully be explored in preparation for designing an HGSF programme. HGSF planners should seek the advice and cooperation of experts from other sectors as required, such as in the ministry of agriculture.

A good understanding of these elements will facilitate, among other activities:

- ▶ definition of the specific **objectives** of the programme or changes to a current programme, including the target groups it aims to support and the extent to which it seeks to strengthen local food systems;
- ▶ decisions regarding the specific **modalities** to be used or changed in the programme – hot meals, snacks, conditional household transfers;
- ▶ **design or redesign of menus** that can be sourced at least in part from local smallholder producers;
- ▶ assessment of the cost implications of different options;
- ▶ assessment of **seasonal aspects** – food availability, logistics, prices;

⁴³ HLPE, 2017.

⁴⁴ HLPE, 2017.

⁴⁵ FAO, 2014a.

- ▶ assessment of which **operating models** are most appropriate for the programme (Module 3 provides examples of different operating models illustrating how different countries have used food system analysis to design HGSF programmes in ways that optimize complementarities and benefits); and
- ▶ assessment of the numbers and types of **suppliers** to be involved in the programme in the short, medium and long terms – a programme may plan to involve increasing

numbers of smallholders over time, for example, if its needs cannot be met by smallholders in the short term.

More details on assessing each of the four domains of food systems are provided in Annex 2.

2.3.3 Existing national capacities

This resource framework aims to promote the wider use of home-grown approaches in school feeding through realistic and sustainable programmes.

TABLE 1
Aspects of food systems to take into consideration when designing an HGSF programme

Food production	<ul style="list-style-type: none"> ▶ Crops that could be used in the local supply of school feeding – their local availability and nutritional properties. ▶ Traditional and regionally adapted crops that are currently undervalued but that would satisfy both cultural preferences and nutrition needs. ▶ Current smallholder production and food balance by crop, cultivated area, average plot sizes and average yields. ▶ Surplus areas, and potential production capacity of smallholders in deficit areas. ▶ Smallholders' capacity to increase crop diversity and productivity. ▶ Seasonality and availability of food. ▶ Preconditions for increasing diversity, productivity and production – for example, affordable credit, irrigation, storage and technology. ▶ Good agriculture production practices, such as safe use of fertilizers and pesticides and irrigation.
Food handling, storage and processing	<ul style="list-style-type: none"> ▶ Efficiency and effectiveness of food handling, including levels of post-harvest losses and potential food safety risks such as contamination or spoilage. ▶ Extent, capacity and state of infrastructure – roads, aggregation points, warehouses, mills, primary processing units, etc. – and access to it. ▶ Nutritional value of traditional local foods and relevant existing food value chains in the country. ▶ Food processing and fortification capacity.
Food trade and marketing	<ul style="list-style-type: none"> ▶ Capacity of farmer organizations, traders, transporters, processors, caterers, food safety and quality inspection services, packagers, etc. to satisfy HGSF needs. ▶ Volumes of and gaps in food markets. ▶ Degree of integration of existing market systems – strong, moderate or weak – focusing on the prices of items in the school food basket and alternative items in different markets, and food price fluctuations. ▶ Existence of food price information systems – existing, weak or none – covering items in the school food basket and alternative items, in the country and by subregion. ▶ Functioning of the markets for these items – good, with seasonal variations or weak. ▶ Security situation throughout the year at the national level and in subregions of the country as relevant for sourcing and delivering school food – stable, unpredictable, etc.
Consumers' demand, food preparation practices and preferences	<ul style="list-style-type: none"> ▶ The involvement of the school community – caregivers, school staff and children – in setting school meal preferences. ▶ Capacity for and feasibility of preparing safe and nutritious meals, including food preparation facilities such as refrigeration, ovens and kettles. ▶ Whether the populations in targeted areas value or undervalue certain traditional or other dishes that depend on a specific crop; for example, are certain crops or dishes taboo or subject to social stigma or negative beliefs, such as by being considered "poor people's food", believed to bring bad luck or subject to other perceptions that might inhibit or complicate their use as school food? ▶ Whether the nutritional value, food preparation requirements, consumption habits or other aspects of the dish make it preferable to alternatives for inclusion in a school menu. ▶ Knowledge, attitudes and practices of food service personnel, school staff, caregivers and schoolchildren regarding school food and food preparation.

Programme design should therefore be informed by a realistic assessment of the capacities of the actors involved, which the HGSF programme can depend on, and identification of ways to address potential weaknesses or capacity gaps.

An HGSF programme is rarely designed from nothing, but is normally developed in conjunction with one or more existing school feeding programmes. Realistic HGSF strategies build on and benefit from experience, including experience of the challenges met by an existing school feeding programme. An understanding of the existing school feeding programme(s) in a country, their efficiency and operational capacity and their coherence with the national context and goals will assist in analysing the implications of a proposed HGSF programme, facilitate communication among the actors involved and inform the design of the programme so that it takes into account the challenges and opportunities. Understanding of existing capacities and gaps can also help identify opportunities for partners to support the programme, and provide baseline information that will be important when assessing progress over time towards set goals.

Reviewing capacities at subnational levels for partially or fully handling procurement aspects such as tendering, transportation, storage and financial management will help to identify opportunities for scaling up and decentralizing these aspects of the HGSF programme.

Annex 3 provides an overview of a number of analytical tools that are available to support a comprehensive assessment of school feeding programmes. Some of the tools that are particularly relevant to HGSF are presented in the following sections. The analysis can build on the findings of existing assessments, secondary data and other documents, such as the national school feeding strategy, implementation guidelines and M&E reports. A general assessment of national capacities – or a review of a recent general assessment – is a good start. Additional assessments can be limited to those that are crucial for the programme's design in the given context.

a. General assessment of national school feeding systems

*The Systems Approach for Better Education Results – School Feeding (SABER SF)*⁴⁶ is a global initiative for producing **comparative data and knowledge** on education policies and systems worldwide. The overall objective of the initiative is to help countries **identify the strengths and weaknesses in their school feeding systems**, identify core areas in which to focus investments, and **develop evidence-based national action plans or road maps** for improving school feeding policies, systems and programmes.

SABER SF assesses five dimensions of **national school feeding policies and systems** against agreed policy goals, identifies the main gaps and priorities for action, and can help identify related opportunities and challenges for HGSF. The five dimensions are:

- ▶ **national policy and legal framework** – overarching policies for school feeding that are in line with national-level policy;
- ▶ **financial capacity and stable funding** – sufficient stable funding for the national school feeding programme;
- ▶ **institutional capacity for implementation and coordination** – management and accountability structures with clear mandates, multisector coordination of school feeding and strong institutional frameworks;
- ▶ **design and implementation** – quality assurance of programming, targeting, modalities and the design of needs-based and cost-effective procurement, accompanied by reliable monitoring, reporting and evaluation; and
- ▶ **community participation and the role of other non-state actors** – strong community ownership and participation in programme planning and accountability.

A SABER SF workshop brings together all the major stakeholders involved in school feeding at the national, subnational and local levels. Participants

⁴⁶ Annex 4 provides an overview of SABER SF. Additional information and tools, including the SABER SF framework, rubric, questionnaire and implementation manual, are available at: <https://openknowledge.worldbank.org/handle/10986/26517>

generally include government ministries such as those of education, agriculture, health, finance and social protection, representatives of government at the local level, United Nations agencies including WFP, the World Bank, bilateral donors, private-sector entities, international NGOs and other stakeholders, including community organizations that have a national, regional or local scope.

The workshop helps to generate a shared, general understanding of the current status of and the capacities for school feeding at the national level and to identify and reach agreement on potential major gaps and ways to address them. During this process, the SABER SF analysis may also lead to the identification of specific areas that deserve more in-depth analysis in order to inform the design or scale-up of an HGSF programme (see [Annex 3](#)).

More information on SABER SF is provided in [Annex 4](#). [Annex 5](#) provides a **Guiding list of critical issues to consider for HGSF**.

b. Additional assessments of relevance to HGSF

The following subsections briefly explain some additional assessments that can be of particular interest for HGSF:

- ▶ operational review of programme implementation;
- ▶ mapping of stakeholders involved;
- ▶ cost analysis of existing programmes and of potential future home-grown implementation models; and
- ▶ review of information management and existing monitoring, reporting and evaluation capacities.

In-depth operational review of the efficiency and effectiveness of programme implementation

An operational review assesses the performance of existing programmes, determines existing capacities at the operational level, enhances understanding of specific challenges related to implementation, and explores options for addressing these.

The school environment and available infrastructure may determine the feasibility of HGSF. The introduction of commodities that are procured locally from smallholder farmers often entails a change or adjustment to school feeding modalities and implementation, for instance, diversification of

the food basket through the addition of perishable foods, or decentralization of procurement to the school level. The feasibility of different options at the school and other implementation levels should be assessed, not least to ensure that the programme will not compromise the quality of education, for instance, by encroaching on teaching and recreational space or teachers' time.

The information required for an operational review may be available from programme monitoring reports or from other programme reviews or evaluations. Available information may need to be complemented by specific information obtained through a regional school survey and key informant interviews. Aspects to be covered may include:

- ▶ programme effectiveness – outcomes in terms of educational indicators and other intended and unintended effects, for example on school organization, teaching time, the environment;
- ▶ targeting – relevance and implementation of existing targeting principles, if any, and their effectiveness in minimizing inclusion and exclusion errors;
- ▶ characteristics of school meals – frequency, food basket and food diversity, nutritional content, cost, adequacy and acceptance by schoolchildren;
- ▶ supply mechanisms – level of centralization, actors involved and current sourcing from local smallholder farmers or cooperatives;
- ▶ food management, preparation and distribution – menu preparation, quality control, food hygiene and whether activities are performed by school feeding staff or a third party;
- ▶ efficiency and transparency of financial flows;
- ▶ equipment and infrastructure;
- ▶ compliance with national policies, standards and procedures, and the challenges identified;
- ▶ institutional and human capacities for implementation – in partially or fully handling procurement aspects such as tendering, transportation, storage and financial management and reporting;
- ▶ involvement of the community – men, women and traditional, administrative and other leaders relevant to the community in question; and
- ▶ complementary interventions – frequency and/or quality of, for example, school gardens, deworming, visits of doctors or nurses, health and nutrition education for children and households.

Stakeholder mapping

The purpose of stakeholder mapping is to provide a shared understanding of who the main stakeholders are and how they interact and contribute to the programme. At the outset, the mapping may be aspirational, outlining the stakeholders who would ideally be involved and how they would be involved. This can provide a starting point for establishing communication channels and identifying points in the proposed programme that are particularly important for efficiency, accountability and monitoring purposes. In ensuring efficiency and accountability, stakeholder mapping is useful to the development and implementation of a communication plan for involving stakeholders in programme plans, setting expectations, and identifying flows of funds, goods – fresh, staple and processed foods and voucher transfers – and information on prices, quantities, budgets, reporting, etc. Identifying the stakeholders to be involved and their capacities and relationships can assist in generating political, technical, in-kind financial and other support for the programme, planning capacity building activities, establishing checks and balances on power and avoiding conflicts of interest. If school feeding is embedded in school health and nutrition activities, the mapping can be broadened to include major complementary interventions.

Stakeholder mapping provides a quick overview of government structures in terms of the centralization and decentralization of responsibilities, decision-making authority and budgets at different levels, and roles and responsibilities of different ministries. This information can inform the design of an HGSF programme that is aligned with and builds on these existing structures.

The mapping can also be used to identify partners that could support implementation, provide technical assistance and support capacity development, such as public institutions, civil society organizations, private-sector entities, universities, the media and development partners, including donors.

The roles of different stakeholders may change as a programme unfolds, is implemented and develops. Stakeholder mapping should thus be updated regularly, for example, following publication of a new SABER SF assessment. If kept up to date, the map can serve programme managers as a quick

reminder of all the stakeholders involved. Managers can use the tool at any time to review where things stand with each stakeholder, allowing them to list the date of the last communication, identify where special attention is needed, find gaps or weak links in the programme, and plan for stakeholder involvement in training or planning sessions, advocacy or other joint activities.

Cost analysis

A national cost analysis establishes the total cost and the unit cost per child or meal of a national school feeding programme, the main cost drivers, and opportunities for cost containment. It can also clarify the financial implications of different design and scale-up options, including home-grown approaches. The analysis is based on planned and actual expenditures incurred during one school year, and usually involves data collection at the school level. WFP has developed a standard methodology for conducting national cost analyses in a structured and efficient way. National cost analyses conducted by WFP for interested governments have informed policy dialogue in several countries, most recently in Rwanda and Zambia.

Information management and monitoring, reporting and evaluation systems, and related capacities

A review of the information management and monitoring, reporting and evaluation systems of a national school feeding programme can inform future adjustments to incorporate the processes, outputs and outcomes related to HGSF and to improve overall programme quality and accountability.⁴⁷ The review usually asks: Which information does the national monitoring system look for? Which tools does the system foresee for gathering and conveying information? Does the system provide access to up-to-date, complete and reliable, meaningful information? and How is the information generated used in programme management, documentation of results and learning?

Baseline surveys collect data prior to, or in the earliest phases of, programme implementation in order to identify a starting level against which

⁴⁷ A number of tools are available to support the assessment of national monitoring, reporting and evaluation systems: PCD, 2011; WFP, forthcoming.

future measurements can be compared for all indicators of interest. Baseline data are used for setting targets, measuring changes in outcomes over time, comparing developments before and after changes are introduced, and enabling project managers to undertake programme planning and decision-making.

For some indicators, the baselines required for a future HGSF programme can be established in advance through context analysis, operational review and cost analysis. For others, specific baselines will have to be established as a point of departure for a (potentially revised) monitoring system (see [Module 4](#)).

MODULE 3

DESIGN AND IMPLEMENTATION OF HOME-GROWN SCHOOL FEEDING



This module starts with a short section on the merits and potential contents of an operational strategy for HGSF. The following sections focus on elements that are of specific interest to HGSF.

3.1

OPERATIONAL STRATEGY

An operational strategy translates the outcomes of assessments and discussions into clear goals, objectives and institutional and implementation arrangements for a programme with the aim of maximizing the programme's benefits while maintaining costs and risks at manageable levels. Not only is such a strategy critical for the efficiency and sustainability of the programme, but it will also justify the choices of operational models for achieving the intended objectives. In brief, a strategy outlines **where the country stands** regarding its national school feeding programme, **where it wants to be with HGSF and how it plans to get there**. The development of an operational strategy for HGSF facilitates consistent and coordinated engagement under government leadership and helps secure adequate financial and human resources. It also forms the basis for promoting partnerships among private, public and civil groups.

By making fundamental decisions with respect to the programme, an operational strategy determines the extent to which the programme is:

- ▶ responsive to the needs of the population;
- ▶ feasible in terms of capacities and resources;
- ▶ aligned with the policy directions and

- ▶ strategies of the government – particularly in the areas of education, social protection, health and nutrition, and agriculture; and
- ▶ implemented efficiently, with a realistic view of how to obtain adequate financial resources in the short and long terms, and how to involve, and build, adequate and robust operational capacities.

An inclusive and credible strategy will facilitate the participation of policy-makers and practitioners from different sectors and communities. The development and recurrent adaptation of an HGSF operational strategy is an iterative and flexible process: the programme should be reviewed – and, if required, revised – regularly on the basis of monitoring data and different assessments and evaluations in order to optimize its performance, scale and sustainability. In many countries, the transition to HGSF and the definition of the operational strategy are integral parts of the transition to national ownership. In addition, HGSF rarely starts from nothing, but is normally developed incrementally building on one or more existing programmes or pilots (Box 12).

The exact structure and content of an operational HGSF strategy will differ from context to context. The strategy can be integrated into broader strategic documents and policies for school feeding, but it may also be a stand-alone instrument, or it may start as a separate document to support a specific work stream that is then progressively mainstreamed into the national strategy for school feeding and other legal and policy instruments.

BOX 12

KENYA'S WAY TOWARDS AN HGSF STRATEGY

In Kenya in 2009, the Government moved about half (540 000) of the 1.2 million children benefiting from WFP's food-based school feeding programme to a new, national HGSF programme based on cash transfers to schools, where dedicated school meal committees procure food from local farmers or traders. The school feeding programme's food basket, targeting of schools and monitoring system remained the same. Each year after that, the HGSF programme has taken over an additional 50 000 children in schools in semi-arid districts, while WFP supported the Government in developing its capacities for implementing the national school feeding programme. In 2013, WFP and the Government commissioned the development of a strategy for expanding the national school feeding programme into arid lands, where market conditions and local production are more difficult than they are in semi-arid areas. As part of this strategy, WFP switched its own school feeding modality to the "cash to schools" model, prepared schools and committees for their future tasks and made the transition smoother. In 2016, work began on a new HGSF strategy to increase the programme's integration into social protection and enhance its benefits and sustainability, with support from development partners and making use of South-South cooperation and technical support from the WFP Centre of Excellence against Hunger in Brazil. The strategy was validated and approved by three ministries – education, health and agriculture – in July 2017.

Regardless of its form, an operational strategy should include a number of generic elements:

- ▶ **Strategic goals and core objectives of HGSF in the country** – the rationale for introducing or expanding HGSF, and specific objectives for new procurement and implementation approaches.
- ▶ **Policy coherence and alignment:** How will HGSF be integrated into different relevant sector policies and strategies, such as for education, health, agriculture, social protection, development of small and medium enterprises, etc.? Agricultural and rural development policies or programmes have a strong influence on food availability, the development of production potential and the setting of food-related standards. Policy coherence between agriculture and rural development on the one hand and the HGSF programme on the other is key for the geographic and sector convergence that provide the basis from which relevant stakeholders can provide specific support to value chains, agriculture and rural development in a comprehensive and complementary way. Nutrition, education and social protection policies also set priorities for the country, and school feeding strategies should be reflected in these while themselves making explicit the role of school feeding in pursuing the priorities of different sectors. An HGSF strategy should therefore identify which of the policies and initiatives that are already in place cover the food products, intended target groups and/or geographic areas of a potential HGSF programme, and where relevant should make provisions for dialogue on specific recommendations regarding policy updates to ensure that there is sufficient policy space to accommodate the programme. Where a relevant policy is under revision, the design of an HGSF programme can be an entry point for enhancing policy coherence and complementarity to maximize benefits for the HGSF programme as well as other sectors. For example, in the medium to long term, agricultural and rural development policies can be designed to support the food products, producers and value chains in priority geographic regions identified for the school feeding programme, nutrition policies can explicitly include school feeding

among the key strategies for promoting dietary diversity and healthy eating habits, and social protection policies can include school feeding as one of the national safety nets, ideally a shock-responsive one, for enhancing access to food for vulnerable children and their households.

- ▶ **Operational targets and, where relevant, scale-up approach:** The strategy can identify operational targets and activities that will facilitate the achievement of programme goals. Where a sequenced approach is envisioned – for example, initially targeting areas with surplus production, supplying only part of the food basket from smallholders, or implementing a small-scale project to test new modalities – the strategy can lay out core steps and milestones for gradual scale-up.
- ▶ **Guiding principles for programme design, implementation, monitoring and evaluation:** Guiding principles draw on assessments of ongoing school feeding programmes – providing information on the extent they provide a good basis for HGSF and on any adaptations that are required – and food system analysis for design aspects such as the food basket, including where applicable reference to nutrition standards and guidelines, and the operating models that link school feeding demand to local food production. The strategy should define priorities, areas where different crops and operating models present the need for trade-offs and links to complementary programmes and activities. The strategy may include the development of detailed programme implementation procedures and guidelines. This resource framework focuses on two aspects of programme design for HGSF:
 - **Linking smallholder farmers to school feeding supply** requires the planning of *pro-smallholder procurement processes*, a *communication strategy* for informing farmers about programme requirements and their potential involvement in the programme, and *actions* required by the ministry of agriculture and partners to *support production*.
 - **Nutrition-sensitive interventions** to be considered, such as: i) promoting well-balanced, nutritious food baskets – including for example the development of

nutrition guidelines and standards for school meals – food safety and quality measures, food and nutrition education, and attention to sanitation and hygiene measures; ii) using school feeding as a platform for delivering services to complement nutrition activities, such as deworming and access and referrals to health services; and iii) targeting other groups whose nutrition status is at risk, such as adolescents and pre-school-aged children. Complementary programmes promoting smallholder farmers' nutrition-sensitive agriculture can play an important role.

- In addition, the strategy could include an **outline for a M&E system**, defining the monitoring and reporting needs, and **baselines**, at least for outcome-level information obtained through context and food system analysis, to measure progress.
- ▶ **Coordination and management:** The strategy lays out how the sectors and ministries involved in the HGSF programme will coordinate their cooperation. It also outlines how the programme will be managed, including the institutional role of a central body responsible for programme design and capacity strengthening, the management of programme implementation and monitoring and, not least, accountability mechanisms.
- ▶ **Resources:** The strategy should also define how to ensure regular funding of the recurrent costs of managing the HGSF programme and related activities, and identify short-, medium- and long- term budgetary and fundraising strategies.

Building consensus and developing a comprehensive strategy in a participatory way takes time and often requires specific studies. A logical first step may be a short-term plan, agreed on by the main national stakeholders and defining the vision for HGSF and the steps required to link school feeding to local food production, or to identify appropriate implementation models from which to develop a comprehensive strategy.

3.2

OBJECTIVES OF AN HGSF PROGRAMME

The objectives of an HGSF programme depend on the needs of the population and the opportunities

identified. Objectives need to be realistic and to consider potential trade-offs. Where trade-offs are identified, it must be clear how these are to be prioritized.

Programme objectives will be oriented towards satisfying the identified needs of the different target groups (see [Module 2: Context analysis](#)) and achieving the different benefits that HGSF can have in areas such as nutrition and health, education, social protection, agriculture, local economic development and climate change adaptation, for different target groups – children, households, women, farmers, processors, traders, communities, etc. (see [Module 1](#)). The strategy will identify which of the potential benefits of HGSF the programme will actually pursue. To achieve programme objectives, it is crucial to build complementarity across all the sectors concerned, particularly among existing social protection and development programmes.

Clearly defined objectives are fundamental for:

- ▶ rallying cross-sector support by showing the potential benefits that the programme will generate for each sector;
- ▶ justifying requests for potential amendments of existing policies, strategies and programmes;
- ▶ justifying the allocation of adequate resources to the programme; and
- ▶ identifying appropriate indicators for monitoring in order to ensure credible documentation of the extent to which the assumed benefits of the programme are actually generated.

3.3

DESIGNING SCHOOL MEAL MENUS

The design of menus is one of the most important steps when embarking on the design of an HGSF programme because the food to be provided to and consumed by beneficiaries determines to a large extent the extent to which the programme will be able to achieve its objectives.⁴⁸

⁴⁸ Most developed countries design school meal menus with the involvement of all the stakeholders in the school community, including school principals, teachers, parent-teacher associations, student representatives and food service personnel. Quarterly meetings are normally held to see what foods are in season and to design menus, usually with the support of a nutritionist. These meetings can be held to design the menus for all the schools in a town or district or for a single school. The advantage of this method is that it enhances the uptake of the meals.

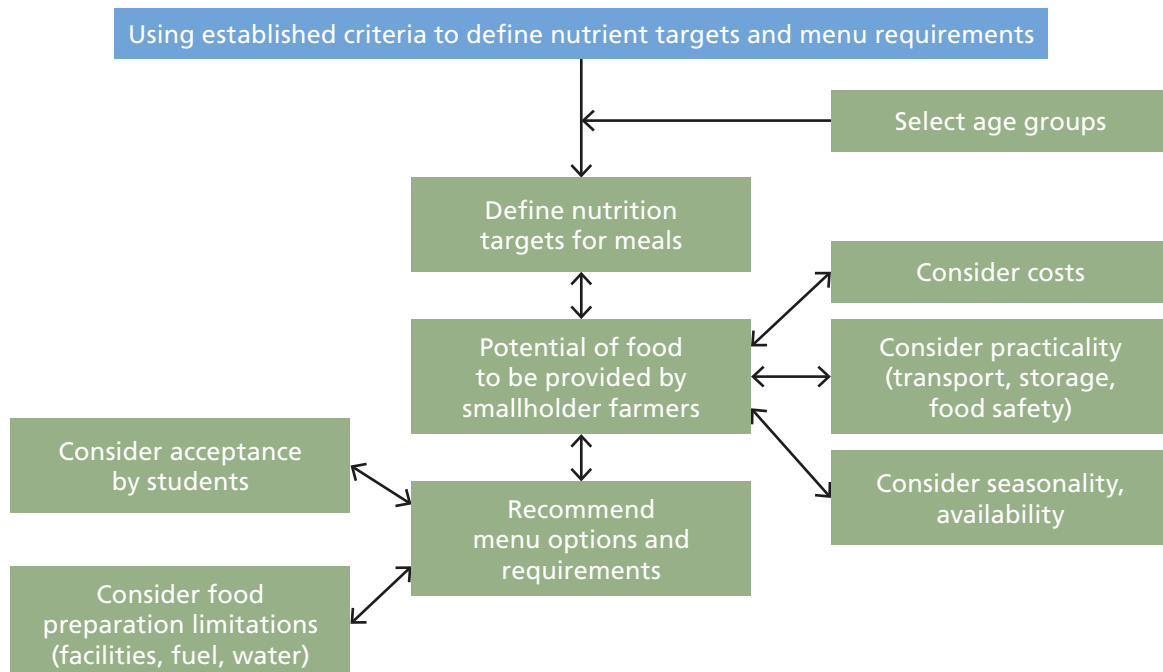
An HGSF strategy can design menus in various ways:

- ▶ A fixed menu – or a set of menus based on, for example, regional food availability and preferences – can be determined centrally, prescribing exactly which foods and preparations are to be used each day, or at least on a set number of days per week or month. This model is very simple, but leaves very little flexibility to respond to seasonal availability or price fluctuations, and may also limit the diversity of school meals or the consideration of local habits and preferences.
- ▶ A strategy can also decide to define food baskets, prescribing how many times approximate quantities of specific food groups have to be served per day, week or month. This model provides more flexibility, for example, to reflect local preferences and opportunities, but makes it more difficult to compare the actual menus of schools in different regions. The model also requires local capacity to design the menus.

An HGSF strategy can adapt and combine these models as appropriate to the specific context, depending on factors that include, among others, the nutrition needs of target children, taking into account any changes in priorities in different contexts; regional differences in terms of prices, availability, local preferences, etc.; the availability of technical capacities and training schemes for meal planning; and the desired degree of flexibility. Whichever model is chosen, it should allow for diet diversity, regional and seasonal differences, and logical substitutions as may be necessary.

Programme designers have to consider a number of criteria when developing menus. These depend primarily on the identified objectives of the programme: To which extent does a menu or the inclusion of a certain kind of food promote the achievement of these objectives? As programme objectives can be many and will vary according to local, seasonal and other conditions, it is possible to have many criteria. However, several core criteria should be considered for any HGSF programme.

FIGURE 4 Basic considerations for designing school meal menus



Source: adapted from IOM (Institute of Medicine). 2010. *School Meals: Building Blocks for Healthy Children*.

These include:

- ▶ the nutrition requirements of target beneficiaries;
- ▶ food consumption patterns and traditions that help to determine the acceptability of foods by the targeted children and their parents;
- ▶ existing national food-based dietary guidelines;
- ▶ existing and potential foods produced by men and women smallholder farmers;
- ▶ seasonality;
- ▶ prices;
- ▶ storage and handling requirements;
- ▶ vulnerability to safety and quality issues; and
- ▶ preparation challenges.

A healthy and balanced diet should provide diverse food in the right amounts and combinations and that is safe and free from pathogenic germs and harmful substances. The process of planning school meal menus involves assessing the nutrition requirements of the target group – school-aged children in specific areas; setting recommended nutrient targets, or ranges, to be fulfilled by the school meals; and developing patterns or combinations of food groups – taking into consideration food composition issues – that can achieve these targets as a basis for defining the menus.⁴⁹ The second step for HGSP involves establishing the extent to which different foods can currently or potentially be provided by smallholders to fulfil these requirements. Candidate foods can then be assessed against the criteria listed above.

a. Nutrition targets for school meals

Ideally, the nutrition status of school-aged children is assessed during the preparatory phase ([Module 2: Context analysis](#)) to provide information on levels of undernutrition, overweight and obesity, prevalence of micronutrient deficiencies, etc. For a school feeding programme to address these needs effectively, the food it provides must satisfy certain nutritional requirements.

National nutrition guidelines for school meals

When national nutrition guidelines that advise on the composition of school meals are available, menu planning should follow them. Such guidelines can include a set of rules, principles or recommendations

regarding the dietary components (food groups) and nutrients that are required to increase the potential of school meals to meet the nutrition needs of targeted children. Ideally, when targeting healthy schoolchildren, these guidelines should also be coherent and consistent with the food groups and recommendations embodied in national food-based dietary guidelines (FBDGs).⁵⁰

Many countries have developed national nutrition guidelines for school meals with the purpose of:

- ▶ providing advice on healthy diversified food for school meals;
- ▶ ensuring food safety in handling, storage and preparation; and
- ▶ helping to reduce health inequalities.

Such guidelines are based on dietary principles and provide advice on the quality and quantity of foods and drinks recommended for respective age groups of children, ideally by region, in order to achieve optimal health and limit the risk of diseases related to malnutrition.

The guidelines should be formulated by the government, involving policy-makers from relevant sectors, and school and health professionals including nutritionists, dieticians, general practitioners, educators and other interested parties. They should provide information on:

- ▶ how to plan a school meal – how to define the food basket;
- ▶ how to plan menus for healthy and nutritious meals;
- ▶ how to identify the types of food that are required;
- ▶ how to determine the food quantities required;
- ▶ how to satisfy local taste preferences and incorporate locally available foods; and
- ▶ how to provide the intended levels of nutrients, through food selection, fortification or supplementation.

⁴⁹ FAO (forthcoming).

⁵⁰ Development of food-based dietary guidelines entails a rigorous process to provide context-specific advice and principles on healthy diets and lifestyles that are based on sound evidence and reflect public health and nutrition priorities, food production and consumption patterns, socio-cultural influences, food composition data and food accessibility, among other factors.

Countries that include Côte d'Ivoire⁵¹ and Tajikistan⁵² (see **Box 13**), the Kyrgyz Republic and Malawi have developed cook books that translate nutrition guidelines into accessible guidance on how to provide healthy and balanced school meals.

In the absence of national dietary guidelines

Where national dietary guidelines do not yet exist, or an assessment reveals that existing guidelines require revision, technical partners and South–South and triangular cooperation may be sources of support to help governments develop guidelines that can adequately direct the school feeding programme.⁵³

School meals should provide an adequate proportion of the nutrition requirements of schoolchildren according to the averages for their age groups. As well as the required macronutrients – energy, protein and fat – micronutrient requirements must also be considered. Micronutrients comprise vitamins and minerals, three of which are of particular public health concern for children in developing countries: iron, iodine and vitamin A. Prevalence of anaemia, which is often caused by iron deficiency, can be used as a proxy for overall micronutrient deficiencies.⁵⁴

In settings with specific dietary or nutrition issues – for example, where the local diet is poor in micronutrients and micronutrient deficiencies are a concern, or where levels of overweight and obesity are high – school meals can be designed specifically to address them.

BOX 13

EXAMPLES OF SCHOOL FEEDING MENU BOOKS

Nutritious menus in Côte d'Ivoire

WFP contributed to the development of a compilation of menus using local commodities in line with the home-grown sustainability strategy. The compilation proposes 29 balanced nutritious menus that respect communities' food habits and would provide at least 40 percent of the protein and energy needs of school-aged children. It serves as a reference guide providing information on and training in nutrition and food hygiene for school canteen stakeholders – advisers and managers of school canteens, teachers, school cooks and the communities served by school canteens.

Price-winning cookbook in Tajikistan

In 2016, WFP developed and published a cookbook as part of its school feeding programme in collaboration with Tajikistan's Ministry of Health and Social Protection and Ministry of Education and Science and the Social and Industrial Foodservice Institute, an NGO based in the Russian Federation.

The 202-page book is a collection of 127 traditional Tajik recipes, which are used by schools that participate in the WFP school feeding programme. The dishes aim to provide children with a varied and healthy diet and take into consideration local traditions and the availability of simple and affordable ingredients.

"We could tell that children loved the school lunches," said Alibek Nasridinov, director of a school in Rasht District. "Parents have come in to ask what food is being served at lunch, as their children are asking them to cook the same dishes at home!"

The recipe book was proclaimed as the "Best in the World" in the food safety category at the Gourmand World Cookbook Awards, held in Yantai, China in May 2017.

⁵¹ Côte d'Ivoire Ministère de l'Éducation Nationale et de l'Enseignement Technique and WFP, 2016.

⁵² Tajikistan Ministry of Health and Social Protection, Ministry of Education and Science, WFP and Social and Industrial Foodservice Institute, 2015.

⁵³ Guidance is also provided by the World Health Organization (WHO) regional office for Europe and the French Ministry of Agriculture, among others. However, HGSP planners should be aware that these documents were developed for Europe and France, respectively, and that the needs and contexts for most HGSP programmes will be very different. International or national guidance may be biased towards high-income countries and the foods available there, and may have to be complemented by tables on the foods available in lower- and middle-income countries. WHO Europe guidance can be found at: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf?ua=1; guidance developed by the French Ministry of Agriculture is available at: http://agriculture.gouv.fr/sites/minagri/files/1506-al-gui-restauecoll-bd_0.pdf; <http://agriculture.gouv.fr/ministere/guide-favoriser-lapprovisionnement-local-et-de-qualite-en-restauration-collective>; and http://agriculture.gouv.fr/sites/minagri/files/syntheserestauecoll-bd_cle4e111f.pdf. A toolbox is available at: <http://agriculture.gouv.fr/localim-la-boite-outils-des-acheteurs-publics-de-restauration-collective>

⁵⁴ United States Agency for International Development (USAID) MEASURE Evaluation project: https://www.measureevaluation.org/prh/rh_indicators/womens-health/womens-nutrition/percent-of-women-of-reproductive-age-with-anemia

When setting the nutrient targets for meals, it is therefore important to consider the prevailing micronutrient deficiencies in target groups. Where such deficiencies are high⁵⁵ and are difficult to address year-round with locally available foods, HGFS planners could consider the temporary provision of micronutrient powders, multi-fortified commodities, dairy products or biofortified foods, as feasible, particularly in the initial phases of a school feeding programme.⁵⁶

The following tables provide an overview of recommended daily intakes⁵⁷ of energy, protein and fat (Table 2) and micronutrients (Table 3) for school-aged children and adolescents, by age group and sex.⁵⁸

As well as the nutrition requirements of relevant age groups, the nutrient targets set for school meals should also take into consideration prevailing food consumption patterns if data are available, school modalities and programmatic considerations, including available resources. Table 4 provides general estimates of macro- and micronutrient requirements during the school day, assuming that the remainder of requirements will be covered at home. If the context analysis indicates that there is a high probability of the target groups receiving fewer than the required nutrients at home, the share to be provided by school feeding should be adjusted accordingly. The local context needs to be taken into account, including the time spent and the distance covered between home and school. Dialogue with parents is important for checking underlying assumptions regarding what food children receive at home. The timing of meals is also important, particularly where children come to school without breakfast.

Programme designers also have to determine the quantities of each of the candidate foods that will be required for meals to reach the targets

⁵⁵ For example, anaemia prevalence of more than 40 percent among school-aged children is considered “high” in the Sphere handbook: <http://www.spherehandbook.org/en/appendix-15/>

⁵⁶ For more details, see Sidaner, Balaban and Burlandy, 2012.

⁵⁷ The recommended nutrient intake is the daily intake that meets the nutrient requirements of almost all – 97.5 percent – apparently healthy individuals in an age and sex group.

⁵⁸ These estimates have to be read with caution, as actual requirements vary by geographic region and the age spans used (such as 6–12 years) are very wide.

established for the provision of different macro- and micronutrients.

When determining the foods and food combinations to include in setting the nutrient targets for school meal menus, dietary diversity considerations should be prioritized. School meals should aim to incorporate a variety of foods from essential food groups in accordance with the main nutrition priorities of target beneficiaries. Food groups often differ among countries and include foods that are specific to the context, in terms of availability, consumption patterns, traditions, etc., or food groups that are of particular interest to the country, hence the need to refer to national food-based dietary guidelines and food composition tables for menu planning. This is of particular interest for HGFS as it allows programmes to make use of a variety of nutritious, locally available and sometimes underutilized foods.

To ensure dietary diversity, different foods from ideally **at least four food groups** should be combined. Any need to substitute different foods from the same food group in response to seasonal or other variations in the availability of local foods also needs to be defined early. Increasing dietary diversity, particularly by integrating fresh products such as fruits and vegetables, is a good way to improve children’s nutrition status because it increases intakes of a wider range of nutrients, including essential micronutrients. Fruits, vegetables, legumes and animal-source foods such as milk and eggs can be of relevance for improving the nutritional quality of meals. If specific foods are to be promoted, for example fruits and vegetables that are rich in vitamin A, potential subgroups of these foods can also be considered when defining guidelines for menu planning.

The following food groups should be taken into account:⁵⁹

- ▶ staple foods – grains such as maize, sorghum and wheat, tubers such as yams, and roots such as potatoes;
- ▶ legumes, oilseeds and nuts;
- ▶ animal-source foods, such as milk and yoghurt, meat, poultry and fish/shellfish;
- ▶ fats and oils; and
- ▶ vegetables and fruits.

⁵⁹ Adapted from FAO, 2013b.

TABLE 2
Estimated required daily energy and macronutrient intakes for schoolchildren and adolescents

Education level	Age (years)	Daily energy requirements (kcal)		Daily energy and macronutrient requirements – boys and girls		
		Boys	Girls	Energy* (kcal)	Protein (10–15% of energy) (g)	Fat (15–30% of energy) (g)
Pre-primary	3–6	1 360	1 240	1 300	33–49	22–43
Primary	6–12	1 930	1 780	1 850	46–69	35–62
Lower secondary	12–16	2 870	2 400	2 600	65–98	44–88

* Average of daily requirements for boys and girls.

Source: adapted from FAO, 2001; Bhatia, 2013.

TABLE 3
Estimated daily micronutrient requirements for children and adolescents

Age (years)	Micronutrient requirements for boys and girls*				
	Vitamin A (µg RE) ^[a]	Iron, based on bioavailability (mg)		Iodine (µg)	Calcium (mg)
		Low ^[b]	Very low ^[c]		
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	1 20 ^[f]	700
10–16	600	31.9 ^[d]	63.7 ^[d]	1 50 ^[g]	1 300
		16.7 ^[e]	33.4 ^[e]		

* Average of requirements for boys and girls.

^[a] µg RE = µg equivalent retinol; 1 mg retinol = 1 RE.

^[b] Bioavailability of 10 percent in developing countries.

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

^[d] Girls aged 11–17 years.

^[e] Boys aged 11–17 years.

^[f] Boys and girls aged 6–12 years.

^[g] Boys and girls aged 13–18 years.

Source: adapted from FAO/WHO, 2004.

TABLE 4
General proportions of macro- and micronutrient requirements during the school day

Time spent at school	Share of total daily nutrient requirements (%) [*]
Half day	30–45
Full day	60–75
Boarding	100

* All school menus with an nutrition-sensitive objective should provide healthy diversified foods.

Source: adapted from WFP, 2000; Bhatia, 2013.

TABLE 5
Examples of food grouping

Group	Examples of foods and food products
Grains, roots and tubers	Grains: amaranth, barley, buckwheat, maize, kamut, millet, oats, quinoa, rice, rye, sorghum, spelt, teff, wheat Breads and flatbreads, flours, pasta, porridge Roots and tubers: arrowroot, breadfruits, cassava, oca, parsnips, plantains, potatoes, sweet potatoes, taro roots, turnips and yams
Legumes	Bambara beans, broad beans (fava, field), chickpeas (garbanzo), common beans (black, kidney, pinto), cowpeas, lentils, lima beans, lupins, peas, pigeon peas, and soybean/soybean products or other legume products
Nuts and seeds	Nuts: almonds, Brazil nuts, cashews, chestnuts, hazelnuts, macadamia nuts, peanuts/groundnuts, pecans, pistachios and walnuts Seeds: chia, flaxseeds, pine nuts, pumpkin seeds, sesame seeds and sunflower seeds
Dairy	Liquid and solid dairy products from cows, goats, buffaloes, sheep or camels. Tinned, powdered or liquid milk, soft and hard cheeses, yoghurt and kefir
Meat, poultry, fish and eggs	Eggs, meats, organ meats, poultry and other birds, fresh and dried fish and seafood/shellfish
Vegetables	Artichokes, asparagus, beets, Brussels sprouts, cabbages, carrots, cauliflowers, celery, chayote, cucumbers, eggplant, fennel, green leafy vegetables (Chinese cabbage, romaine and bibb lettuce, and darker greens such as cassava, bean, pumpkin, amaranth and other leaves), green peppers, jicama, leeks, lettuces, mushrooms, okra, onions, palm, pumpkins, radishes, red peppers, squashes, sweet corn, tomatoes and zucchini
Fruits	Acerola, apples, apricots, avocados, bananas, baobab fruit, blackberries, black currants, cactus pears, cantaloupes, cherries, cranberries, dates (fresh and dried), elderberries, figs, grapefruits, grapes, guava, honeydew melons, jackfruit, kiwis, lemons, limes, mandarins, mangoes, mulberries, nectarines, oranges, papaya, passion fruits, peaches, pears, pineapples, pitanga, plums, pomegranates, prunes, quinces, rambutan, raspberries, star fruits, strawberries, tamarind, tangerines and watermelons
Oils and fats	Butter, cream, ghee, lard, margarine, mayonnaise, cream, vegetable, fruit, nut or seed oils (canola, coconut, palm-nut, cottonseed, groundnut, maize, olive, rapeseed, safflower, sesame, soybean, sunflower and walnut)

Table 5 provides examples of food grouping.⁶⁰ The amounts and types of food groups actually served can also function as an indicator for monitoring meal adequacy.

FAO hosts a global repository of national food-based dietary guidelines with examples of different food groupings.⁶¹

Several organizations have developed tools that could be helpful for composing different menu options. The most relevant tools for HGSF programmes include:

- ▶ NutVal;
- ▶ the school meals planner;
- ▶ cost-of-diet analysis;
- ▶ Optifood; and
- ▶ food composition tables.

Annex 6 provides more details of these tools. It should be noted, however, that none of these tools are yet able to answer all of the questions that HGSF planners might have. The partners involved in developing this resource framework are reviewing existing tools and developing new ones that facilitate, for example, greater inclusion of more local foods.

⁶⁰ The examples are only illustrative and the lists are not exhaustive. They therefore do not reflect the great variety of foods that are available and locally produced in the different contexts of HGSF programmes, emphasizing the need to use national or local food groupings and food composition tables.

⁶¹ FAO's food-based dietary guidelines are available at: <http://www.fao.org/nutrition/education/food-dietary-guidelines/home/en/>

BOX 14

THE POTENTIAL ROLES OF SPECIALIZED NUTRITIOUS FOODS

The use of specialized nutritious foods can support local processing industries and be tailored to local nutrition needs. In Latin America and the Caribbean, for instance, many countries include locally produced multi-fortified foods such as cereal blends, cereal bars or drinks. In recent years, countries have paid particular attention to enhancing the quality of the snacks provided in schools and controlling their sugar and fat contents. Where challenges arise, such as potential cost increases or the additional burden of quality control, they should be addressed through additional capacity strengthening activities, which could include providing technical support to factories – for example, by seconding food technologists – to improve production quality and nutrient availability; supporting farmers in improving the quality of raw materials; or providing technical support to laboratories and public or private supervisory entities to strengthen their quality control capacity.

Notes: For example, increasing the nutritional quality of food crops – also known as “biofortification” – can increase the nutritional content of the final products. The possibilities for local fortification using, for example, Moringa can also be explored.

b. Existing and potential smallholder food production

The food system assessment (Module 2) establishes the quantities of foods that could be suitable for school meals and that smallholders currently (or potentially) can provide. These quantities should be compared with the quantities required for an HGSF programme.

The requirements for an HGSF programme can be calculated easily from the menus designed for school meals by multiplying the quantities of foods included in each menu by the number of days during the year when the menu will be served and the number of schoolchildren who will receive it.

This comparison will show whether food purchases from local smallholders can satisfy programme requirements throughout the school year.

To maximize the economic and development benefits for local smallholder farmers, processors and communities, the food for HGSF should be bought to the greatest extent possible from smallholders living as close to the schools as possible. For a several reasons, however, it is rarely possible to procure food exclusively from smallholders. Even if only a percentage of food is purchased from local smallholder farmers and other local stakeholders along the value chain, a school feeding programme can be considered as “home grown”, provided that the local purchases are designed to support and boost the local agricultural market. The HGSF operational strategy can establish a target percentage of food that has

to be purchased from smallholders,⁶² and increase this percentage as the potential of smallholders to supply school meals increases.

If the programme aims to address, for example, specific micronutrient deficiencies in an area, programme designers should consider a combination of healthy and diverse foods that may or may not be complemented by micronutrient powders or specialized nutritious foods to help address logistics and nutrition challenges.⁶³

An HGSF programme must be able to rely on procurement contracts being fulfilled and food being delivered as agreed so that meals can be provided as planned. Programme designers should therefore be cautious when determining the share of food that has to be purchased from smallholders. Programme planners have the following options:

⁶² For example, Brazil’s public food procurement requires that at least 30 percent of school food be purchased from family (smallholder) farms.

⁶³ Specialized nutritious foods for HGSF could include locally produced milk- or cereal-based multi-fortified drinks, multi-fortified blended flours and multi-fortified biscuits, fruit bars, etc., as well as fortified staples such as the fortified rice used in Bangladesh, locally produced SuperCereal or fortified corn-soya-blend. It should be noted, however, that various types of food have the advantage of providing nutrients in an integral form that might have a higher absorption rate and greater bioavailability than isolated nutrients provided through nutrition supplements. Fresh fruits and vegetables are particularly beneficial because of the wide array of compounds that they contain (Jacobs, Tapsell and Temple, 2011. Dietary supplements containing isolated vitamins or minerals do not appear to have the same beneficial effects (FAO, 2011).

- ▶ Making realistic plans based on existing and potential production capacity: Programme designers can aim to start with a smallholder procurement share that is clearly less than the amount of food that can realistically be provided by smallholders. In addition, to ensure continuous provision of school meals, HGSF programmes should be designed to include a range of flexible strategies that vary by location and the production capacity of farmers and that can be activated in case of the disruption of smallholder supplies because of safety or quality concerns, for example, or environmental events such as droughts.
- ▶ Following a gradual approach that starts with procuring only modest amounts of food from smallholders: This gives smallholders time to benefit from their contracts and make investments in increasing crop production, productivity and diversity, improving quality and reducing losses. For example, expecting local smallholder farmers to provide fresh products for only a limited number of days per week or only during certain seasons can be a solution. Such plans can be reassessed and the portions purchased from smallholders can be increased as the farmers' capacity grows.
- ▶ Connecting farmers with the potential to increase their production to complementary activities along relevant value chains, such as agricultural development projects, local processing and productive safety nets.

When determining the kinds and quantities of food to be bought from smallholder producers, programme designers should keep in mind several factors that are beyond the production capacity of smallholder farmers.

Programme costs are important for all school feeding programmes. The use of food provided by smallholders food should not be allowed to result in programme costs increasing to a level where the programme becomes unaffordable and unsustainable. Any increase in programme costs should be more than compensated for by the additional benefits of involving smallholders. Where different foods achieve the same objectives in the same way, the cheaper one is preferable. However, where a somewhat more expensive menu may be able to achieve programme objectives to a

far higher degree, designers will have to consider whether this makes the menu more cost-effective and thus preferable. The guiding principles of the HGSF strategy should help with such decisions.

Practicality: In principle, the easier it is to transport a certain food to schools, store it and prepare it, the more suited that food is for an HGSF programme. Another issue to take into account is that some foods are more susceptible to contamination, for example by aflatoxins, than others. However, other considerations may warrant the inclusion of food that is more difficult to handle. For example, nutrition considerations, local food preferences and the desire to provide diverse food and promote healthy dietary habits can indicate the use of fresh, perishable foods such as fruits, vegetables, milk, eggs, fish, meat and poultry. In these cases, adequate forms of food preservation, such as drying, canning, freezing or refrigeration the foods, and/or daily or weekly food deliveries and storage that are appropriate to the school's situation have to be found.

Different meals can be designed to fulfil nutritional requirements while providing access to markets for smallholder producers to the extent possible. As well as considering the many combinations that are possible, based on the selection and quantities of different foods to be used, project designers should also apply a number of additional criteria to select menus to recommend for the programme.

When the recommended meals have been identified, project designers can opt to develop a cookery book (see [Box 13](#)) and training that provide detailed guidance for cooks and caterers on how to prepare the meals. Programme monitoring should pay attention to the acceptance and consumption of the meals, and suggest potential amendments when necessary.

3.4

FOOD SAFETY AND QUALITY

Food safety refers to the absence, or presence at acceptable levels, of microbiological, chemical or physical hazards in food in order to minimize risks to the health of final consumers. Hazards result from the presence of agents in, or the condition of, food that has the potential to cause an adverse health effect ([Table 6](#)). Food safety is the most important component of food quality because a

BOX 15 BIHAR SCHOOL MEAL POISONING INCIDENT

The Midday Meal Scheme provides free lunch to about 120 million children throughout India, making it the world's largest school lunch programme. It aims to fight widespread poverty and improve children's school attendance and health. On 16 July 2013, at least 23 students died and dozens more fell ill at a primary school in the village of Dharmashati Gandaman in Saran District of the State of Bihar after eating a midday meal contaminated with pesticide. Subsequently, the Government of Bihar took a series of steps to prevent any recurrence of such incidents.

Source: https://en.wikipedia.org/wiki/Bihar_school_meal_poisoning_incident

TABLE 6
Examples of hazards that may occur in food

Biological hazards	Chemical hazards	Physical hazards
Infectious bacteria: <ul style="list-style-type: none"> ▶ <i>Salmonella</i> ▶ <i>Escherichia coli</i> ▶ <i>Listeria</i> ▶ <i>Vibrio</i> Toxin-producing organisms: <ul style="list-style-type: none"> ▶ <i>Clostridium botulinum</i> ▶ <i>Staphylococcus aureus</i> ▶ <i>Bacillus cereus</i> Moulds Parasites Viruses Prions	<ul style="list-style-type: none"> ▶ Naturally occurring toxins such as cyanides in raw cassava and almonds ▶ Food additives ▶ Pesticide and herbicide residues ▶ Veterinary drug residues ▶ Toxins of microbial origin such as aflatoxin (see Box 16) ▶ Allergens ▶ Chemical contaminants ▶ Environmental contaminants 	<ul style="list-style-type: none"> ▶ Glass ▶ Plastic ▶ Metal, machine fillings ▶ Wood ▶ Stones ▶ Bone chips ▶ Personal articles such as jewellery, ear plugs, etc.

lack of safety can result in serious injury or even death of the consumer of a product. If the food is not safe, good nutrition cannot be achieved.

Food quality refers to the characteristics that influence a product's value to the consumer. In the context of school meals, nutritional quality is a key attribute in achieving nutrition outcomes. Other quality attributes pertain to palatability, such as taste, flavour, texture and colour, which can have positive or negative effects on consumers' (students') desire to consume the foods provided in school feeding programmes. A re-emerging area of concern to food regulators is the fraudulent and deceptive practices that may be applied in value chains in order to deceive consumers for the purposes of economic gain, for example, the addition of water to milk or the use of colorants to disguise the low quality of food.

The production, processing, distribution, retail packaging and labelling of commercial foodstuffs are normally governed by laws, regulations, codes of practice and guidance. Food safety and quality standards are a set of criteria that food must meet if it is to be deemed suitable for human consumption. Parameters that are often governed by such standards include the food's source, composition, appearance, freshness, content of permissible additives and maximum bacterial or toxin content. However, enforcing safety and quality standards may not be feasible when sourcing food from rural smallholders.

Government agencies are responsible for setting food safety standards and enforcing adherence to them through quality control and assurance. It is recommended that national food standards should be based on and harmonized

BOX 16

THE RISK OF AFLATOXIN AND MYCOTOXIN CONTAMINATION

Aflatoxin contamination of crops is a long-standing challenge as contaminated crops are a significant risk for human and animal health. Aflatoxins are produced by fungi that occur naturally in the soil and that can colonize various food commodities, including maize, oilseeds, spices, groundnuts and tree nuts. They are one of the most potent liver carcinogens known. Other fungal toxins referred to as “mycotoxins” are of equal significant public health concern.

Drought and temperature stress resulting from today’s decreasingly stable weather patterns in many of the countries where maize and peanuts are staple crops make these crops more susceptible to fungal diseases. In addition, high humidity during post-harvest handling, including storage, support the growth of fungi.

Control of these fungal toxins along the food chain should be core to preventive management by all relevant actors. The practices adopted along the value chain must be economically feasible, sustainable and integrated and should comprise investments in infrastructure and a supportive role for local and national authorities.

One way of reducing the risk of aflatoxin and mycotoxin contamination is through hermetic storage. The WFP Post-Harvest Knowledge and Operations Centre in Kampala, among other bodies, has developed a range of solutions for reducing post-harvest losses on the basis of hermetic storage, from multi-layered bags to microsilos for farm-level storage. These have proved very effective and cost-efficient in reducing post-harvest losses and preventing aflatoxin and mycotoxin contamination. Hermetic storage has been a transformative instrument in WFP’s support to smallholder farming, and such technologies could also be used at the school level to develop safe local food storage infrastructure.

More info: <http://www.wfp.org/content/wfp-post-harvest-loss-prevention>

with the Codex Alimentarius,⁶⁴ a collection of internationally recognized standards, codes of practice, guidelines and other recommendations relating to foods, food production and food safety. The General Principles of Food Hygiene⁶⁵ developed by Codex Alimentarius also lay a firm foundation for ensuring food hygiene along the food chain from primary production through to final consumption, highlighting the main hygiene controls at each stage. The specifications of the standards to which food has to comply for WFP purchases⁶⁶ also provide guidance on food quality and safety standards in general.

A set of sanctions such as contractual penalties, exclusion from public procurement processes or revocations of licences should be in place to react to infringements of standards or failure to apply agreed risk management measures. However, it is unclear how far national food control agencies can reach rural areas because food control activities often focus on urban settings, commercial food manufacturers, and inspection and certification of imports and exports.

Food safety and quality are crucial for any school feeding programme, not only HGSF. Attention to food safety is a non-negotiable feature of school feeding, as unsafe food will prevent the full achievement of goals for improving food security and nutrition. The provision of nutritious and fresh foods can increase the need for good food hygiene, which comprises the conditions and measures necessary for the production, processing, storage, distribution and preparation of food in ways that ensure a safe, wholesome product fit for human consumption. For example, the use of fish or meat requires a functioning cold chain and good hygiene practices to prevent food-borne illness caused by bacterial growth, cross-contamination, etc.

⁶⁴ Codex Alimentarius is set of “living” documents developed by FAO and WHO that serves as a point of reference for the resolution of disputes, or in absence of a national food quality and safety framework: <http://www.fao.org/fao-who-codexalimentarius/>

⁶⁵ The General Principles of Food Hygiene are available at: http://www.fao.org/fao-who-codexalimentarius/sh-proxy/ar?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCAC%2BRCP%2B1-1969%252FCXP_001e.pdf

⁶⁶ WFP’s specifications for the food commodities used in its programmes are available at: <http://foodqualityandsafety.wfp.org/specifications>

Particularly in HGSF programmes, appropriate food safety measures need to be in place along the food chain, starting at the primary production level and continuing all the way to the final consumer. This is known as the “farm to fork approach”, in recognition of the fact that hazards can be introduced at any stage of the supply chain, and therefore need to be controlled all along the chain. It should also be recognized that food safety hazards are often invisible – examples include pathogens and pesticide residues – making it important that hazards are controlled at all stages of the supply chain, as the end consumer may not be able to detect their presence. This food chain approach should form the basis for identifying food safety risks along the supply chain and applying appropriate control measures to manage these risks.

Ideally, simple and accessible guidance and examples of what the school-level implementers of HGSF programmes can do to ensure food safety and quality should be part of detailed HGSF guidelines and training initiatives.

a. On the farm

The first stage of the HGSF supply chain at which food safety needs to be considered is the farm where the foods are grown. Farmers should control production so that crop contamination, pest outbreaks and animal and plant diseases do not compromise food safety. Good agricultural practices (GAP),⁶⁷ including good hygienic practices where appropriate, should be adopted to make sure that the harvested commodity will not present a food hazard to the consumer.

GAP refers to practices that need to be applied on farms to ensure food safety and quality during preproduction, production, harvest and post-harvest stages. Strengthening knowledge of GAP among smallholders may require collaboration with extension service providers such as the ministry of agriculture or NGOs. As there may be many smallholders providing food to the supply chain, the GAP checklists to identify and verify potential food safety risks, and basic quality standards can be useful tools. For example, criteria may relate to the use of pesticides, post-harvest handling and storage

methods, etc. that can have an impact on food safety. The application of GAP on the farm will help ensure basic safety and quality when ownership of the food is transferred from the producer at the farm or school gate, because it is often not feasible to have laboratory analysis in many HGSF models, especially decentralized ones with frequent deliveries of fresh food with shelf-lives that are shorter than the required lead time for receiving results from a laboratory. Depending on the food crop, proxy indicators can be useful. For example, moisture content can indicate whether there might be increased risks related to mycotoxins.

b. During transport

Food may become contaminated or may not reach its destination in a suitable condition for consumption if effective control measures are not taken during transport, even where adequate hygiene control measures have been applied earlier in the food chain. Measures should therefore be taken where necessary to protect food from potential sources of contamination, protect food from damage likely to render it unsuitable for consumption, and provide an environment in which the growth of pathogenic or spoilage microorganisms and the production of toxins in food are effectively controlled.

The type of container in which foods are transported depends on the nature of the food and the conditions under which it is transported. Depending on specific conditions, food containers should provide effective protection from contamination, including dust and fumes; be effectively cleaned and, where necessary, disinfected; permit effective separation of different foods or of foods from non-food items, where necessary, during transport; and be able to maintain the temperature, humidity, atmosphere and other conditions necessary to protect food from harmful or undesirable microbial growth and deterioration likely to render it unsuitable for consumption. Where necessary, temperature, humidity and other conditions during transport should be verified. Appropriate containers, handling, hygiene, etc. will also minimize declines in quality and reduce the food losses that often occur during transport.

c. During processing

The use of processed foods can bring specific risks, particularly resulting from secondary processing, which is more complex than the processing of dried commodities during primary processing.

⁶⁷ FAO, 2007a.

The individuals and agencies responsible for food procurement should ensure that chemical preservatives and other additives present in the foods are within the levels permitted by national food regulations and should check whether foods contain any potential allergens.

Numerous processes need to be carried out in order to manage such risks properly. Manufacturers of processed food are responsible for ensuring that the food they produce will not damage the health of consumers. To ensure that food processing consistently delivers the desired level of food safety and quality, manufacturers should use modern quality assurance systems that facilitate the prevention and control of food hazards. Such systems include:

- ▶ good manufacturing practices,⁶⁸ which guarantee that the procedures followed deliver consistent quality and safety; and
- ▶ Hazard Analysis Critical Control Points (HACCP),⁶⁹ which focuses on preventing flaws in the manufacturing process itself to prevent potential contamination risks from the outset.

HACCP is an advanced food safety system that builds on well-functioning “prerequisite programmes”⁷⁰ and requires a detailed hazard analysis process. It is based on audits evaluating the capability of a food manufacturer or supplier to manage food hazards at an acceptable level of risk, and issues a set of corrective and preventive actions if needed. Enforcing the application of good management practice of HACCP systems is often a challenge. When discussing and selecting an operating model for HGSF, programme designers should therefore consider ways of ensuring safety and quality assurance, starting with the application of GAP and good hygienic practices. In addition, programme designers can include a specific set of activities aimed at strengthening the capacity of national actors to effect reliable quality control and assurance.

Prior to entering a procurement contract, the capacity of the producer, manufacturer or supplier

to adhere to food safety and quality requirements should be assessed. If possible, local or national authorities should be responsible for inspection and enforcement of food quality and safety standards and quality management systems. Where this is not possible, the food purchaser or a contracted third-party organization should carry out periodic inspections of farms, audits of processing lines, etc. Where required, corrective actions need to be put into place and capacity built among farmers or manufacturers in order to eliminate or reduce risks to an acceptable level.

The end product of food processing should be tested randomly or systematically, depending on the risk inherent to the food product and the capacity of the supplier. With a view to ensuring the sustainability of the HGSF programme, it is recommended that a national laboratory be used for this, if a laboratory certified for the required analysis is available.

d. In the school

At the school gate

Visual quality control should be carried out before the food enters the school. Guidelines and training should enable school staff, or a school feeding committee, to apply clear criteria for accepting or rejecting food deliveries. Even when the school is not the buyer, visual control has to take place before the food is received at the school. Anybody responsible for the reception of food at school should be trained in carrying out **visual quality control** of any food before it enters the school.

Food storage at school

All school feeding programmes have to ensure that food at the school is stored and prepared safely and appropriately. However, HGSF usually includes a wide range of foods, including vegetables, fruits, dairy products, fresh meat and fish, which require particular attention to food safety. HGSF programmes therefore have to meet specific requirements with respect to food storage and preparation.

Adequate food storage: Adequate storage infrastructure and practices are crucial for storing both dry and fresh food. While food products are waiting to be used, they can become a breeding ground for bacteria, be infested by pests or become otherwise contaminated if they are not stored properly. Simple measures can do much

⁶⁸ FAO, 2014b.

⁶⁹ Captured in the International Organization for Standardization (ISO) food standards ISO 9000 and ISO 22000.

⁷⁰ Prerequisite programmes are the practices and conditions needed to implement HACCP.

to ensure good storage conditions: proper drying before storage, the use of waterproof roofing, the presence of openings for ventilation of the room, adequate stacking practices using pallets with no contact between stacks of food and walls, the use of hermetically sealed bags and storage spaces, regular sweeping of the floor, pest control, etc. WFP has prepared a simple guide to food warehousing with clear illustrations and instructions that can be followed without incurring great costs.⁷¹

Fresh food is more likely to provide a breeding ground for microbes than dry food because it contains water. Without cooling, fresh food cannot be stored for a long time and should be consumed quickly. Ideally, for each fresh food product, guidelines should include information on the right storage and preparation practices and the maximum storage time before consumption.

Storage capacity and delivery modalities: The availability of sufficient space for adequate food storage is important in enabling less frequent deliveries at longer intervals in order to reduce transport costs. Storage capacity is determined not only by the size and quality of a storeroom, but also by the skills of relevant staff in management and good storage practices.

Smallholders typically have limited capacity to provide good storage themselves. One solution is to ensure adequate food storage at the school level or to develop storage capacity at a point in the food supply chain – for example, with a farmer organization, an aggregator or an intermediary – that can function as a buffer between deliveries from farmers and final deliveries to schools.

Frequency of deliveries: Deliveries to the storage facility should take into account the pattern of supply and demand and the storage capacity. Reordering procedures need to take into account the lead time required for receiving the supply. The need for a buffer stock will depend on variations in demand, lead times and trade-offs between the costs and advantages of holding stock in storage.

e. Meal preparation

Regarding the preparation of meals, a number of considerations are important in ensuring that the meals provided to children in school are safe to consume. The World Health Organization (WHO) has formulated five keys to safer food:⁷²

1. Keep clean:
 - a. Wash your hands before handling food and frequently during food preparation.
 - b. Wash your hands after going to the toilet.
 - c. Wash and sanitize all surfaces and equipment used for food preparation.
 - d. Protect kitchen areas and food from insects, pests and other animals.
2. Separate raw and cooked food:
 - a. Separate raw meat, poultry and seafood from other foods.
 - b. Use separate equipment and utensils such as knives and cutting boards for handling raw foods.
 - c. Store food in containers to avoid contact between raw and prepared foods.
3. Cook thoroughly:
 - a. Cook all foods thoroughly, especially meat, poultry, eggs and seafood.
 - b. Bring foods such as soups and stews to boiling point to make sure that they have reached 70 °C. Make sure that juices of meat and poultry are clear, not pink. Ideally, use a thermometer.
 - c. Reheat cooked food thoroughly.
4. Keep food at safe temperatures:
 - a. Do not leave cooked food at room temperature for more than two hours.
 - b. Refrigerate all cooked and perishable food promptly, preferably at below 5 °C.
 - c. Keep cooked food piping hot – at higher than 60 °C – prior to serving.
 - d. Do not store food too long, even in the refrigerator.
 - e. Do not thaw frozen food at room temperature.

⁷¹ The guide, along with links to useful tools other guidance, including on cold chains, is available at: <http://dlca.logcluster.org/display/LOG/Warehousing+and+Inventory+Management>

⁷² Documents on WHO's Five Keys to Safer Food Programme are available at: http://www.who.int/foodsafety/areas_work/food-hygiene/5keys/en/

5. Use safe water and raw materials:
 - a. Use safe water or treat water to make it safe.
 - b. Select fresh and wholesome foods.
 - c. Choose foods that have been processed to increase their safety, such as pasteurized milk.
 - d. Wash fruits and vegetables, especially if they are to be eaten raw.
 - e. Do not use food after its expiry date.

The following aspects can help HGSF programmes to apply these five keys.

Equipment: To reach minimum desired standards of hygiene, a school kitchen requires access to safe drinking-water and adequate cooking stoves. To the extent possible, stoves should be energy-efficient.⁷³ Stoves should not be placed on the ground. In indoor kitchens, stoves should also be equipped with smoke pipes to avoid indoor air pollution and resulting health hazards for cooks.

Cooking practices: Cooking is a good method for controlling food safety risks and a critical control point in most food safety plans because temperatures above 75 °C kill most germs. As some germs are more tolerant to heat and resilient than others, food should generally be cooked until the centre of the thickest part of the food has reached a temperature of 70 °C for two minutes.⁷⁴

Proper hot and cold holding practices throughout storage and meal preparation: Lukewarm food is dangerous as it is a perfect environment in which bacteria can thrive. For this reason, cooked food should be kept hot at temperatures above 60 °C. If kept in the “danger zone” of 5–60 °C, cooked food should be used within two hours of cooking.

Hygienic practices: Along with proper cooking, a safe and healthy HGSF programme ensures:

- ▶ good hygienic practices and hand hygiene;
- ▶ good health of cooks (with health certificates) and good practices for treating wounds;

⁷³ An array of potential measures for reducing the need for fuelwood and providing access to alternative sources of energy is presented in WFP, 2012.

⁷⁴ A temperature of 75 °C measured at the centre of the food is considered equivalent to achieving 70 °C for two minutes: EU, 2004.

BOX 17

SAFE ACCESS TO FUEL AND ENERGY (SAFE) IN BURUNDI

WFP and its partners are implementing a four-year, USD 2 million SAFE initiative to address severe challenges in Burundi related to lack of access to cooking fuel. The initiative:

- ▶ provides institutional stoves to 150 primary schools (serving 100 000 schoolchildren) through WFP’s HGSF programme in Cibitoke, Bujumbura and Bubanza provinces – the fuel-efficient stoves use briquettes instead of wood and use 40–45 percent less wood than a three-stone fire; and
- ▶ is introducing energy- and livelihood-related activities for 3 000 rural households through a SAFE pilot, which WFP and its partners plan to scale up to reach 10 000 rural households and meet their energy needs by 2019.

- ▶ no contact between bare hands and ready-to-eat foods;
- ▶ proper and quick cooling practices;
- ▶ proper hot and cold holding practices throughout storage and meal preparation;
- ▶ reduced time in the “danger zone” for food to become unsafe – at temperatures of 5–60 °C; and
- ▶ no cross-contamination between foods, especially after cooking.

More detailed guidance will be included in specific guidelines that WFP plans to issue during 2018.

3.5 LINKING SMALLHOLDER FARMERS TO SCHOOLS

Linking smallholder farmers to schools involves many aspects that often are not clear at the outset of programme planning. For this reason, it is often a good idea first to develop an HGSF pilot programme through which to gather information and build experience with all stakeholders in the supply chain. It is crucial that such a pilot be closely monitored and well documented. Based on the outcome of the pilot, a full programme can be adapted to the specific needs

of the farmers, schools and communities involved, and then be brought to scale. This gradual approach reduces implementation challenges, minimizes costs and risks and maximizes potential benefits for all actors along the value chain. Simultaneously, governments and their partners should work on complementary programmes in multiple sectors and with multiple actors to strengthen smallholders' capacity to produce diverse foods of adequate quality and quantity to supply HGSF (see [section 3.5e](#)).

The most important elements to consider when designing an HGSF programme include the following:

- ▶ How to define the target group for the programme.
- ▶ How to define the operating model of the programme.
- ▶ How to ensure that procurement rules allow the involvement of the target group.
- ▶ How to ensure adequate transport of food to schools.
- ▶ How to provide complementary support to the target group in order to enable it to participate.

Each of these aspects is addressed in the following subsections.

a. Defining the target group for a programme

The target group for an HGSF programme includes smallholder producers, who are primarily farmers, but also food processors and other actors along the value chain.

Smallholder farmers

There is no single or generally used definition of smallholder or family farmers – definitions vary according to the country context and the programme objectives. As recognized by the High Level Panel of Experts on Food Security and Nutrition, there are a number of definitions of “smallholder agriculture” each of which has implications for counting numbers of smallholders. Definitions also guide understanding of the investment needs of smallholders. A discussion of definitions is therefore neither trivial nor academic, but has tangible implications for policies and their impacts on livelihoods.⁷⁵

⁷⁵ HLPE, 2013.

In some countries the definition of smallholders is covered by legislation that will also apply for the HGSF programme. Especially in areas where farming and farmers are highly heterogeneous, such as in Latin American countries, the establishment of a legal definition can contribute to stronger institutionalization of smallholder farming in the

BOX 18

THE DEFINITION OF FAMILY FARMING IN BRAZIL

Brazil is one of few countries to provide a legal definition for family farming. Law No. 11.326/2006 (amended by Law No. 12.512/2011) establishes four criteria that farmers and rural entrepreneurs must fulfil to be regarded as family farmers:

- i. The size of the rural property does not exceed a maximum number of *módulos fiscais* (see below).
- ii. The labour used in the rural activities is predominantly family-based.
- iii. A minimum percentage of the family's income is generated by the activities of the rural property or enterprise.
- iv. The establishment is directly managed by the family.

A “*módulo fiscal*” is a unit of land measurement of between 5 and 100 ha, depending on production conditions in the region in which it is located. The better the production conditions in a municipality – including market dynamics, available infrastructure, access to technologies, and natural conditions such as soil and water – the smaller the size of land required for farming activities to be profitable. This system provides more flexibility to the concept of family farming and makes it more adjustable to the vast diversity in a country as large as Brazil.

The existence of a legal concept has been an important contributing factor for the institutionalization of family farming in Brazil, for the development of tailored policies and programmes and, not least, for the articulation of policies and programmes on market access, access to finance, training, etc. that target the same beneficiaries.

Source: Swensson, 2015.

BOX 19 BRAZIL'S FAMILY FARM REGISTER

The Brazilian Family Farm Register includes all the family farmers and rural family entrepreneurs who have a valid Declaration of Eligibility (*Declaração de Aptidão – DAP*). The DAP certifies that a producer or formal organization complies with all the requirements established by law for classification as a family farmer or rural family entrepreneur.

A DAP is issued to a family unit or a formal organization – a DAP legal entity is one in which at least 70 percent of members have a DAP – free of charge by authorized institutions, such as the official entities that provide technical assistance and rural extension, or agriculture federations and confederations. The DAP has become an essential document for participating in all Brazilian public programmes related to family farming, including institutional procurement programmes. An individual DAP is valid for six years, while the DAP for a DAP legal entity lasts for only one year.

In 2014, there were more than 5 million active individual DAPs and 2 900 DAP legal entities in the Family Farm Register.

Source: FAO, 2015.

country and to the development and articulation of different policies and programmes for smallholders.⁷⁶ As described in Box 18, Brazil provides an example of how a definition provided by legislation works.

In the absence of a national definition, it is crucial that the HGSP programme develop its own definition of smallholders with clear criteria, and a strategy, for identifying them.⁷⁷ The parameters may vary and be adapted to national conditions and specificities. There are many variations in each context at the regional, national and local levels, and also over time as economies transform.

Common criteria for identifying the smallholder farmers that an HGSP programme aims to target include:

- i. area cultivated – although this criterion can be arbitrary and should be used cautiously; for example, 5 ha of vegetables makes a farmer far larger in economic terms than 10 ha of cereals does. Brazil's *módulos fiscais* described in Box 18 provide a good example of flexible measurement of cultivated area that takes

- into account market dynamics, available infrastructure and soil and water conditions;
- ii. household management; and
- iii. income – HGSP programmes usually focus on poor farmers to help them improve their livelihoods.

To facilitate potential synergies, any definition used by the HGSP programme should be coherent with existing definitions adopted by national policies and programmes supporting smallholders.

Establishing **registration and certification systems** with specific requirements for the classification of smallholders, such as the Family Farm Register adopted in Brazil described in Box 19, can be a good strategy for identifying and operationalizing inclusive policies for smallholders and guaranteeing their access to HGSP programmes.

Within the definition of smallholders adopted, an HGSP programme can also target specific groups of beneficiaries. The following are examples of criteria for such targeting of specific groups of smallholder farmers:

- ▶ farmers producing food of particular interest to the programme, such as eggs or plant protein, orange sweet potatoes, leafy greens, etc.;
- ▶ farmers who already produce regular food surpluses and have the capacity to supply schools throughout the academic year – this approach is helpful for developing and implementing adequate procurement, operational and administrative tools in order to start the programme smoothly, and for

⁷⁶ Swensson, 2015.

⁷⁷ For the International Year of Family Farming (2014), FAO defined family farming as “Family Farming (which includes all family-based agricultural activities) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labour, including both women’s and men’s. The family and the farm are linked, coevolve and combine economic, environmental, social and cultural functions.” FAO, 2014.

reducing the risks of supply breaks resulting from production shortfalls, poor food quality and limited logistics capacity. However, one of the objectives of HGSF programmes is to enhance the livelihoods of smallholders through the development and strengthening of market access opportunities for farmers. To pursue this objective, countries can also choose to provide assistance to smallholder farmers who do not yet have sufficient production capacity, but have the potential to develop it;

- ▶ women farmers (see [subsection 3.6](#) on gender considerations); and
- ▶ farmers producing organic and agroecological food – HGSF can be designed to support forms of agricultural production that ensure environmental sustainability while providing healthy food that is biodiverse and free from pesticides. By establishing specific criteria for the inclusion of organic or agroecological products, an HGSF programme can improve market access, and thus the chances of success, for organic and agroecological production, and also incentivize the production and consumption of these products. Examples include:
 - Brazil's PNAE gives priority to organic and/or agroecological produce and offers a price premium of up to 30 percent in order to promote and enhance biodiversity, organic and agroecological food production; and
 - the Law on School Feeding (December 2014) of Bolivia aims to support the enhancement of family farming capacities and management with respect to the production and processing of food, with an emphasis on ecological produce.⁷⁸

Processors and other actors along the value chain

While smallholder farmers are often the primary focus of an HGSF programme, other actors along the value chain can also be linked to school feeding, generating multiple associated potential benefits. The most important groups among these actors are food processors.

Primary food processing is as old as agriculture itself. It stabilizes food after harvest, milking or slaughtering, increasing its shelf-life. Primary processing often also converts food into a more convenient form for storage, making it more available and accessible and often safer and more palatable. Examples of primary food processing include drying crops or meat, milling cereals and extracting cooking oils from oilseeds or nuts, and also cleaning, grinding, hulling, sieving, pounding, grating, flaking, squeezing, tempering, soaking and parboiling, portioning, removing inedible parts, bottling, drying, chilling, freezing, pasteurizing, fermenting, skimming, vacuum and gas packing, and simple wrapping. Any of these processes may be used by primary producers, packing houses, distributors or retailers, as well as manufacturers, for eventual sale to consumers.

Secondary processing turns the raw foods and products from primary processing into new edible products that are attractive to consumers.

Transforming food adds value to smallholders' production and helps to satisfy consumer demand by increasing the availability of food in different forms and for longer periods.

Forms of food processing that are relevant to HGSF include local fortification, including biofortification.

In many countries, HGSF programmes use primary processed foods, providing a stable market and an entry point into sustainable local business for small-scale food processors, including women (see [subsection 3.6](#)). Linking such processors to an HGSF programme can play a valuable role in HGSF supply chains by expanding market opportunities and stimulating increased value addition.

Stimulating enhanced food processing through HGSF can also have significant additional benefits for the food security of rural communities, not only indirectly through income generation and employment creation, but also directly by decreasing malnutrition, reducing food losses and increasing food diversification and safety. Not least, increased markets for primary processed foods can create important economic opportunities for women (see [subsection 3.6](#)).

⁷⁸ Ministry of Education (Bolivia), 2015.

BOX 20

THE USE OF PROCESSED FOODS IN CHILE'S SCHOOL FEEDING PROGRAMME

In 1976, Chile's National Board of School Assistance and Scholarships (*Junta de Auxilio Escolar y Becas – JUNAEB*) began a pilot programme outsourcing some of its school feeding operations to private contractors; by 1980 all of the school food service had been turned over to private companies. The Government sets and controls nutrition standards for its programmes, including the number of calories per meal, the quantities of protein, fruits and vegetables, and requirements for variety.

Since 2009, the programme has operated a bidding process, issuing successful private contractors with three-year contracts; each year the Government selects contractors for providing one third of the meals needed. Proposals are assessed on the bases of a variety of factors that fall into two major categories – quality and price. While the government seeks the best quality for the lowest cost, competition has been so great, and some companies have so little experience of estimating costs that JUNAEB decided to set a minimum price per meal to eliminate unrealistically low bids.

The programme employs an innovative computerized process for assessing proposals, which reportedly has saved the Government about USD 40 million per year, and a "triple blind" award system to prevent corruption in the contract review and award process. Stringent quality and quantity control measures are applied to ensure that deliveries comply with programme standards and that the schools and children receive the promised items in adequate quantities and quality and on time.

To scale up the programme, in 2006 a "cook and chill" component was added, through which about 400 000 of the 2.4 million school meals served each day are prepared in a central kitchen. They are then chilled using rapid cooling technology, sealed in ready-to-heat bags and shipped cold to schools, where they are reheated – usually by boiling the bags – and served.

In 2009, 37 private contractors were involved in the school meal programme: two were large international firms, two were Brazilian and the remaining 33 were Chilean.

Source: GCNF, 2009.

It should be noted that **HGSF should not promote the use of ultra-processed foods and drinks**, which are prepared with ingredients such as sugar, oils, fats, salt and preservatives and additives to give them hyper-palatability. Such foods and drinks do not support healthy diets, do not contribute to nutrition outcomes and are associated in some studies with obesity and other non-communicable diseases.

b. Procurement

Procurement is the crucial step through which smallholder farmers and processors are linked to an HGSF programme. Given the often limited capacities of smallholders, however, procurement can also present a major bottleneck to increasing the involvement of smallholders in formal programmes such as HGSF.⁷⁹ A successful HGSF programme takes procurement considerations into account from the very start. Such considerations concern mainly the national regulatory framework for public procurement and procurement practices.

National regulatory framework

When integrated into national systems, an HGSF programme is normally a public programme that uses public procurement processes to acquire the food it provides to schools. HGSF procurement thus normally has to adhere to the national policies, laws and regulatory frameworks that define the procurement process and modalities. Public procurement in almost all countries is governed and regulated by detailed rules aiming to ensure the efficient use of public resources, to guarantee the best value for public money, to ensure open competition and transparent procurement decisions and, not least, to prevent fraud, waste, corruption and local protectionism in connection with the public procurement of goods and services.⁸⁰

Public procurement rules often follow complex procedures including specific requirements for tendering, and decision-making. These requirements often make it difficult for smallholder farmers and

⁷⁹ Kelly and Swensson, 2017; GCNF, 2009

⁸⁰ Quinot and Arrowsmith, 2013.

BOX 21

ADAPTING PUBLIC PROCUREMENT FRAMEWORKS FOR SCHOOL FEEDING IN BRAZIL AND BOLIVIA

Brazil: Adaptation of the framework for public procurement for national institutional food procurement programmes such as PAA and PNAE is considered a key factor for the successful implementation of the programmes. To ensure that PNAE is linked to smallholder agriculture, the law establishes that: i) at least 30 percent of the food for school meals be purchased directly from smallholder producers; and ii) procurement for PNAE does not follow the usual bidding process, but instead uses a smallholder friendly procurement process.

To protect the interests of the public administration a new set of parameters foresees that: i) food must be produced and procured directly from smallholders – as defined in the legislation on family farming – and/or their organizations; ii) prices must be competitive with local and regional market prices; iii) food must comply with quality control requirements established by legislation; and iv) there is an annual limit on the amount of food procured from each farmer.

In **Bolivia**, the success in linking small family farm agriculture to school feeding is largely attributed to the favourable legislative framework for public procurement. Bolivia's laws aim to create markets for national producers and increase the participation of small- and medium-scale suppliers in school feeding and other social assistance programmes. They allow local governments to purchase directly from producer organizations and family farmers, reducing the burden of tendering requirements. In addition, various decrees prioritize national and local producers in the public procurement of food.

Source: FAO, 2015.

processors to participate in public procurement and they represent one of the main barriers for smallholder farmers' access to the market for school feeding programmes, particularly when complex bidding procedures are combined with a centralized procurement system geared to acquiring large quantities of food products.⁸¹

Some countries allow more flexible procurement procedures up to a certain value, or under specific conditions. Such provisions could be used to provide an opening for smallholder farmers, particularly when an HGSF programme is highly decentralized and encompasses small quantities of products (see the following [subsection 3.5c: Operating models](#)).

To secure the best value for public money, most public procurement systems follow competitive tendering procedures, including criteria for awarding contracts that, for example, bind procurement decisions to accepting the lowest price, leaving little room for additional considerations. Where this is the case, economies of scale provide a strong advantage to larger producers or traders, which are often able to offer lower prices than

local producers, even though they may offer no benefits to local economies in terms of social development goals. Public procurement rules that require preference for (even slightly) lower prices may prevent local smallholders from supplying food to nearby schools, and thus result in missed opportunities for local agricultural and wider economic development.

When a government seeks to establish an HGSF programme, it should therefore assess the existing regulatory framework (see [Module 2](#)) and consider adapting it to facilitate the use of public food procurement as an instrument for achieving broader social and economic goals. Possible interventions for achieving this objective include:

- ▶ the use of criteria other than the lowest price for awarding contracts, for example by allowing procurement decisions regarding the food for a school feeding programme to be based also on factors such as potential social, economic and/or environmental benefits, or by assigning a specific weight to each category of supplier in the overall contract awarding process; and
- ▶ the adoption of reservation, preference and/or indirect procurement strategies that, for instance, ensure that school food contracts, or a percentage of them, are awarded to

⁸¹ FAO; 2015; FAO, 2014a.

smallholder producers, as in Brazil, or that preference is given to smallholder producers in competitive selection processes, as in Bolivia (see **Box 21**).⁸²

While such interventions make public procurement more flexible and adaptable to the characteristics of smallholder producers, they must continue to protect public interests and ensure transparency, accountability and efficiency, and must therefore be accompanied by clear rules and safeguards to curtail abuses.

Other possible interventions include the development of specific procurement procedures and contractual instruments to be used by public buyers for the purpose of procuring food from smallholders.

Procurement procedures and contractual instruments

Procuring food directly from smallholder producers may take different forms and use different procurement procedures and contractual instruments: there is no single model that will be best in all contexts.⁸³ The procurement form that best serves its purpose may differ from country to country depending on the public procurement regulatory framework, the implementation model adopted, the commodities procured, the capacity of farmer organizations, local market structures, etc. However, any procurement procedure and contractual instrument used should:

- i. take into consideration the capacities and characteristic of smallholder suppliers; and
- ii. maintain the core public procurement principles that protect the interests of the institutional buyer, including strict compliance with food safety and quality requirements and efficient use of public money.⁸⁴

Regardless of the operating model, some procurement procedures can be considered as smallholder-friendly alternatives to conventional

competitive tendering. They include soft tenders and direct procurement:⁸⁵

- ▶ **Soft tenders**, or pro-smallholder competitive tendering, are competitive procedures in which most of the conditions and requirements of the standard tender procedure – proposal, guarantees, quantities, delivery terms, payment, etc. – are adapted to suit the characteristics and capacities of small suppliers and their organizations. Under soft tendering, some of the more onerous conditions for smallholders are waived, without compromising compliance with competitiveness, transparency and cost-efficiency. Soft tendering can be particularly appropriate when procurement is carried out through local or central governments and involves higher volumes and values of products. Soft tendering still requires that producers have a certain level of capacity to prepare for and participate in a competitive procurement process.
- ▶ **Direct contracting** is a non-competitive procurement procedure. Contracts are negotiated directly between the buyer and farmers for agreed quantities of produce compliant with the buyer's standards. This type of contracting is easier and faster to implement than conventional contracting, and usually requires less bureaucracy as it does not include a selection process. However, direct contracting is less stringent in guaranteeing the principles of transparency and open competition and thus needs to be combined with good control instruments to prevent fraud, waste and corruption, which are more easily controlled under competitive procurement processes.⁸⁶ Direct contracts can be a good choice when relatively small quantities of food are purchased at the local level, as when a school feeding committee buys food directly from local farmers who do not yet have the capacity to participate in competitive processes or to supply schools systematically.

⁸² In Africa, such strategies have been recognized through the 2017 Johannesburg Resolution on Public Procurement. Available at: http://www.hlpf-egpf.com/downloads/2017_HLPF-RESOLUTION.pdf

⁸³ Kelly and Swensson, 2017.

⁸⁴ Kelly and Swensson, 2017; Brooks, Commandeur and Vera, 2014.

⁸⁵ Kelly and Swensson, 2017.

⁸⁶ Quinot, 2013.

One type of contractual instrument that could be used to facilitate smallholders' access to HGSF markets is **forward contracting**. In forward contracting contracts are signed at planting time with targeted farmer organizations for the delivery of specified quantities and quality of products in the future at a price that is agreed on at the time of signature. A major advantage of forward contracting is that it reduces the risk to farmers and gives them greater certainty for planning. Another benefit is that it may allow farmer organizations to use the contract as collateral for obtaining access to credit and to justify investments. However, the feasibility and success of forward contracts depend strongly on specific aspects of the country and the market, such as price volatility and the legal and fiscal regulation of farmer organizations. For HGSF, the risks of non-delivery must be taken into consideration and addressed.

Administrative adjustments

Adapting a procurement system to the capacities of smallholder supply may also require administrative adjustments that aim to reduce the capacity gap between smallholder farmers and their organizations on the one hand and conventional suppliers to governments on the other.⁸⁷ Such adjustments can include outreach programmes and protocols that address operational issues in the procurement process that could constitute an additional barrier to access to school feeding markets.

Examples of administrative adjustments include improving communications on HGSF procurement opportunities with smallholder farmers, for example, by publishing and disseminating tender announcements in locations that are frequented by smallholders; increasing the time allowed to smallholders to prepare responses to tender requests; rationalizing the requirements for tenders, including performance bonds and other documents; adapting contract sizes; and, not least, aligning payment policies with the realities of smallholders and their organizations.⁸⁸

A general challenge in linking small-scale producers to structured markets is the need to pay smallholders soon after delivery. Smallholder suppliers often lack access to (affordable) credit, and need to receive income quickly. Payment delays can undermine the HGSF programme's goal of improving income opportunities for family farmers, resulting in a loss of programme credibility among suppliers.⁸⁹ Having to wait a long time for payments may stop producers from participating in the programme. When designing an HGSF programme and its operating procedures, it is therefore crucial to include administrative measures that aim to avoid delays and reduce payment time lags.

In this context, the development of procurement guidelines that focus on smallholder-friendly procurement practices and capacity building of procurement authorities is of major importance for supporting the effective implementation of HGSF programmes.

c. Operating models

HGSF programmes can be implemented in many different ways. No model is best in all contexts. Operating models can be characterized in terms of two main dimensions:

- i. the degree of centralization or decentralization of programme management, procurement, distribution and monitoring; and
- ii. whether the procurement of food and related activities are performed in-house or by third parties.⁹⁰

Many countries have developed their own models based on their specific contexts and objectives. Even within a single country, different models may coexist.

The choice of operating model determines the degree of centralization or decentralization of programme management, specific decisions on the foods to be included and procurement, distribution, monitoring and other processes.

⁸⁷ Kelly and Swensson, 2017; Brooks, Commandeur and Vera, 2014.

⁸⁸ European Commission, 2014; Brooks, Commandeur and Vera, 2014.

⁸⁹ Kelly and Swensson, 2017.

⁹⁰ Gelli et al., 2012.

This section is in three sections:

- ▶ an overview of the main groups of operating model according to their degrees of decentralization and including their generic strengths and weaknesses;
- ▶ the criteria that can guide discussions and decisions regarding various models in a specific context; and
- ▶ two examples of different operating models, which are considered in more detail.

Overview of models

Figure 5 summarizes the main groups of HGSF operating model and shows the involvement and roles of the various actors along the path from production, through trade and procurement to the school level.

Procurement authorities or operators can purchase food directly from farmers or their associations, or through intermediary traders. To the extent possible, an HGSF programme should seek to establish more direct relationships between farmers and their organizations and consumers, and enable farmers to obtain a larger share of the value of the final sales price by reducing the number of intermediaries and the stages in the food supply process.

The intermediation of traders can also be considered, however, and can be of particular value in certain country contexts.⁹¹ In such cases, it is important to develop mechanisms that can track the origins of food to ensure that it is provided by smallholders, and that improve transparency in pricing and price transmission from traders back to smallholders, ensuring that smallholders benefit from the programme.

Decentralization can occur gradually, for example, to the provincial, district or school level and then on to the most decentralized farm-to-school model. Operating models include mixed models that combine advantages of both centralized and decentralized approaches. Countries can, for example, decide to purchase certain types of product, such as cereals, through a more centralized approach at the regional level, while purchasing fresh products at a more decentralized level.

In addition, procurement authorities can carry out food procurement directly or delegate it to a third party, for example, by contracting catering services to buy, prepare and serve food. The linkage to smallholder farmers can be guaranteed by requiring that a fixed percentage of the food used must be purchased from smallholder farmers (see the Ghana example in Figure 7).

Each model has advantages and trade-offs in terms of benefits for farmers, schools, children, quality of food and cost-efficiency. These have to be considered when identifying the degree of centralization or decentralization is best suited to a specific context, or deciding whether food procurement and related activities be performed in-house or by third parties.

It is crucial that the operating model developed for an HGSF programme be adapted to the country context and take into consideration a series of factors including the country's size, the prevailing economic and market structure, the government structure, the volumes and types of food required, beneficiaries' needs and institutional procurement capacities.⁹²

In general, decentralized models may be easier to adapt to local conditions and opportunities. The higher the degree of decentralization, the greater the opportunities for local-to-local linkages that benefit the smallholder producers supplying food and the end-users such as schools and have spill-over effects for the rest of the local community.⁹³ A decentralized system can also facilitate the supply of fresh food, and generally increases the variety of foods supplied and their compatibility with local habits and tastes.⁹⁴

Centralized processes can ensure greater standardization of procedures, facilitating monitoring and control, which should allow more stringent quality control. On the other hand, the centralized procurement of large quantities of food through few contracts might increase the temptation to manipulate procurement processes.

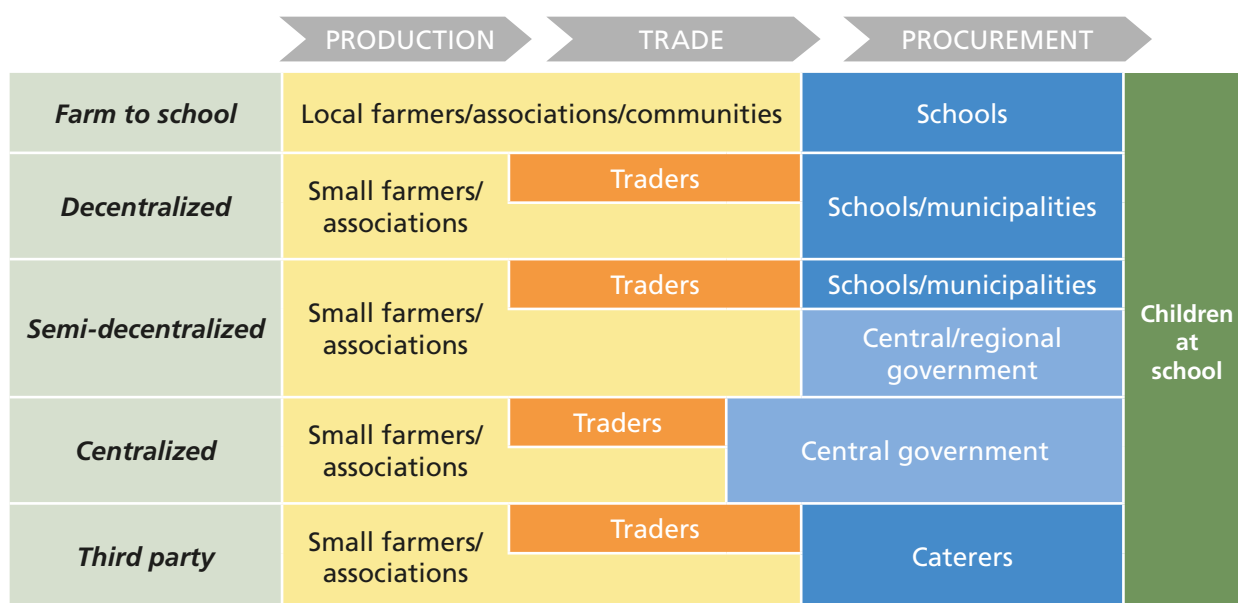
⁹¹ Kelly and Swensson, 2017.

⁹² Kelly and Swensson, 2017.

⁹³ SIGMA, 2000; Thai, 2009.

⁹⁴ Belik and Chaim, 2009.

FIGURE 5 Overview of groups of HGSF operating model



Source: authors' elaboration.

Models that use third parties give governments the opportunity to support smallholder production, even if they do not purchase products directly from smallholders. The challenge, however, is to ensure that caterers purchase from smallholder farmers in an inclusive way that benefits farmers in terms of timely and fair payments and fair access, and that is well documented.

Figure 6 serves as a tool to facilitate discussions among HGSF planners. It provides a framework in which planners can plot the relative strengths and weaknesses, as they see them, of several options for more centralized or decentralized models. Planners should feel free to amend the parameters or add others that are important in their specific contexts.

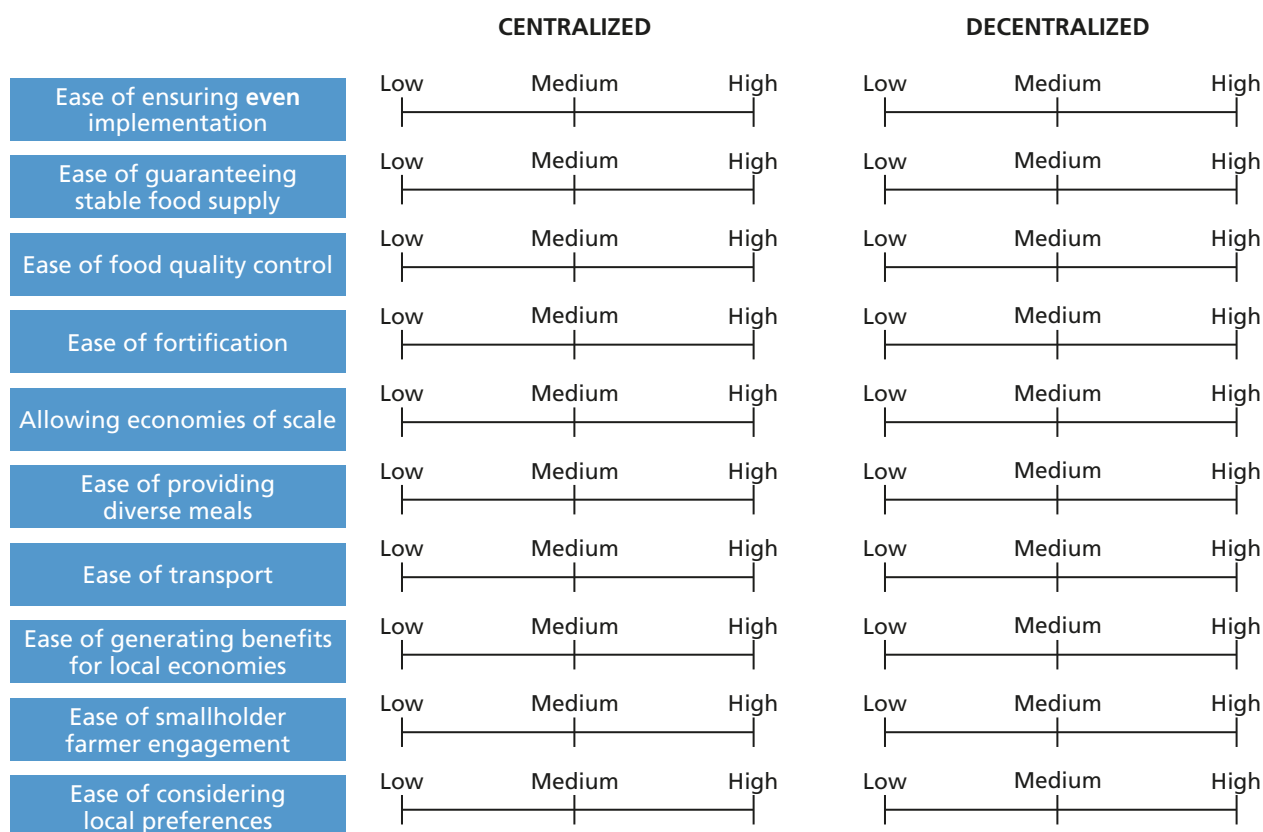
It is important to highlight that different operating models may have different cost implications for a programme. The factors that governments may take into consideration when selecting an HGSF operating model include cost-efficiency and cost effectiveness.

Cost-efficiency: Cost-efficiency is a measure of how economic resources – funds, expertise, time, etc. – are converted into results, i.e., the ratio of the cost of an intervention or input to a relevant deliverable or *output*. For HGSF, the measure of efficiency is the cost of delivering a healthy and balanced meal.

The type of procurement model used affects the overall cost of the programme. In decentralized models, information flows are more direct and delays can be avoided, while the costs of transportation and storage can be reduced. Centralised models can provide better opportunities for bulk purchasing and economies of scale, increase the procurement authority's purchasing power, and reduce the costs of developing human and institutional capacities because the people responsible for procurement are fewer in number and centrally located.⁹⁵ Good food system analysis (see Module 2) provides the basis for well-informed decision-making regarding the most appropriate and efficient model in the given context.

⁹⁵ Belik and Chaim, 2009; SIGMA, 2000.

FIGURE 6 Tool for mapping the strengths and weaknesses of centralized and decentralized HGSF operating models



Source: authors' elaboration.

Cost effectiveness: Cost effectiveness establishes the ratio between intervention costs and the effects or *outcomes* of the intervention – the change in the development situation. For HGSF, the measure of effectiveness is the cost of generating benefits such as positive impacts on nutrition, employment and income, increased food security, or wider benefits for local economies. The use of a slightly less efficient model – for example, one in which decentralized, small-scale purchases are prioritized over bulk procurement – may sometimes be justified if the overall benefits clearly exceed those of the more efficient model.

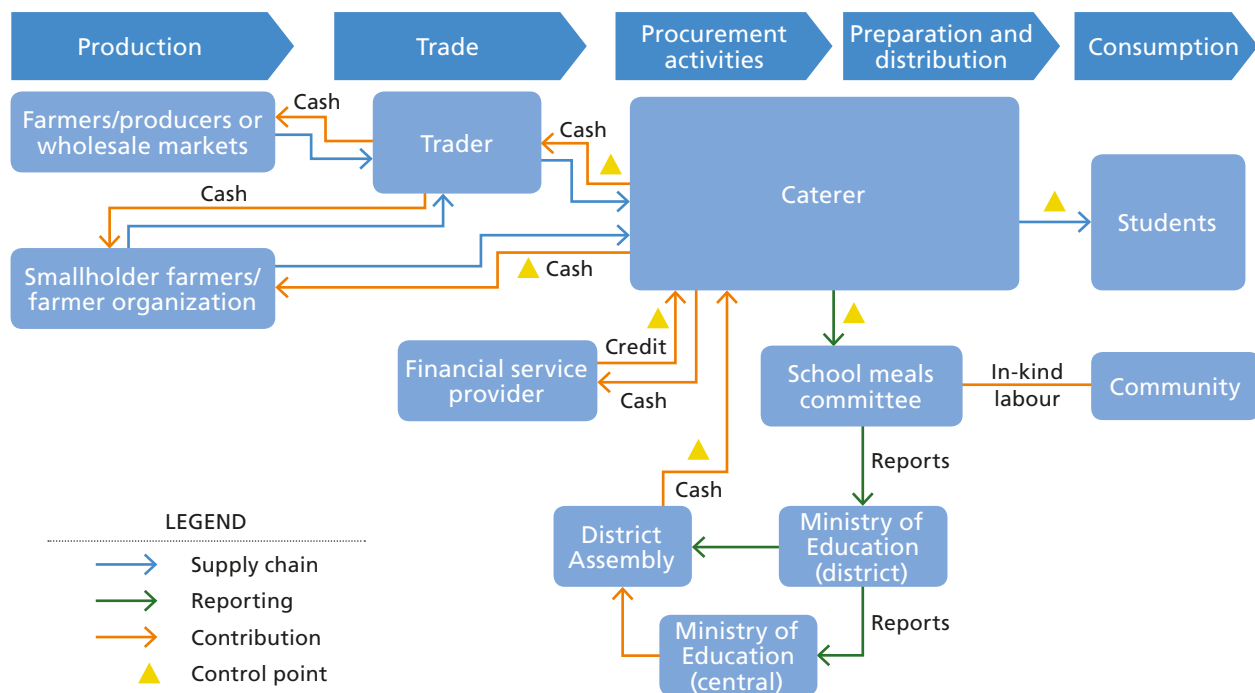
Examples

The following are examples of two operating models: a third-party model from Ghana; and a decentralized model from Kenya. More examples can be found in [Annex 7](#).

Third-party model: a school-level catering company with supply-side support in Ghana

A third-party model usually involves the services of caterers. In Ghana, district authorities contract small catering companies – often managed by women – to provide school meals to individual schools, and pay them a flat rate per child per day. Caterers can purchase food either directly from smallholder or farmer organizations or from traders, who in turn source food from smallholder or farmer organizations, from larger farmers or from wholesale markets at the regional, national or even international level. With the food procured, caterers then prepare and distribute meals to children in school. In addition, partner organizations provide technical inputs to the farmers and relevant institutions in order to strengthen the productive sector.

FIGURE 7 The supply chain for Ghana’s third-party operating model for school feeding



Source: authors' elaboration.

As part of NEPAD’s Home-Grown School Feeding Programme, Ghana’s school feeding programme pursues the objectives of: i) reducing short-term hunger and malnutrition; ii) increasing school enrolment and retention; and iii) increasing domestic food production and the incomes of poor rural households. To achieve these aims, the programme requires that at least 80 percent of the food used be purchased from local smallholder farmers. The programme uses a decentralized third-party procurement model through which caterers are contracted by the district authorities to purchase, prepare and distribute food to schools.

Although linking smallholder production to school feeding demand is an explicit objective of the programme, an evaluation found that systematic and coordinated linkages were not evident,⁹⁶ mainly because of a lack of alignment between

the programme and existing public procurement regulations and practices:⁹⁷ in Ghana’s HGSP procurement system there was no strategy in place that formally required contracted caterers to purchase a fixed percentage of their primary products from the target beneficiaries, or to give preference to traders who do so. There was also no instrument to guide caterers in their procurement or to monitor, evaluate and certify whether procurement from smallholder farmers was effective in terms of percentage purchased from smallholders and the conditions offered to them. Once awarded a contract, caterers were free to purchase from any type of supplier without taking into consideration the 80 percent target set by the programme.

These gaps were aggravated by the lengthy process of paying caterers for their services, which forced caterers to pre-finance procurement and made them

⁹⁶ SNV, 2008; Commandeur, 2013.

⁹⁷ Brooks, Commandeur and Vera, 2014.

more attracted to large suppliers – traders – who sold them products on credit, unlike smallholders.⁹⁸

With the aim of removing barriers to smallholder participation, the Netherlands Development Organization (SNV) piloted a project that applied an indirect procurement strategy supported by other tools and administrative adjustments to create effective, long-term links between caterers and farmers and help Ghana's school feeding programme meet its policy objectives.⁹⁹ This model is illustrated in [Figure 7](#).

Considerations: The HGSF approach adopted in Ghana requires caterers to make immediate cash payments to farmers, farmer organizations or traders, who often operate on small margins and incur debts for inputs and labour during the growing season. Payments from central or district government to caterers are, however, frequently delayed, which means that the catering companies have to pre-finance their purchases and operations, sometimes for extended periods, before they receive reimbursement from the Government on supplying documentation of the number of meals they have served. At the same time, small catering companies or associations do not have easy access to loans: they often lack the required collateral and, if they have it, are often wary of high interest rates and the risks associated with default. In many countries, the inability of local caterers to pre-finance their operations until reimbursement has resulted in the caterer model either not being used or failing when it is used.

The Ghana HGSF programme addresses this problem through an innovative partnership with SNV, which brokers low-interest loans from financial service providers and guarantees 50 percent of each loan. In addition to this loan guarantee from SNV, the district assembly issues a letter of undertaking to the bank in which it promises to pay the catering company for the services provided at the agreed rate.

These combined measures provide caterer companies with access to affordable bank loans.

If a government is interested in adopting the caterer model but does not have access to such a partnership, it should consider other ways of reducing the financial burden on caterers, for example, by paying caterers advances of 60–75 percent of the amount expected to be reimbursed.

Control points, where programme managers can influence and monitor the flow of funds and food are shown as yellow triangles in [Figure 7](#) and include:

1. the contract with the catering company, outlining the likely size of and timetable for payments;
2. the numbers of meals served to students, captured by the programme's monitoring system;
3. the bridging loan from the financial institution to the catering company; and
4. payments made to the catering company.

Decentralized HGSF: Kenya's cash transfers to schools for purchasing on local markets

In decentralized HGSF models, cash and procurement authority are delegated to the schools. Transport volumes are small because transactions at the school level are small in size. Traders maintain some stock, while smallholder producers typically sell their produce immediately after harvest. Stock is also kept at the school level. In this model, food is bought from smallholders and other farmers, usually through traders.

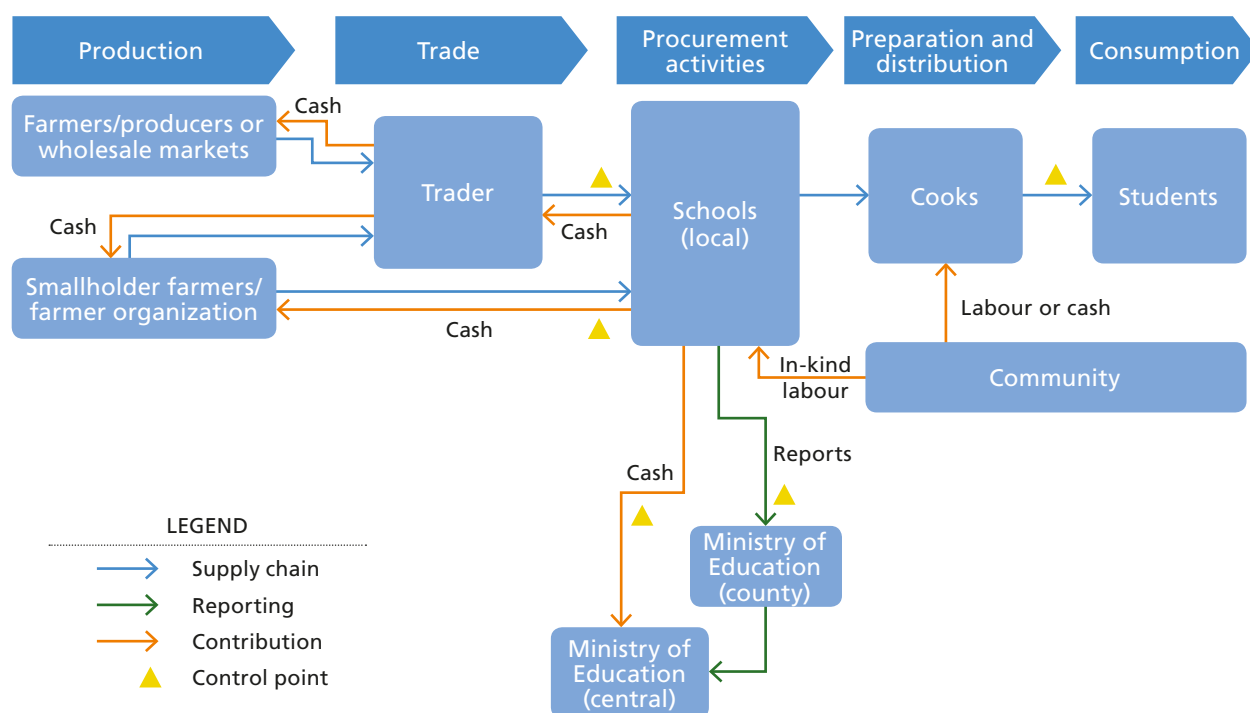
In the Kenyan model, funds are transferred to schools according to the number of students enrolled. A school meals sub-committee, which includes parents, carries out a public tender process and procures food for each term from local farmers or traders.

Considerations: The recent changes to school feeding in Kenya occur at a time of – and in part respond to – substantial changes in administrative processes, decentralization of government functions and development of parallel processes to ensure compliance and good governance. In addition, the current HGSF model is highly appropriate in productive agricultural zones, but needs to be adapted to the unique needs of arid areas, and to the range of other contexts between agricultural and arid zones. Interventions include direct links to the productive sector in semi-arid areas,

⁹⁸ Aboah, Commandeur and Casey, 2016.

⁹⁹ Vera, Commandeur and Casey, 2016.

FIGURE 8 Kenya's decentralized HGSF operating model



Source: authors' elaboration.

improvements to market access, and a degree of relaxation and amendment of regulations for the registration of food suppliers.

Parents' involvement in school management committees, and subsequently in the sub-committees responsible for school meals, is one aspect of these changes, with a view to increasing transparency, including parents in decision-making and improving standards. Regular market analysis helps to ensure that schools are provided with adequate funding based on prevailing market prices.

School meal committees can start the procurement process only when the funding for school meals throughout the term has arrived in the dedicated school bank account. As the flow of funds from the National Treasury to the Ministry of Education and on to the schools' accounts often entails delays, school meals are often not provided until well into the school term. In addition, school meal committees have to adhere to general public

procurement rules, with no provisions for targeting smallholder farms or giving them preferential treatment in procurement decisions, which means that most food is purchased from traders. Apart from these limitations, the model functions well and ensures strong involvement of parents through the school meal committees.

Summary of risk analysis: In the decentralized model, adherence to government standards for food storage and quality must be ensured through close collaboration between schools and the public health officials who undertake food quality assessments at suppliers' stores and in schools.

The risk of mismanagement of the funds transferred to schools is mitigated by ensuring transparent communications regarding the programme, what it provides to schools and procurement entities, and what the resources are meant to cover. Such communications result in students and parents knowing at all times what the programme plans to deliver, giving them not only a sense of ownership,

but also the possibility of assessing whether what is actually provided corresponds to what was foreseen. Communications, combined with a toll-free hotline open to all stakeholders, strong oversight and the full involvement of parents in food procurement and management processes, reduce the risk of transferred funds being used differently from planned.

Control points are shown as yellow triangles in **Figure 8**:

1. The funds transferred to schools through the financial system are tracked.
2. The School Management Board's tendering procedures and the school's bank account are monitored.
3. School meals are monitored for quality and quantity through unannounced spot checks and other means.
4. Reporting is reconciled with funds transferred.

In addition, the amounts, timing and intended uses of the resources transferred to schools are announced transparently to parents and school committees in advance of the transfer; a telephone "hotline" enables parents, school staff, local leaders or other stakeholders to voice any concerns about waste, fraud or abuse (see Module 4) and is publicized in the community in advance of the transfer of resources; and appropriate action is taken in response to hotline complaints.

Annex 7 provides additional examples of HGSF operating models with a short description of each model, an illustration of relations and resource flows within the model, special considerations, a summary of risk factors and a list of control points:

- ▶ centralized model: Bhutan;
- ▶ semi-decentralized models: Togo, Tunisia; and
- ▶ decentralized models: Haiti, Mozambique.

d. Transport

Transport and logistics requirements have to be considered with a view to ensuring that they do not prevent smallholder producers from participating in an HGSF programme. Smallholder producers and their organizations often have limited capacity to transport their products, which is one of the main operational barriers for smallholder producers' access to government food procurement schemes. It may therefore be necessary to adapt delivery

conditions for the supply of food from smallholder producers, at least until their transport capacity has been strengthened, for example, through complementary support or as an effect of smallholders' increased market participation and income opportunities.

Adaptations will depend on the HGSF operating model used, the type of products – fresh products, grains, etc. – and other factors. Possible adaptations include extended delivery times, delivery to collection points or distribution centres, and the inclusion of delivery costs in product prices. A number of considerations are outlined in the following paragraphs.

Short food supply chains: To the extent possible, an HGSF programme should seek to establish more direct relationships between farmers and consumers and enable farmers to obtain higher shares of the value of final sales prices. For fresh foods, such as fruits and vegetables, short food supply chains also help reduce the food losses that can occur in lengthy supply chains. HGSF programmes therefore typically aim to ensure geographical proximity among producers, processors and consumers. This reduces transport distances and requirements compared with conventional food supply chains. There are many different types of short food supply chain, including direct purchase at the farm-gate or at farmers' markets, collective direct selling, establishing food chains with just one intermediary, collective catering, or the involvement of shops and supermarkets that prioritize local procurement. Developing short food supply chains improves the competitiveness of smaller, more local producers.

Separate contracts: Challenges related to transport need to be assessed through logistics and cost feasibility analysis of both sellers and buyers. For sellers, an appraisal will need to assess whether it is feasible for targeted small-scale suppliers to deliver produce directly to buyers or to an agreed pick-up point using their own transport, public transport or privately rented means. Small-scale sellers may or may not have the capacity or contacts to coordinate the required arrangements, and may require the support of farmer organizations, the buyer or a supporting intermediary, with incurred costs factored into selling prices.

It may be more feasible, in terms of both costs and organizational arrangements, for buyers to transport directly from smallholders or from an agreed and viable designated point close to farms. However, although such arrangements may be logistically feasible, the added costs to the overall procurement process will need to be factored into the feasibility assessment to ensure that the business model is sustainable in the long term when project or programme support subsidies have been withdrawn.

For this reason, any of these transport options should be accompanied by activities for strengthening the capacity of smallholders and their organizations to ensure adequate transport, and remuneration for delivery should be included in the final price to be paid. Longer-term food procurement contracts between farmer organizations and an HGFSF programme can provide a good basis for such efforts to increase transportation capacity by reducing risks and justifying some necessary investments.

Good practices: Adequate handling of food products throughout transport and storage plays a critical role in food quality and safety. Products must be kept cool and dry, free of dust, moisture, odours and various rodent and insect pests, and at suitable temperatures. Quality control or inspection is therefore required in order to ensure that products and packaging are not damaged, broken or bent during transport. For HGFSF, good practices for enhancing the safe handling of food during transport include:

- a. ensuring cold chain transport and storage where possible – for example, freezing meat, and keeping milk, fruits and vegetables at chilled temperatures;
- b. using baskets to protect fruits and vegetables from tissue damage, and post-harvest losses more generally;
- c. transporting milk in stainless-steel containers that can be cleaned;¹⁰⁰ and
- d. wrapping, covering and protecting products adequately – using hermetically sealed bags and containers where feasible, especially for grains and dry legumes.

¹⁰⁰ The use of plastic containers can result in high post-harvest losses and health risks because pathogenic bacteria can hide in damaged plastic surfaces: Opinya, 2017.

Because of the diversity of products and conditions – climate, moisture, harvesting practices, etc. – it is not possible within the scope of this resource framework to include all the good practices for transport and storage. WFP is preparing a food quality and safety manual for HGFSF, which takes into account the diversity of situations and programmes worldwide.

e. Complementary support for smallholder farmers

The previous subsections focused on design features of HGFSF programmes that can facilitate links between smallholder producers and school feeding programmes:

- ▶ the choice of foods to be included in the programme, in accordance with nutrition quality criteria, favouring food that smallholders have the actual or potential capacity to provide;
- ▶ the targeting of specific groups of smallholder farmers and processors;
- ▶ the regulatory framework for procurement;
- ▶ the operating model for the HGFSF programme; and
- ▶ the transport and logistic requirements.

While all these measures are necessary, in many cases they may not be sufficient in enabling smallholders to participate in an HGFSF programme because of other underlying social, market and rural and agricultural development constraints.

Such constraints arise not only in food-deficit regions or for the poorest smallholder farmers or food buyers' households. Even farmers who already produce and sell surplus agricultural outputs are sometimes constrained by limited market information, limited liquidity, poor storage, processing and logistics infrastructure, limited access to technology and knowledge, etc. Such constraints are common for farmers in the global South, not least because of the broader spectrum of family farmers in terms of human and economic development, labour productivity, agricultural surplus production and marketing capacity.

HGFSF programmes must consider how best to link to complementary interventions that address such constraints with a view to fostering mutually reinforcing elements of demand- and supply-side support. Such interventions should be designed and implemented under the leadership

or coordination of the ministry of agriculture and other relevant stakeholders. As a starting point, an HGFS programme should identify agricultural programmes and development strategies with

which it can coordinate or interact. [Table 7](#) provides examples of typical supply-side interventions to support smallholder producers that could complement HGFS.

TABLE 7
Examples of complementary supply-side support interventions for HGFS programmes

	HGFS SUPPLY CHAIN			
	Production	Post-harvest	Processing	Marketing
Infrastructure	<p>Farm irrigation systems allow production outside rainy season</p> <p>Greenhouses allow the production of vegetables throughout the year</p> <p>Fences facilitate livestock and pasture management</p>	<p>Storage and drying facilities on farms maintain quality and reduce food losses</p> <p>Rural road maintenance and primary aggregation points/storage facilities facilitate rapid aggregation and prevent long exposure of food to adverse weather conditions</p>	<p>Processing and fortification facilities near procurement/catchment areas allow purchases of minimally processed food such as husked rice, reducing preparation work at schools or extending the shelf-life of certain products</p> <p>Access to electricity and potable water supports processing steps and helps maintain food quality and reduce losses</p>	<p>Rural road maintenance contributes to preventing the disruption of marketing and supplying for HGFS</p> <p>Storage facilities managed by farmers/sellers or buyers can facilitate bulk purchases</p>
Productive assets and inputs	<p>Land titles and legally supported land rights reduce the risks of investing in higher-quality and larger quantities of food production</p> <p>Targeted input subsidies facilitate access to improved seeds and fertilizers in regions facing market failure</p> <p>Cultivation, harvest and pre-processing machines increase production and productivity</p>		<p>The use of processing, packing and weighing machines, etc. can improve productivity, the volumes of aggregated food to be sold and food conservation</p>	<p>Transport facilities managed by farmer organizations or private or public service providers are essential in avoiding disruptions in supply</p>
Services, technologies and knowledge	<p>Crop breeding, agronomic, food science and food technology research programmes complemented by extension or rural advisory services facilitate the adoption of improved technologies to enhance productivity, quality, sustainable agronomic management practices, processing and conservation</p> <p>Collective action may improve efficiency and promote economies of scale for land cultivation, food aggregation and food transformation</p> <p>Public information on prices reduces asymmetries of information and facilitates decisions throughout the production process and along the supply chain</p>		<p>Collective action may promote economies of scale and contribute to farmers' bargaining power</p> <p>Public information on prices and public contracts and procurement rules reduce asymmetries of information</p>	
Financial services	<p>Credit can help farmers, processors, aggregators, etc. cope with liquidity constraints, allowing them to invest in production technology and productive assets</p> <p>Insurance may protect and support farmers, processors and aggregators, enabling them to cope with extreme climate events or shocks in supply or demand shocks, such as excessive price volatility and fluctuations, reducing the risks of investing in productivity and quality gains in order to supply HGFS or other markets</p>			
Business environment	<p>An enabling business environment that encourages private investments in the various stages of value chains and enables smallholders to link to markets can include enacting laws and regulations for the economic organization of farmers and small and medium enterprises, food safety, public budget transparency and accountability, taxes and other areas</p>			

When an HGSF programme is complemented by another programme that is being implemented in the same geographical areas, such as a productive safety net to support communities in cultivating more land, securing forage, harvesting and storing water or securing soils, both programmes can benefit: the communities and farmers participating in the safety net activity can obtain access to the HGSF market for their produce, helping them to sustain their activities and ultimately graduate from public support; while the HGSF programme can depend on smallholders with increased and more reliable production capacity.

When HGSF is complemented by other programmes that strengthen the capacity of farmers to increase their production of quality and diverse food through improved agricultural techniques and access to services and inputs, smallholders can gain access to other markets beyond the HGSF programme.

The optimal mix of interventions will differ among countries and even among subnational areas, as it depends on the HGSF programme's objectives, the specific context and the specific needs, strengths, threats and opportunities, which should be analysed. While the holistic approach of combining HGSF with complementary interventions can be powerful in yielding multiple benefits, it may require the formulation of new or the adaptation of existing policies, and well structured coordination mechanisms among the various actors involved in different sectors in order to achieve the intended results.

3.6 GENDER CONSIDERATIONS

The overall impact of social protection on food security and poverty reduction can be enhanced by explicitly considering the role of women during targeting and programme design. While gender inequalities in decision-making and control over household income persist in many countries, evidence consistently shows that families benefit when women have greater status and power within their households. For example, when women have more influence over economic decisions, families allocate more income to food, health, education, children's clothing and children's nutrition.¹⁰¹

Women are crucial actors who contribute significant shares of primary production and play essential roles along the food value chain and in the marketing of food products. However, in many parts of the world women face specific constraints that put them at a disadvantage in relation to men. Inequities are often reflected by the fact that women work longer hours than men, receive lower salaries and/or lack access to and control over resources, particularly land, income, productive assets, financial capital or credit and education. Often these constraints may reinforce one another, creating a vicious circle of women's subordination, to the detriment of families, communities and societies.

Women's roles in agriculture vary within and among regions and countries, ethnicities, classes and ages. As women are not a homogeneous group, it is difficult to target women in agriculture in general. However, to address gender inequalities and help unleash the productive potential of women, ***it can be helpful to articulate and integrate a gender strategy into HGSF programmes.***

For such a strategy, it is useful to distinguish two operational approaches:

- ▶ A **gender-aware** or **gender-sensitive** programme understands and takes into account gender differences in roles and access to resources, but does not seek to challenge the current situation. The programme addresses and deals with the effects of gender-specific constraints without aiming to contribute towards addressing the causes of the issues that affect women. Such a strategy may contribute to changing gender relations in expected or unexpected ways, and can have both positive and negative impacts on women.
- ▶ A **gender-transformative** programme explicitly aims to address unequal gender relations and the structural constraints to women's empowerment.

Gender aware/-sensitive and gender-transformative approaches are not mutually exclusive. Not all programmes need to be gender-transformative.

A gender gap analysis helps to identify the constraints facing women and men in a specific context and to determine which approach to use in order to achieve the intended objectives. Based

¹⁰¹ Van den Bold, Quisumbing and Gillespie, 2013; Holmes and Jones, 2013.

on the results of the analysis, it may be decided not to address the root causes of women's lack of empowerment, but rather to support women in participating in an HGSF programme by addressing the effects of their disadvantaged position. Such an approach could imply, for example:

- ▶ supporting the capacity of farmer organizations to mainstream consideration of gender issues or to have gender quotas, ensuring that women benefit from their membership and have a voice in decision-making processes within the organization;
- ▶ supporting gender-sensitive capacity development such as training that is that is carried out in the local language(s) most familiar to women, which is often not the official language of the country, and adapted to women's needs, for example, by being conducted at times and in ways that are compatible with their women's caring and domestic responsibilities; and
- ▶ increasing access to capital to invest in women's productive activities, for example, through facilitating women's access to inputs, technology and additional labour on their farms, preferably on a revolving-fund basis.

Governments can also use HGSF to address specific structural constraints to the empowerment of women at the local or national level. In such cases, the HGSF programme should form part of an enhanced approach and wider effort and should include explicit goals for gender transformation. For example, **policy interventions** can help close the gender gap in agriculture and rural labour markets. Priority areas for reform include: i) eliminating discrimination against women in access to agricultural resources, education, extension and financial services and labour markets; ii) investing in labour-saving and productivity-enhancing technologies and infrastructure to free women's time for more productive activities; and iii) facilitating the participation of women in flexible, efficient and fair rural labour markets.¹⁰²

HGSF can play an important role in **enhancing economic opportunities for women**¹⁰³ by

facilitating increased participation of women in government procurement, and as a tool for enhancing women's economic opportunities, not least through purchases from smallholder processors as food processing can be an important entry point for promoting women's economic empowerment.

Women's entrepreneurship and employment:

As an extension of food preparation at home, women often engage in commercial activities related to food processing, for example, by preparing more food than required in the household in order to generate extra income by selling the surplus. In many cases, the labour-based processing of food is a collaborative effort that women perform together. This facilitates the formation of more structured groups that aim to increase efficiency, process larger quantities to benefit from economies of scale and engage in more specialized marketing through the pooling of resources. By including processed food in its food basket (see [subsection 3.5a](#)), an HGSF programme can help local processors, particularly women and women's groups, to gain access to credit under better conditions and to institutional markets under favourable contracts. This can be vital in empowering local processing groups to play an increased role in food aggregation and transformation.

Paid employment can be an important mechanism for empowering women and also conferring benefits on families and society as a whole. Particularly in countries where cultural habits are restrictive, food processing industries and school feeding programmes provide job opportunities for women.

3.7 ENVIRONMENTAL CONSIDERATIONS

An HGSF programme can also choose to promote agricultural practices that are more environmentally friendly than others. For example, by establishing specific criteria for the use or prioritization of organic or agroecological products, an HGSF programme can support forms of agricultural production that ensure environmental sustainability while also providing healthy food that is biodiverse and free from pesticides. A number of examples of such programmes exist at the national level, such as in Brazil and Bolivia (see [subsection 3.5a](#)), while a larger number of cases are emerging at the municipal level. Through such institutional demand, HGSF has

¹⁰² FAO, 2011a.

¹⁰³ ITC, 2014.

the potential to have a positive influence on water and land use, biodiversity and climate change.¹⁰⁴

Potential food procurement criteria for HGSF can favour, for example:

- ▶ Low-impact production methods with reduced carbon inputs and greenhouse gas emissions;
- ▶ organic production;
- ▶ agro-ecology and practices that promote biodiversity; and
- ▶ enhanced animal welfare.

Initiatives for incorporating environmental considerations and sustainability criteria into school feeding programmes build on systems that guarantee the quality and/or organic origin of the produce. A range of approaches have been followed to achieve this, including national registries of agroecological producers, such as Brazil's, organic certification and criteria for environmentally sustainable food. HGSF programmes could start by assessing the production of organic, agroecological or sustainable food by local smallholder farmers, including adherence to any certification or other quality assurance schemes, and use this assessment in discussions with local smallholders and schools about which schemes could work in their context and which support they would need to implement such schemes.

When integrating environmental considerations into HGSF, decision-makers should:

1. consider the range of available systems for guaranteeing the quality of produce – organic certification, agroecological farm registers, participatory guarantee systems, etc. – and decide on the most suitable option;
2. consider how to support farmers – for example, through complementary programmes (see subsection 3.9) – in developing the capacity for organic and agroecological farming, quality assurance, etc.;
3. establish synergies with policies and programmes for organic, agroecological or other forms of sustainable agriculture as relevant, including policies for promoting biodiversity and climate change adaptation;
4. provide education for teachers, catering staff, parents, schoolchildren and the wider

- community on the benefits of organic and agroecological food and farming; and
- 5. work closely with smallholders and planners to incorporate local biodiversity into school menus.

3.8 RISKS

Major risks for school feeding and HGSF programmes to assess and manage are those to food safety and quality. Other risks that are highly relevant to HGSF include:

- ▶ failure of smallholders to fulfil contracts, for example, because they obtain quicker payments elsewhere;
- ▶ failure of smallholders to deliver food in the required quantities or quality;
- ▶ failure of a farmer organizations, for example, because of governance issues;
- ▶ general crop failure, for example, resulting from drought or pests;
- ▶ conflict; and
- ▶ temporary breakdown of storage or transport infrastructure, etc.

This section focuses on the questions of how to assess different risks and how to design a risk management strategy.

a. Risk assessment

As risks vary according to the context, a specific risk assessment should be carried out prior to implementing an HGSF programme. Risk is defined as the product of **hazard probability** and **hazard impact**.

The potential *impact* of a commodity risk can be rated according to the *number of people* who would be affected by a hazard – for example, the impact would be higher with processed food that is distributed to all the students covered by a programme than with fresh vegetables that have exceeded their shelf-life at one school; and the *severity of the hazard* for the individual – for example, the impact would be lower with unpleasant taste than when consumers risk serious poisoning and sickness.

A risk assessment can be conducted by assessing for each hazard the level of its *probability*, ranging from very unlikely to very likely, and the *severity* of its impact, ranging from negligible to critical. The

¹⁰⁴ Fitch and Santo, 2016; Foodlinks, 2013.

results can then be plotted on a “risk heat map” such as the one shown in [Figure 9](#).

The more serious the risk is, such as the risk incurred by using a certain food, the more specific and rigorous the measures required to manage it: principally to protect students from any health hazard, but also to ensure business continuity in case smallholders fail to deliver, for example.

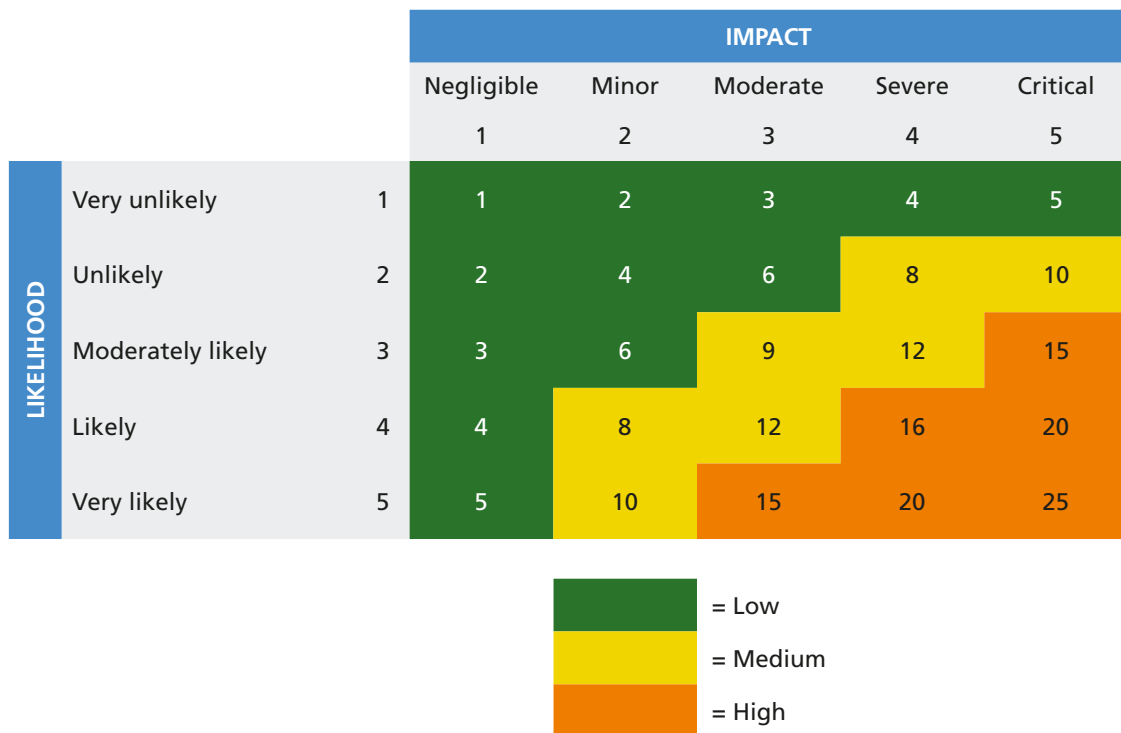
b. Risk management

The specific risks for food safety and quality and ways of addressing them are described in detail in subsection 3.4 on food safety and quality. In addition to these general food safety management tools, programme designers can include a specific set of activities aimed at strengthening the capacity of national actors to effect reliable quality control and assurance. Prior to entering a procurement contract, an assessment of the producers/manufacturers/suppliers’ capacity to adhere to such requirements should be carried out. If possible, local or national authorities should be responsible for inspection and

enforcement of food quality and safety standards and of quality management systems. Where this is not possible, the food purchaser or a contracted third party organization should carry out periodic inspections of farms, audits of processing lines etc. Where required corrective actions need to be put into place and capacity built among farmers or manufacturers to eliminate or reduce risks to an acceptable level. Programme designers and managers should ensure that relevant guidelines that set clear criteria for accepting or rejecting food deliveries are documented and that the people responsible for purchasing/receiving food apply them rigorously. The people in charge of these tasks have to have the necessary attitude, tools and skills to follow these practices, which provides an argument for recruiting staff, such as cooks, who have health certificates and can be trained to be in charge of these tasks, rather than using community volunteers to prepare meals on a rotating basis.

To manage the many risks related to the **capacity or willingness of smallholder producers** to

FIGURE 9 A generic risk heat map



Source: authors’ elaboration.

deliver contracted food in the required quantities and quality, there are as many measures as there are underlying reasons for their probability – programme designers have to base their decisions on the risk assessment.

In all cases, it is helpful to have a fall-back plan for ***sustaining the programme if smallholders (temporarily) fail to deliver***. Programme designers can establish clear contingency plans, agree on clear criteria for invoking these plans, including who should do so, and develop a set of standard operating procedures to help make the switch to the fall-back plan smooth and swift.

To manage the general risk of inefficient use of funds and ensure full transparency in all transactions, an adequate financial accounting and reporting system must be established, relevant staff trained in its use, and its use carefully monitored.

Such measures can be complemented by the creation of school-level food management committees consisting of parents, teachers and student representatives, which can monitor aspects of the programme such as allocations and deliveries of food and food quality and report on successes and challenges. Food management committees provide checks and balances to make sure that no group is overburdened or disadvantaged. They can also form a powerful political tool for advocating for more resources, where needed. The establishment of a parallel feedback system that is open to anyone with an interest in the programme can also be considered (see [Module 4](#)).

3.9

SYNERGIES WITH OTHER PROGRAMMES

Synergies with supply-side programmes for strengthening the capacity of smallholder actors to participate in the market offered by HGSF are discussed in [section 3.5](#). This section focuses on other programmes with which HGSF should seek synergies in order to maximize the benefits of both programmes.

School feeding programmes are best designed and implemented as part of an integrated package of interventions that address the nutrition and health needs of school-aged children. In addition, HGSF

programmes can constitute major social safety nets, which can maximize their potential benefits and improve their financial sustainability if they are well integrated into larger social protection schemes.

Long-term HGSF strategies alone will not be sufficient to address malnutrition sustainably and at the national scale. For this, complementary strategies need to be adopted in close collaboration with the ministry of health, such as mandatory (bio-)fortification, supplementation and use of micronutrient powders.

Like any school feeding programme, HGSF can provide a platform for delivering other services and reaching schoolchildren, promoting knowledge and innovations, and strengthening relevant capacities of households and communities, including health-oriented interventions such as deworming, WASH and nutrition education. These might require policy advocacy and they provide opportunities for public-private partnerships.

In addition, school feeding should always integrate a strong *food and nutrition education component* that uses a “whole school” participatory approach to enable the development of children’s capacities and motivation for healthier food-related practices. Successful food and nutrition education involves providing children, school staff, communities, families and local smallholder farmers with hands-on learning experiences tailored to facilitating the voluntary adoption of healthy eating. In many communities, schools are the only place where children can learn such basic life skills. Linking classroom learning to practical activities that are reinforced by a nutrition- and health-friendly school environment and involve the participation of families and the school community, provides a wide range of practical, community-based learning opportunities aimed at creating positive attitudes, skills and behaviours.

Practical examples of such interventions include the following:

- ▶ Routine deworming campaigns in cooperation with the ministry of health should accompany any school feeding programme.
- ▶ A school garden, where children can learn how the food included in their meals is grown, can provide a learning platform for promoting better nutrition and good diets

while teaching about nutrition-sensitive crops and smart agricultural practices. The food grown in such gardens can also supplement school meals, but the gardens should focus on education rather than agricultural production, as a focus on production would risk overburdening schoolchildren with agricultural chores or distract teachers and students from their educational responsibilities. Educational school gardens can, however, be instrumental in bringing knowledge and practical skills to children, their families and the wider community.

- ▶ Securing safe drinking-water, hand-washing outlets and adequate sanitation for girls and boys is important: these require large investments, but are necessary in addressing immediate health and nutrition concerns and helping children to acquire healthy habits, such as routine hand-washing before eating, which they can continue for the rest of their lives, including when they become parents.
- ▶ Rainwater harvesting and low-cost treatment, and fuel-efficient stoves can enable schools to save costs and convey important and innovative ways for families to improve their lives at home, too.

Other interventions may contribute to generating social transformative processes, for example, by addressing concerns regarding social inequity or exclusion and women's role in agriculture or access to land. Even broader benefits can be pursued by promoting innovations or behaviour change concerning climate- or nutrition-sensitive agriculture.

Synergies among different relevant programmes require cooperation and coordination among the various stakeholders at the policy as well as the implementation level. Coordination, together with improved planning, will help ensure focus and more efficient use of resources. To achieve this, it is advisable to establish and maintain a strong information system that collects information and data on production, productivity and challenges. Agricultural extension services in particular would benefit significantly from coordination among actors and from having a strong information management system in place.

3.10

BUILDING AN ENABLING ENVIRONMENT FOR HGsf

The previous sections of Module 3 show, how different design aspects can be adapted to the specific conditions in which HGsf will take place.

This subsection focuses on possible ways of enhancing relevant existing capacities by complementing an HGsf programme with specific activities. The section is organized according to five recognized dimensions of capacity:¹⁰⁵

- ▶ the national policy and regulatory framework;
- ▶ mandated and accountable institutions and coordination;
- ▶ stable and predictable funding;
- ▶ adequate programme design and implementation; and
- ▶ the roles of non-state actors, including community participation.

a. Policy and regulatory frameworks

Policy coherence

Institutional and policy development is usually a gradual process. HGsf can be progressively consolidated to mainstream HGsf approaches, ensure their sustainability and facilitate coordination and broad participation.

The articulation of HGsf in national policy and legal frameworks varies among countries. However, the integration of HGsf objectives into national development plans and relevant sector policies and strategies and laws is particularly important. These documents articulate national priorities and the roles of different interventions in addressing them, outline the commitments made by different sectors and provide a framework for resource allocation and accountability. It is crucial that governments ensure policy coherence, particularly between welfare improvements and pro-poor agricultural growth. Policy instruments also need to complement each other at different stages of market development.¹⁰⁶

¹⁰⁵ See for example, the SABER SF tools available at: <https://openknowledge.worldbank.org/handle/10986/26517>; Bundy *et al.*, 2009.

¹⁰⁶ Sumberg and Sabates-Wheeler, 2010.

Policy coherence is important in making explicit the aim of achieving multiple benefits (see [section 1.3](#)) and in ensuring the engagement of multiple sectors and stakeholders in the development, implementation and sustainability of HGSF. For example, considering HGSF as part of a social protection scheme can better position and justify the programme in terms of cost efficiency, effectiveness and sustainability. Similarly, including HGSF in a national nutrition policy, such as for school health and nutrition, will make it easier to ensure comprehensive and complementary approaches during programme design and implementation. Policy coherence can therefore be seen as providing opportunities to address the multi-dimensional and cross-cutting social and economic vulnerabilities faced by children and their families through a lifecycle approach in order to avoid gaps and overlaps in different pro-poor and development programmes and to maximize synergies among them, thus achieving more results with fewer resources.

Of particular importance for HGSF is coherence with agricultural and rural development policies as these have a strong bearing on food availability, the development of production potential and the setting of food-related standards. Products already supported by production interventions or benefiting from broader rural development initiatives have greater chance of being successfully incorporated into school feeding in the short and medium terms. Policy coherence between agriculture and rural development on one hand and HGSF on the other is also key for geographical and sector convergence on which to base the provision of specific support to value chains, agriculture and rural development by relevant stakeholders in a comprehensive and complementary way.

Legal basis for HGSF

Once a country has defined a broad vision and strategy for HGSF, it is important to establish a policy and legal framework. To enhance sustainability, HGSF should have clear political and legal foundations that establish the legitimacy of the HGSF programme, define its purpose within the national policies of relevant sectors and protect implementation over time. A legal and policy basis for the programme also helps to strengthen accountability and the quality of

implementation. These are essential requirements for mainstreaming and bringing HGSF programmes to scale.¹⁰⁷

Typical aspects that deserve particular attention include:

- ▶ The scope and objectives of HGSF;
- ▶ definitions and guiding principles;
- ▶ rights and obligations – compliance with international law including human rights treaties;
- ▶ the institutional framework;
- ▶ nutrition standards;
- ▶ the food environment and nutrition education in school;
- ▶ food safety and quality;
- ▶ public food procurement;
- ▶ allocations and flows of funds;
- ▶ monitoring and accountability;
- ▶ nutrition standards, including national dietary or nutrition guidelines; and
- ▶ food safety, including national standards.

A legal framework for HGSF comprises a series of laws and regulations that should be conducive to supporting programme implementation and the achievement of programme objectives. Such laws and regulations include:

- ▶ constitutional provisions;
- ▶ health legislation;
- ▶ food safety legislation;
- ▶ education laws;
- ▶ social protection laws;
- ▶ administrative laws;
- ▶ procurement legislation (see [subsection 3.5b](#));
- ▶ legislation relating to producer organizations, cooperatives and other groups;
- ▶ trade law; and
- ▶ human rights legislation.

It is important to emphasize that to be effective, policies for purchasing food from smallholders need to be supported by a conducive legal framework including, for example, public procurement and contract law, health and food safety regulations

¹⁰⁷ The importance of having well-articulated national policies and regulatory frameworks for school feeding, and for nutrition and food security more broadly, is well documented. See, for example, Bundy *et al.*, 2009; Singh, 2013; Drake *et al.*, 2016.

BOX 22

BOLIVIA: AN INTEGRATED VISION THAT LINKS SCHOOL FEEDING TO THE RIGHT TO FOOD

In the past decade, Bolivia has made important progress in decreasing chronic and acute malnutrition. Its success is the result of a number of factors, including political will and an enabling legal environment:

1. In 2009, the country explicitly included the right to food in its constitution.
2. Through strong constitutional protection, the country was able to promote healthy and adequate nutrition for all people through dedicated programmes such as the National Complementary School Feeding Programme (PNACE). The strength of this programme rests in its strong presence on the ground in many areas of the country, and its integrated vision, which takes into consideration social protection issues, nutrition education and respect for local characteristics such as those of family farming.
3. Bolivia has explicitly linked school feeding to food and nutrition security in its policies and laws. The 2011 Law No. 144 on the productive, communal and agricultural revolution defines school feeding as an important means of improving schoolchildren's nutrition and access to education, and smallholders' production and food sovereignty. When the PNACE was approved in 2014, it had an effect on the development of a food and nutrition policy in which the PNACE is fully embedded, consolidating cross-sector linkages.
4. In December 2014, the country enacted Law No. 622 on school feeding, in the framework of food sovereignty and plural economy, promoting the holistic realization of the right to food. The law regulates school feeding and aims to ensure the human right to adequate food, to strengthen local economies through procurement from local family farmers, and to increase school attendance through the provision of healthy, adequate and culturally appropriate food. The Mother Earth Law and the law on the promotion and protection of breastfeeding are other examples of instruments for guaranteeing the human right to adequate food.

The process of formulating laws and policies for school feeding has stimulated political will and generated political debate and public awareness, providing further impetus for programme development. In addition, the Government, with support from international organizations such as WFP and FAO and the participation of all stakeholders, carried out a SABER exercise in 2014, which demonstrated progress made in implementing school feeding in the country and identified areas for improvement to inform the formulation of the PNACE.

More info: <http://www.fao.org/righttofood/news-and-events/news-detail/en/c/278534/>

Source: Government of the Plurinational State of Bolivia, 2014; Ministry of Education (Bolivia); FAO, 2015.

and rules relating to cooperatives and producer organizations. Sections 3.3 on menu design and 3.5 on linking smallholders to HGFSF address these issues. Where legislation and rules do not yet exist, or constitute bottlenecks for smallholders, efforts may be required to establish an adequate set of regulations and standards that safeguards public interests while allowing greater participation of smallholders.

Important actions for building an enabling environment for HGFSF:

- ▶ Ensure policy alignment and consistency.
- ▶ Develop a legal framework – particularly for public procurement – that enables smallholders to participate in school feeding markets.

- ▶ Provide support to smallholder cooperatives or informal groups in becoming legal entities, which enables them to compete in other food markets.
- ▶ Develop school feeding policies and guidelines, and procedures for mainstreaming HGFSF.

b. Mandated and accountable institutions and coordination

Institutional arrangements are the provisions within a country for managing and implementing its school feeding programme: essentially, they define how a programme is organized. Effective implementation depends on good articulation among actors in different sectors, from the central to the school levels. Non-governmental actors such as the private

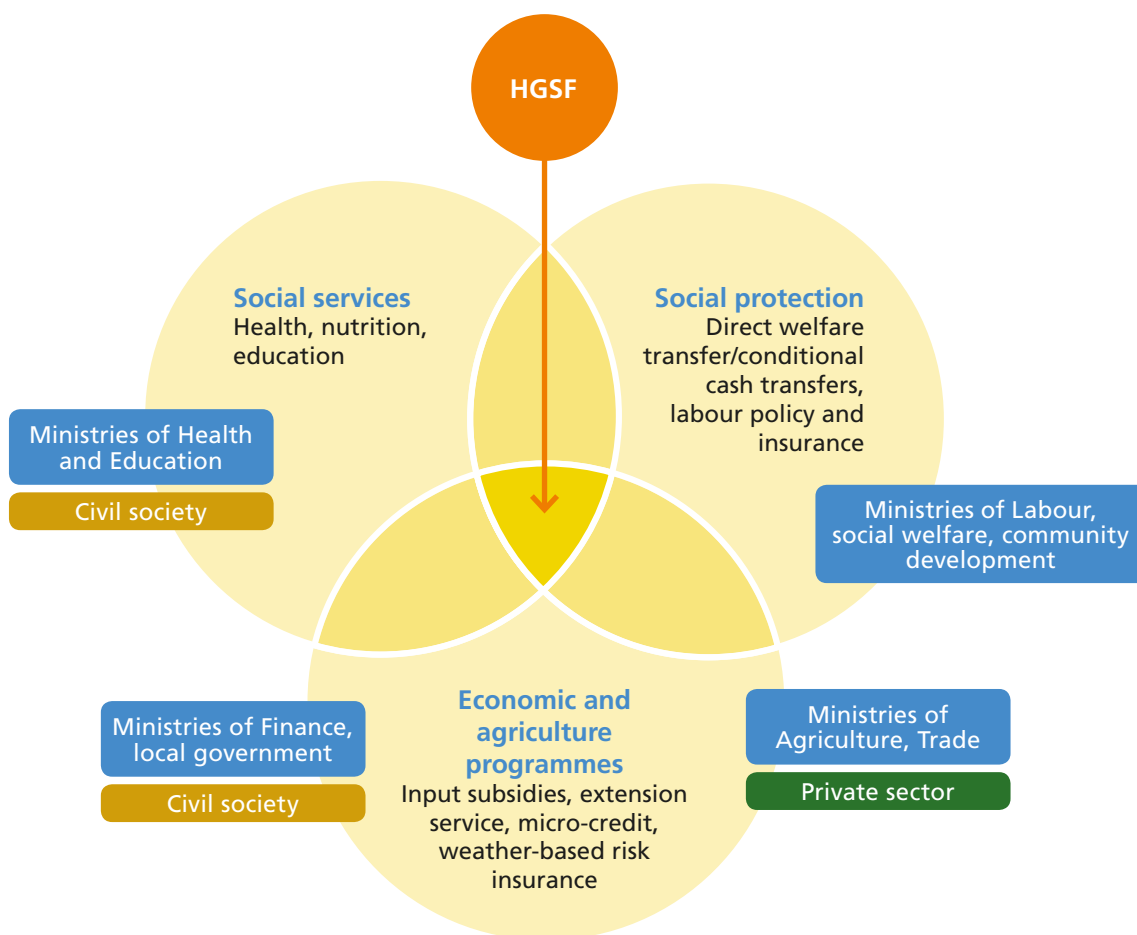
sector, international organizations and NGOs are also often involved. Defining which actor carries out which actions and how the actors coordinate their work is essential.

Establishing formal coordination mechanisms for school feeding, at both the decision-making and technical levels, is the first step towards effective coordination and engagement. HGSF is multisector by nature and requires effective links among the actors in charge of aspects of an HGSF programme or relevant to it. Good formal coordination mechanisms are a key feature for the successful design and implementation of HGSF. Within an HGSF coordination mechanism, one institution may lead the coordination process; where this institution is hosted – in the education, health, social protection or agriculture sector, for

example, or in a body that covers several different sectors, such as the prime minister’s office – depends on the conditions in the country, including the government structure and priorities.

While adequate institutional capacity and effective coordination mechanisms are crucial for any school feeding programme, the multisector HGSF often involves a wider spectrum of actors at different levels and from different sectors, including in the national government, civil society, communities and NGOs. It is therefore important to understand existing institutional arrangements, capacities and coordination mechanisms, and how best to position the HGSF programme in relation to these. **Figure 10** shows the sectors and actors that are typically relevant to HGSF.

FIGURE 10 Sectors and actors typically relevant to HGSF



Source: authors' elaboration.

HGSF programmes often build on existing programmes, and introducing an HGSF initiative can offer an opportunity to consolidate and adjust existing structures, in order to transfer procurement functions to local or subnational entities, for example. Where the development of an HGSF programme is part of the transition to a national school feeding programme, new structures for the programme may need to be established.

Consideration of the following three institutional issues is essential when embarking on an HGSF programme.

Positioning HGSF within existing sector mandates

The fact that HGSF functions in different sectors, particularly education and agriculture, is considered a strength because it widens the set of possible outcomes from HGSF. However, it can also create major challenges when creating the institutional arrangements for the programme.

Each sector tends to concentrate its efforts on achieving what its core (set of) goal(s), and consequently plans and allocates resources to these priorities. It is therefore crucial to explicitly communicate the potential contributions of HGSF to achieving goals in each sector (see [subsection 1.3](#)). Awareness raising and advocacy are thus important elements of an HGSF strategy, and it is also crucial to include HGSF in sector strategies and planning documents, as these provide the basis for establishing accountability and enable the different sectors to allocate resources to the HGSF programme.

Identifying implementation structures and defining the roles and responsibilities of cooperating ministries and institutions from the central to the local levels

Institutional arrangements are dynamic, and they are often reviewed when HGSF initiatives are introduced. Experience shows that the introduction of HGSF is often accompanied by increased decentralization or the adoption of mixed models that combine central and decentralized management, as in Madagascar and Honduras. The most conducive institutional arrangements for coordination and implementation depend on the specific context, but whatever the arrangements adopted, building on existing structures, no matter imperfect they may be, is recommended.

It is important to identify relevant implementation structures at the central, regional and local levels – i.e. structures that define how the HGSF programme will actually work. While the functions managed at the central level vary by country, they usually include policy formulation, standard setting, resource mobilization and management, overall oversight, and programme targeting, training and monitoring. In some countries, central institutions have additional implementation responsibilities, including procurement.

The normative documents for a programme, such as policies, strategies and implementation guidelines, should clarify the roles and responsibilities of different actors and institutions involved in programme implementation, including the terms of reference of mandated institutions and, not least, different coordination bodies.

Ensuring adequate coordination mechanisms from the national to the local levels

HGSF aims to optimize the use of existing resources, particularly in the education and agriculture sectors. The essential feature of sound HGSF strategies is that they leverage infrastructure and capacity from complementary programmes and sectors in order to achieve common goals without creating competition for resources. Efficient cross-sector coordination and programming are crucial in this regard. In Brazil for instance, the PNAE was linked to other programmes under the national zero hunger strategy, particularly the PAA.

Good coordination among the various institutional and non-institutional stakeholders is important in ensuring smooth planning, mobilizing and allocating human and financial resources from different departments and creating legislative and policy support for interventions.

In many cases, coordination at the central level is carried out by a steering committee or an interagency working group that includes representatives of the public sector and other important groups, national and international NGOs, civil society and development partners. The tasks of a steering committee can include advising on the policy, legal and institutional framework, approving resource allocation criteria and mechanisms, approving operational plans, and carrying out general monitoring and oversight. It is also

important to include school feeding in the scope of wider coordination mechanisms, such as those for nutrition, food security and social protection.

At subnational levels too, establishing effective coordination and collaboration among different stakeholders – such as the local representatives of government ministries, district assemblies and administrations, school management committees, parent–teacher associations, chambers of agriculture, local farmer associations, civil society and communities – is critical for allocating efforts and resources effectively and maximizing benefits.

Such mechanisms may already exist and can be broadened to assume new roles. In other cases, coordination bodies will have to be created specially at the local level.

It is also important to define the roles of partners and the mechanisms for collaboration. The institutions in charge of HGFSF at different levels, and their partners should agree on the goals to be achieved, the activities to be carried out, the contributions and obligations expected from each partner, and how progress and the achievement of goals will be monitored. These issues should be formalized, for example, through memoranda of understanding or contracts.

Important actions for ensuring coordination among mandated institutions:

- ▶ Position the HGFSF programme in sector mandates.
- ▶ Create national awareness of HGFSF, for example, through a national awareness campaign.
- ▶ Define the roles and responsibilities of cooperating ministries and institutions and draft terms of reference.
- ▶ Establish adequate coordination mechanisms from the national to the local levels, or broaden and strengthen existing ones as necessary.

c. Costs and funding

As for any school feeding programme, stable funding sources for HGFSF are critical to sustaining activities and expanding capacity over time. HGFSF requires long-term financial capacity and a willingness to invest in building adequate, effective systems that are able to achieve the multiple objectives

of HGFSF, including better nutrition and health of schoolchildren and the provision of support to smallholder farmers and local economies. The sustainable and reliable funding of HGFSF is a serious challenge for many countries.

School feeding programmes, including HGFSF, are funded in a variety of ways. Brazil, Chile, India, Nigeria and South Africa, for example, implement programmes that are funded entirely from national resources, while other countries combine national and external funding. External funding support – for example, for a pilot programme – has proved essential in supporting the transition to national school feeding programmes and developing HGFSF approaches in some countries. Although different sources of external funding can sustain a programme until national capacity is in place, in the long run it is essential that the required resources can be resourced nationally and funding secured from the national budget in the form of a budget line. Interim solutions include using other national sources of funding, such as national trust funds, as in El Salvador and Honduras.

Local resources – for example, from regional or district budgets, as in Brazil and Ghana, or in the form of community contributions, as in Côte d'Ivoire – can also contribute to school feeding programmes.

The integrated nature of HGFSF means that funding opportunities might be greater. In generating multiple benefits for several sectors (see [Figure 2](#)), an HGFSF programme should ideally be funded through multiple national sources and sectors, such as the agriculture, health, and social protection sectors, in addition to the education sector. The main purpose of a sound HGFSF strategy is to leverage infrastructure and capacity from complementary programmes and sectors in support of each other in order to achieve common goals without creating competition for resources. Efficient cross-sector coordination and programming are key in this regard. In Brazil for instance, the PNAE was linked to other programmes of the *Zero Fome* strategy, particularly the PAA.

The added benefits of HGFSF are also likely to attract greater interest from donors, including those that do not normally fund school feeding programmes. As HGFSF offers many opportunities

for increased business along the food value chain, opportunities for entering public–private partnerships in order to generate programme funding may also be greater than for regular school feeding programmes. Of particular interest to potential non-governmental funding partners are the aspects of HGSF that require specific incremental costs, such as:

- ▶ possible additional cost of food commodities sourced from smallholder farmers – balancing cost-efficient procurement with smallholder farmers' involvement is a major challenge when trying to increase the home-grown food component of a programme;¹⁰⁸
- ▶ food system assessments, other relevant assessments and market analysis;
- ▶ learning, evaluation and the dissemination of information;
- ▶ institutional capacity development – policy dialogue, workshops, staff, training, guidelines, equipment, enhanced reporting systems and financial control systems;
- ▶ support to small-scale farmers in the form of organizational strengthening, training, technology, storage capacity, irrigation systems, etc.; and
- ▶ awareness campaigns, strategies for local ownership and the involvement of local structures.

In every case, it is crucial to identify the set-up and running costs of HGSF, and to make provisions for continuous funding, ideally from national sources.

The sustainability of resources also depends on rigorous cost containment. Cost components will vary in each country and **the national cost assessment** (see [Module 2, section 2.3](#)) can help determine the cost elements of national programmes, including the costs borne by communities in order to support implementation. The national cost assessment also provides a useful framework and a list of cost categories to consider when planning an HGSF programme.

At all levels of government, effective financial management and control mechanisms are crucial. Understanding how well treasury systems

function at the national and local levels, including administrative capabilities, quality control, financial transfer and disbursement options and reporting mechanisms, is extremely important when setting up new mechanisms for HGSF or reviewing and adapting existing ones. Improving weaknesses in these areas, for example, by establishing an open feedback or complaints mechanism (see [Module 4](#)), will protect against waste and problematic delays, build trust and confidence, and contribute strongly to stable funding. The level of decentralization of the programme will in part determine the sizes and interactions of different budget lines.

Important actions for defining costs and funding:

- ▶ Identify funding requirements for the programme, including for capacity development and complementary activities; plan a multi-year budget for the programme.
- ▶ Identify the drivers of costs, through a national cost assessment or other mechanism, taking into account the effects of factors such as decentralization and pro-smallholder procurement, and find ways of reducing disproportionate costs.
- ▶ Identify complementary programmes and capacities in other sectors that can be leveraged to support common goals.
- ▶ Identify funding sources – external and domestic, from the national and subnational levels, from different sectors, etc.
- ▶ Carry out advocacy for increased fund allocations from multiple sectors by demonstrating the multiple benefits of HGSF.
- ▶ Establish mechanisms for efficient and timely disbursements of funds for implementation, building on existing funding channels to the extent possible.
- ▶ Establish new and review existing mechanisms for resource tracking and ensuring accountability.

d. Programme implementation and management

The operating model chosen, the legal framework and the institutional decisions taken define which actor will perform which tasks and where and when they will perform them for the HGSF programme to be implemented as planned. The institutional issues described in [subsection 3.10b](#) determine whether the actors chosen have the mandate and authority

¹⁰⁸ Drake et al., 2016.

to function, for example, by making the decisions required to move the programme forward. The stability of the available finances determines whether the actors are able to carry out the work required. When the necessary conditions are in place, it is also crucial that each of the involved institutions and people has the capacity required to perform their functions for implementing the programme. These functions include:

- ▶ planning and management;
- ▶ procurement and contracting;
- ▶ resource management and reporting, with accountability;
- ▶ food inspection, storage and preparation;
- ▶ monitoring of all steps in the planned work flow for the programme;
- ▶ reporting; and
- ▶ communicating.

The following variables determine the implementation capacities available.

Reliable systems that allow well-informed discussions and decision-making: Examples for this include:

- ▶ the foreseen workflow, including all streams of information, food and funds – this system can be strengthened by, for example, incorporating a detail description of the operating model into programme implementation guidelines; and
- ▶ the programme's *monitoring and reporting system*, which determines what information is collected, how it is collected and by whom and how it is analysed, presented and used for management and learning.

Accessible and manageable tools that allow implementers to work efficiently: Examples of these include:

- ▶ tools for *data collection, analysis, storage and distribution* as parts of an education management information system;
- ▶ clear programme *implementation guidelines* that set programme standards, define decision-making criteria, and explain to everyone involved exactly is expected of them; and
- ▶ *physical tools*, including infrastructure and equipment that facilitate the application of good practices in food handling, storage and preparation.

Staff: At all levels of programme implementation there has to be an adequate number of adequately qualified staff members.

The three variables are interdependent: good systems and tools mean that fewer staff members are required to ensure efficient programme implementation and that staff require fewer qualifications and previous experience to perform their tasks reliably, but even the best systems and tools are useless if staff are too few and lack the necessary capacities.

Many of these capacities already exist because staff deployed for an HGSP programme have often already been involved in the implementation of a regular school feeding programme. On the other hand, however, the switch to HGSP is often also accompanied by a greater national role in programme implementation, and will involve new tasks for national school feeding staff.

Selection of the operating model has to take into account existing capacities and also the potential of staff to increase their capacity within a limited time frame. Once an operating model is defined, potential significant capacity gaps must be identified and addressed. Cooperation with development partners can play a crucial role in this.

Important actions for programme implementation and management:

- ▶ Identify the functions to be performed by relevant actors at each level, based on the operating model chosen.
- ▶ Assess existing capacities in three areas – systems, tools and staff – and identify gaps.
- ▶ Develop a coherent programme for addressing the gaps identified, ideally in partnership with development partners.

e. Roles of non-state actors, including communities

Non-state actors include communities, farmers and processors, the private sector and civil society. Non-state actors are also the most likely to benefit from HGSP beyond the direct benefits for children enrolled in school. Farmers, processors, food handlers and cooks can contribute to and benefit from school feeding programmes in a range of ways at all stages along the value chain, from food production, processing and trading, to food preparation and distribution to children. Entire

BOX 23

COMMUNITY PARTICIPATION AND ACCOUNTABILITY IN BRAZIL

Brazil presents an interesting example of community engagement through the mechanism of social participation.

Communities participate mainly through school feeding councils, which are autonomous bodies made up of representatives from local authorities, civil society, teachers, students and parents. They have a supervisory role along the supply chain, from food purchase to food delivery to students. Their main purpose is to oversee the use of funds and ensure the quality of programme implementation.

The National Council for Food and Nutrition Security (CONSEA) has played a fundamental role in the elaboration and constant improvement of Brazil's food procurement programmes. CONSEA is a consultative forum that joins representatives of both government and civil society. It consists of civil society representatives and members of the Federal Government and offers advice on the formulation of policies and the definition of guidelines. Through the participation of Brazilian civil society, CONSEA has been a champion in the adoption of innovative programmes. It is responsible for the initial design of the PAA and numerous improvements to both the PNAE and the PAA since their first implementation.

Source: Swensson, 2015; IPC and WFP, 2013; Drake *et al.*, 2016; IPC and WFP, 2013.

communities can benefit from enhanced economic activity and improved agricultural performance through complementary and outreach activities, for example. In some places, HGSF programmes have also contributed to positive local dynamics by fostering better coordination of actors at the local level, as illustrated in [Box 24](#) on the *Mancomunidad de Alimentación Escolar de Chuquisaca* in Bolivia.

Involving non-state actors in the HGSF programme, including in decision-making, is important in ensuring long-term programme sustainability. In particular, to be successful, HGSF programmes require a high level of engagement from local communities and civil society. The more a community is engaged in the design and effective management of an HGSF programme, the higher the probability that the overall community will benefit from – and support – the programme. The type of community involvement can vary greatly depending on the supply model selected, the procurement arrangements and local capacity.

As part of a larger stakeholder engagement strategy, community engagement should start with community consultations – with farmers, households, groups, elders, women, etc. – throughout the initial assessment and programme development stages to ensure that the programme responds to the characteristics, assets and needs of the communities it serves, and the surrounding areas. Effective community consultations promote trust and increase local ownership.

A credible consultation process takes into account the fact that different groups have different roles in an HGSF programme. In this context, sensitivity to gender issues is crucial in ensuring that both women and men are adequately recognized for their respective roles in the community and their contributions to food production, handling and preparation, and that they are involved accordingly in programme design and decision-making processes at the school, community and market levels. Consultations should also consider the extent to which implementing the programme may overburden women and men, disrupting their regular activities, with possible repercussions on household care practices and income-generating activities, and increasing their unpaid workloads.

In most cases, community members will be closely involved both in agricultural production to supply food for school feeding and in purchasing, distributing and preparing the food. In Kenya, for instance, school committees formed by teachers and members of the community manage the funds received from central government to purchase the food required for the programme.¹⁰⁹

In some cases, the main roles of communities are participating in oversight and discussing public policies, establishing dialogue with government

¹⁰⁹ Detailed information on the HGSF programme in Kenya can be found in Drake *et al.*, 2016.

BOX 24

COMMUNITY PARTICIPATION IN BOLIVIA

Bolivia's school feeding programme is highly decentralized. The provision of school meals is part of the mandate of municipal authorities, which are responsible for planning and budgeting through their annual operational plans. In most cases, municipal services procure the food, but sometimes, particularly in urban areas, they outsource school feeding services to private companies. While implementation arrangements vary throughout the country, communities always play a pivotal role through social community education councils, which are composed exclusively of parents and community members and function on a voluntary basis. These councils manage and operate school feeding programmes in schools and constitute an essential control mechanism for communities. They organize the preparation and distribution of school meals and control municipalities' use of financial resources. In some cases, the community also takes part in identifying food suppliers and contributes to ensuring that small producers and minority groups participate in supplying food. Training courses have been developed for them.

Communities also contribute resources: in rural areas, parents provide fresh vegetables, kitchen equipment and cooking fuel. In some schools, they pay a financial contribution to cover cooks' salaries. They are also involved in programme design through consultations on municipal annual operational plans.

An interesting example of collaboration among actors at the local and community level is the *Mancomunidad de Alimentación Escolar de Chuquicasca* (MAECH), in an area of low population density and high food insecurity. A group of 11 municipalities formed the *Mancomunidad* in 2008 to administer school feeding in Chuquisaca, pool resources and improve efficiency. The *Mancomunidad* serves as the agency for implementing school feeding. Municipalities transfer the allocated financial resources to the *Mancomunidad's* bank account and the *Mancomunidad* technical team manages all programme implementation, including procurement, logistics, monitoring, training and oversight. It is governed by a general assembly formed by the mayors of member municipalities. The *Mancomunidad* procures the food and distributes it to community education councils. Some commodities are procured from smallholder and community organizations. This model has proved to be efficient because technical staff are available to provide advice and training to community education councils, for example, in cost analysis, priority setting and complementary activities for consolidating the school feeding service, including the promotion of local production, school gardens and fuel-saving stoves.

in order to improve and adjust policy design and implementation. In Bolivia (see [Box 24](#)) and Brazil, school feeding committees validate the accounts of school feeding programmes.

Considerations to take into account when engaging communities in HGSF include the following:

- ▶ Have a clear idea of the specific expected roles and responsibilities of the different groups, acknowledging that these may change overtime.
- ▶ Use an integrated approach that supports the engagement of and coordination among and within the different entities in the communities concerned.
- ▶ Learn from local experience and knowledge and make sure that community development principals and techniques are adhered to and included in any activity designed to support community engagement.
- ▶ Allow the time needed for community

empowerment activities to produce results.

- ▶ Allow sufficient flexibility to accommodate the special characteristics of different actors and geographical areas involved in implementing the programme.
- ▶ Ensure that the levels of contribution expected do not overwhelm communities, particularly women. Where financial contributions are expected, ensure that this does not result in exclusion of the poorest children from participation in education and school feeding.

In order for communities and civil society actors to participate actively in school feeding programmes, adequate systems need to be in place. Roles must be clearly delineated through policies and guidelines and supported by adequate training. Established mechanisms for community participation are also important. These may include parent–teacher associations, school management committees

and committees established specifically for school feeding. Some countries, including Peru, have established separate school feeding procurement committees that include community representatives. In Bolivia, communities are involved in programme planning and management, including food procurement, through social community education councils and the elaboration of annual municipal management plans in which the budgets for school feeding are allocated (see [Box 24](#)).

Another effective way of involving communities is to provide a communications system through which any community member can ask questions and voice concerns regarding programme plans and implementation, or provide feedback. Such a system can foster greater understanding of the programme among community members and contribute directly to monitoring and reducing leakages, both through providing access to

information from outside the internal monitoring system and through its effect on preventing misuse of programme resources. An example for one way of organising such a communication system is provided in more detail in [Module 4](#).

Important actions for promoting the involvement of non-state actors:

- ▶ Set-up formal mechanisms for community participation.
- ▶ Discuss and agree on clear roles and responsibilities for communities, while maintaining a flexible approach.
- ▶ Identify activities and funding requirements for building local ownership and the capacities of local structures, for example, through community awareness campaigns, training, production of guidelines, experience sharing and coordination.

MODULE 4 MONITORING, REPORTING AND EVALUATION



Reliable and timely monitoring and reporting are essential to ensuring the efficiency, effectiveness and sustainability of a programme. Specifically, good monitoring and reporting serve to ensure:

- ▶ accountability for the use of resources;
- ▶ learning, in order to inform targeting and management decisions and continuous improvements in the efficiency and effectiveness of the programme; and
- ▶ generation of evidence of achievements, which forms the basis for successful sustainable resource mobilization.

Consistent monitoring of and reporting on relevant indicators forms the basis for regular in-depth evaluations.

As HGSF programmes are ***cross-cutting programmes with multiple goals*** in the short, medium and long terms, it is important to develop a monitoring system that can capture and measure the various objectives of the programme. An HGSF programme normally combines the objectives of a school feeding programme – for example, education, nutrition or safety net outcomes – with additional goals related to the home-grown aspects of the programme, such as smallholder farmers' access to and participation in a stable market and nutrition outcomes for their households and the community.

In HGSF programmes, community participation creates additional opportunities and challenges. There is need for proper monitoring of community participation in order to ensure that standards and regulations are respected and that programme managers at the central level can keep track of what is happening countrywide.

When information gathered by a monitoring system is analysed, summarized, presented to decision-makers in concise and timely reports and shared with relevant stakeholders it is a powerful tool for gaining and sustaining support for an HGSF programme. The benefits of such analysis and reporting will be most immediate if there is clear demand from the political leadership and the higher levels of management for such reports, and for their quality and timeliness. Without this demand and support, information analysis and reporting will be more challenging in the short term, but experience shows that they will nonetheless be valuable for

justifying programme modifications, demonstrating progress and making at least core information available when political leaders need the data. Too often, a lack of attention to the programme data needed by leaders at the outset of a programme results in an inability to produce information when it is required at a later date.

To increase the reliability and timeliness of monitoring and reporting, governments should consider the use of modern data and information management systems that avoid the inefficient reporting chains resulting from repeated manual data entry and aggregation. Such systems are becoming increasingly affordable and technically feasible and allow timely and more accurate information collection, analysis and reporting.

At regular intervals, an in-depth programme evaluation should analyse the relevance, coherence, efficiency, effectiveness and sustainability of the programme. Such evaluations should be based on existing monitoring reports produced by the programme, and be conducted by a qualified, respected and objective evaluation team or organization. The evaluators should triangulate their findings from reviewing monitoring reports with additional information obtained through site visits, interviews with key informants at the school, community and administration levels, and consultations with relevant partners. Any evaluation should aim to analyse observed developments in order to formulate concrete and constructive recommendations for the future design, integration and implementation of the programme.

Any HGSF programme should secure adequate resources to ensure continuous reliable, quality and timely monitoring and reporting and periodic evaluations.

This module falls into two parts:

1. The first part explains the generic considerations to be kept in mind when designing the monitoring and reporting system for an HGSF or other programme.
2. The second part proposes a number of HGSF-specific outcome and output indicators, which could be covered by the monitoring and reporting system.

4.1

THE MONITORING, REPORTING AND EVALUATION SYSTEM

The design of the monitoring and reporting system for an HGSF programme should be led by the government and guided by, for example, a working group of technicians from core ministries with support from a credible local academic institution or an international partner such as a South–South cooperation or other development partner.

The design process can be structured around four aspects in order to ensure relevant content, quality and effectiveness of the monitoring and reporting system:

- ▶ **the information needed, and why** – the underlying logic, intended outcomes, indicators and target audience(s) for the information and what they need or want, and the purposes that the data to serve;
- ▶ **the sources, tools and systems needed in order to obtain this information** – styles of and tools and systems for data collection, transmission and flow, cleaning and storage; consideration of the human dimensions such as the credibility of the people involved, the demographic profile of the populations surveyed, and any necessary adjustments to languages, data collection methods and profile of interviewers in order to ensure an appropriate cross-section in sampling and avoid data distortions resulting from interviewer, language or other biases;
- ▶ **making the information obtained useful** – data and information aggregation; access issues, for example, whether the data are available to anybody through open-source access, and if not, who has access?; analysis and storage; and format of reports; and
- ▶ **presenting, sharing, learning from and using the information** – the audience(s), presenter(s) and options for presentation formats and the credibility of the presenter, presentation and use of the information.

System design should also consider the potential for integrating the HGSF monitoring and reporting system into other national records, such as a wider national unified registry for social protection schemes, the ministry of agriculture’s records regarding supply and demand issues, and databases that track data on gender.

In line with the four aspects mentioned above, the system can be designed in four steps, keeping each aspect as simple, clearly defined and closely linked to core data needs as possible:

Step 1 Intervention logic: Based on the specific objectives of the programme (see [section 3.1](#)), decide which information should be captured by the system. For each objective, one or more outcomes and corresponding indicators should be identified, and for each outcome, one or more outputs with corresponding indicators. At this stage, decision-makers in the country need to decide whether to *revise an existing* monitoring and reporting system for an ongoing national school feeding programme in order to cover HGSF aspects, or to *design a new system* to capture only the additional HGSF aspects. WFP has developed useful outcome and output indicators for school feeding programmes, and a number of potential HGSF-specific outcomes and outputs and their respective indicators are proposed in the following section of this module. The type of information to be fed into the system also depends on the *demand* for such information (see [Step 4](#)).

Step 2 Data collection tools and systems: All relevant stakeholders, including ministries, should be involved in this stage. The design of data tools and systems can start with the drawing up of a chart showing the desired flow of information from its initial collection to the points at which it is subject to quality control, aggregation, analysis, storage and reporting. Fundamental decisions at this point include the extent to which a paper-based system where information “trickles up” – with numerous potential sources of errors, omissions and non-compliance – can be avoided by using a more direct, electronic and, ideally, online system. Once the desired overall flow has been decided, specific data collection tools such as paper forms and electronic interfaces can be designed. Also at this stage, specific actors and their roles and responsibilities have to be identified. The design of the system should be clearly explained, ideally as part of the HGSF programme’s operational guidance.

Step 3 Monitoring and reporting capacities:

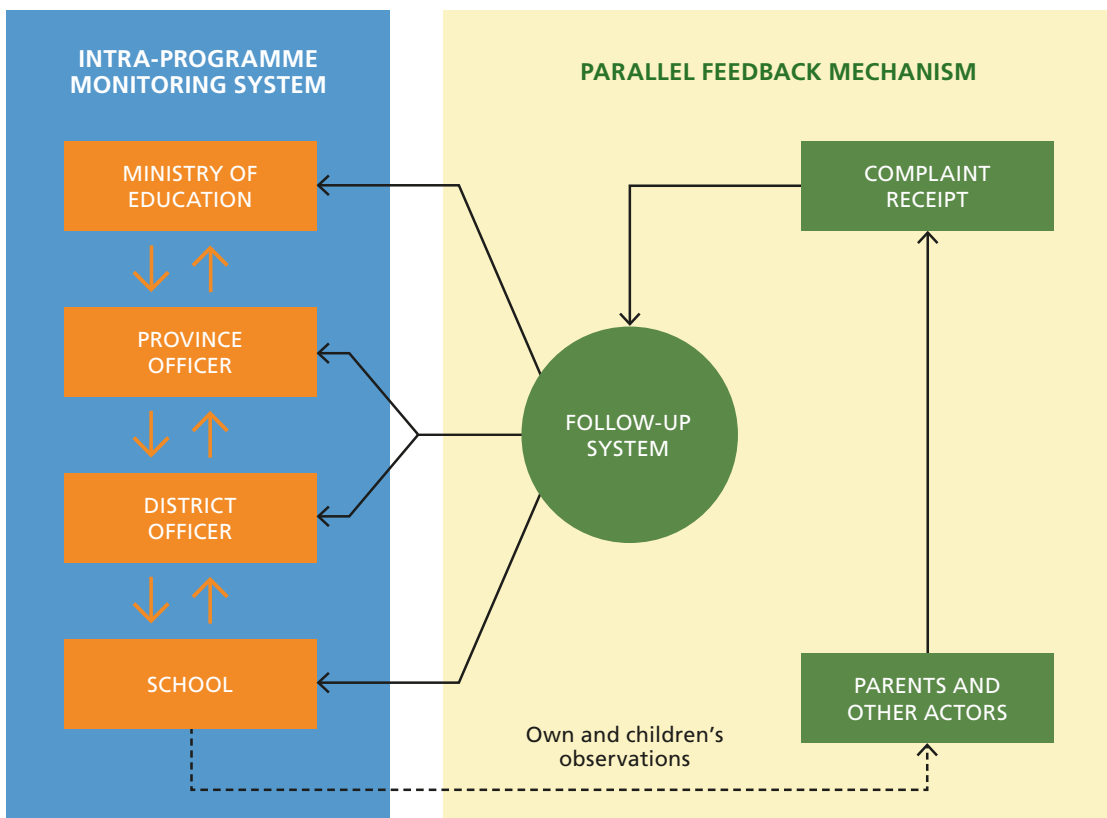
Which infrastructure, skills and competencies are required to ensure that the system design is implemented as planned? Designers should ask searching questions regarding what information they can expect to be available at each point in the data flow under prevailing conditions. Where the necessary capacities are not yet fully present, specific measures should be identified for strengthening existing capacities. Such measures should be integrated into the overall strategy to ensure an enabling environment and national capacities for the HGFSF programme (see section 3.5).

Step 4 Using, sharing and learning: The entire system can be invigorated if there is high demand for the information and analysis

it is designed to provide. System designers should be aware of this demand from the very outset: Who demands which information for which use? Who needs or will need to know what is happening in the programme? Who should have access to the information produced? Will there be a feedback loop for sharing results with the people who provided inputs? How will information be shared and with whom, and which information will be required and used for programme management and by whom? and How will the information and analysis be used to extract lessons learned and create an evidence base for improving programme performance?

Table 8 is adapted from WFP 2017 (*Guidance for the assessment of monitoring, reporting and evaluation systems of national school meals*)

FIGURE 11 Parallel feedback system for supporting the monitoring of HGFSF programmes



Source: WFP, forthcoming.

TABLE 8

Questions for the design and assessment of a monitoring and reporting system

Question/issue	Results and considerations
Level 1: Results and indicators: “Are we looking for the right things?”	
Analysis of the HGSF programme’s logical framework and theory of change	
What is the programme doing?	Clear and shared understanding of programme scope, ambition and form.
What is the intervention logic?	A clear and explicit intervention logic is adequately reflected in programme goals, significance and ambition.
Are the chosen indicators relevant? Will they demonstrate achievement of the intended results?	A draft of the complete intervention logic including relevant indicators, focusing on: i) documenting programme results; and ii) facilitating evidence-based programme management.
Level 2: Tools and systems: “Do we have what we need (in principle) to get the information we want?”	
Design of monitoring tools and data flows	
How are data expected to be collected?	A work-flow chart mapping the foreseen system, showing actors, the sequence of data collection, control points and points of aggregation and analysis. Human and demographic aspects are considered.
What monitoring and reporting roles are there?	A clear distribution of tasks and the frequency of data collection are mapped showing who is supposed to do what and at which intervals.
Design of data collection forms – paper or online?	Efficient data collection forms and tools that minimize sources of error or manipulation and facilitate aggregation, disaggregation and analysis.
Level 3: Collection and storage: “Will information actually be collected, aggregated and analysed as foreseen?”	
Assessment of prevailing capacities in relation to the identified system and roles, and design of measures for capacity strengthening	
Analysis of prevailing capacities based on past data series	Shared understanding of the availability of data, reasons for identified gaps and how to avoid them in future. Will it be better to design a new system? Are capacities and interests sufficient to ensure good performance?
What data analysis is foreseen? Is it feasible to expect the analysis to be of the quality required and foreseen?	Identification of ways of addressing potential shortcomings.
How will data be stored?	Current data storage tools – are they sufficient for the future system? Is new infrastructure such as electronic equipment and improved connectivity required? What can realistically be achieved? Does the system design require amendment?
How will data quality be ensured?	Identification of the demand for accurate and correct data, vulnerabilities of the future system, and a shared understanding of ways of improving it.
What are the cost implications of the future system?	Understanding of resourcing needs for the monitoring system, and ways of increasing cost-efficiency and safeguarding the system against funding bottlenecks. Does the system design require amendment?
Level 4: Information use and learning: “How is monitoring information presented, shared and used to manage and improve programme implementation?”	
Analysis of the uses made of the information obtained	
What information is/should be demanded?	Ensure that there is explicit demand for the information being collected; where demand is lacking, identify the reasons and consider possible ways of addressing them through a feedback loop to level 1.
How is information presented?	How the demand for information will be met: contents of reports at different levels and intervals; and ways of presenting information and analysis – standard charts, dashboards, etc.
What happens to the monitoring information?	Explain how and when the information and analysis provided will be used for the management and continuous improvement of programmes.
Sharing and learning with partners	Explain how monitoring results will be shared and used for learning and, for example, preparing wider partnerships, complementary activities, etc.

programmes (internal document). It summarizes specific questions to be addressed at each of the four levels of analysis and concerning the four aspects and steps introduced above, and can be used as a critical checklist for quality assurance during design of the monitoring and reporting system.

Once designed, the entire system should be integrated into the operational guidance for the programme as a point of reference and a tool for the regular training of involved actors.

In addition to this “internal” system for monitoring and reporting on an HGSF programme, the establishment of a parallel system for community feedback (see Figure 11) should also be considered. There are two main reasons for this:

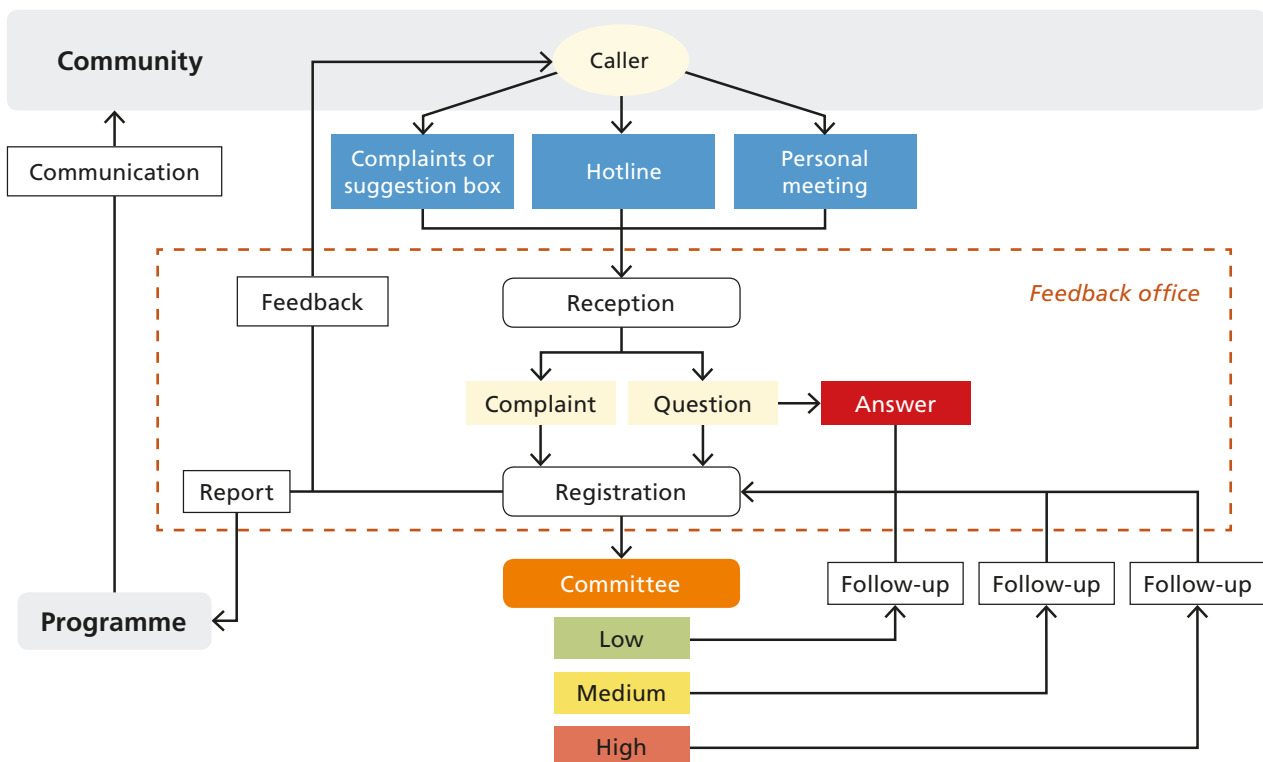
- ▶ In HGSF, communities’ involvement in programme implementation and ownership of the programme is even more important than in regular school feeding programmes.

A parallel feedback mechanism can be instrumental in involving all the people in a community – including those who are not directly involved in programme implementation through, for example, membership of a school-level school feeding procurement committee – in the programme.

- ▶ Any standing and internal monitoring programme is prone to manipulation by actors who may not have programme performance as their primary interest, for example, those who are seeking to hide their own poor performance or other problems.

Corruption is an inherent risk in HGSF programmes, particularly when management is decentralized and may be hard to control from a central point. Schoolchildren, their parents and local farmers are the local population groups who are most interested in high programme performance in delivering good-quality school meals on a regular

FIGURE 12 A community feedback system



Source: WFP, forthcoming.

and sustainable basis. Providing these groups with a direct and reliable channel for feedback can help uncover any form of abuse quickly, and can also have a strong preventive effect.

The success of a parallel feedback system depends on having a reliable follow-up system in which every feedback message or complaint is registered, conveyed to the right level of management for resolution, depending on the seriousness of the complaint, resolved and documented with reporting back to both the “caller” and programme management. A generic flowchart for such a feedback system is shown in [Figure 12](#).

4.2

HGSF-SPECIFIC OUTCOME AND OUTPUT INDICATORS

For each of the indicators presented in [Table 9](#), adequate baselines should be established. This is particularly important if the HSGF programme is the first school feeding programme to be implemented in the area. Where an HGSF programme is developed on the basis of an ongoing regular school feeding programme in the same area, the data produced by that programme may be sufficient to serve as baselines for the programme aspects that are not specific to HGSF – safety net-, nutrition- and education-related indicators – particularly if a full time series of data covering a long period is available. In these cases, future data will help to assess whether the HGSF modality performs better or worse against these indicators than the previous programme. However, HGSF-specific indicators are not normally collected for a regular school feeding programme, and it will be necessary to establish baselines.

A standard questionnaire is applied to a representative sample of beneficiary schools and communities/food suppliers. Usually, data on additional variables on school infrastructure and complementary activities are also collected in order to assess conditions in the school learning environment and the coverage of complementary interventions.

[Table 9](#) provides a list of **suggested outcomes, outputs and indicators** that are specifically for HGSF programmes.¹¹⁰ The elements shown in **bold** constitute the minimum standards for any HGSF programme, while all person-based indicators, such as number of smallholder farmers, should be disaggregated by gender of, for example, the head of household.

More detail on each of the proposed HGSF-specific outcome and output, including some guidance on how data can be obtained and monitoring results can be presented, is provided in [Annex 8](#).

¹¹⁰This means that indicators such as provision of deworming tablets and nutrition sensitization, which should be part of any school feeding programme, are not included here. An overview and detailed information on outcomes, outputs and indicators for regular school feeding programmes can be found in WFP, 2017.

TABLE 9

Overview of suggested HGSF-specific outcomes, outputs and indicators

Outcomes and outcome indicators		Outputs and output indicators	
Outcome: Increased market participation of smallholder farmers with quality and diversified products			
Degree of participation of smallholder farmers in the programme	<ol style="list-style-type: none"> 1. Volume and value of food purchased by HGSF programme from smallholder farmers, by commodity 2. Number of smallholder farmers who sold food to the HGSF programme 3. Volumes and values of sales from smallholder farmers to targeted aggregators 4. Number of smallholder farmers who sold food to targeted aggregators 	Schools include food from smallholder farmers in their menus	<ol style="list-style-type: none"> 1. Number of schools that include food from smallholder farmers in their menus 2. Numbers of boys and girls who consume food from smallholder farmers through the programme 3. Quantities and shares of food from smallholder farmers provided through school meals 4. Number of schools covered by the programme 5. Numbers of boys and girls covered by the programme 6. Quantities of food provided through school meals
Effects of participation in HGSF on smallholder farmers' production and productivity	<ol style="list-style-type: none"> 5. Number of smallholder farmers who have increased their agricultural outputs, by commodity 6. Number of farmers who diversified their agricultural production 7. Numbers of farmers who have increased their agricultural productivity (yield/ha), by commodity 8. Number of farmers who have reduced post-harvest losses through improved techniques or participation in post-harvest handling and storage services 9. Number of farmers who have obtained access to credit to increase their production and/or productivity 		Smallholder farmers, including women, are supported in producing quality food surpluses that can be purchased for school feeding programmes
Effects of HGSF participation on smallholder farmers' vulnerability	<ol style="list-style-type: none"> 10. Diversity of crops and animal products produced 11. Dietary diversity scores and food consumption scores for farmers 12. Coping strategy index of smallholder farmers 13. Share of expenditure on food by households of smallholder farmers 		

continued >

TABLE 9 (continued)

Overview of suggested HGSF-specific outcomes, outputs and indicators

Outcomes and outcome indicators		Outputs and output indicators	
Outcome: Access of schoolchildren to fresh and diverse food			
Effects of higher acceptance of HGSF	14. Absenteeism of boys and girls after introduction of HGSF		10. Numbers of girls and boys in relevant age groups who received school meals
Effects of greater dietary diversity and quality of HGSF meals	15. Dietary diversity score of children receiving school meals	School-aged children receive school meals	11. Amounts of food provided by average school meal, by food group (actual versus planned)
	16. Absenteeism of boys and girls because of sickness		12. Macro- and micronutrients provided by an average school meal, as percentages of daily requirements of children in different age groups (actual versus planned)
		Material investments are made to avoid sources of disease and infection	13. Quantities and kinds of non-food items provided or facilities built/improved
		Schools with HGSF provide adequate, diverse and fresh food	14. Numbers of schools and children with access to improved drinking-water source
			15. Numbers and percentages of schools covered by the HGSF programme that provide meals aligned with nutrition criteria (guidelines and standards)

THE WAY FORWARD: REACHING SCALE WITH HGSF AND LEARNING FROM EXPERIENCE

In the context of collective efforts in pursuit of the multifaceted targets of the 2030 Agenda – including, but not limited to, the prioritization of human capital development to promote sustainable, inclusive economic growth and deliver tangible results through policies and programmes in childhood education and development and in universal health coverage – HGSF programmes can make significant contributions to the achievement of the SDGs for agriculture as well as food security, nutrition, education and health.

The HGSF resource framework is of particular value to governments as another entry point for enhancing collaboration among the three Rome-based agencies – the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP) and other crucial partners. Such collaboration is a key building block in the ongoing United Nations Reform process for improved efficiency and impact. The multisector and multi-stakeholder dimensions of HGSF programmes also call for broader-based partnerships, given the significant opportunities they provide for generating win–win outcomes and providing entry points for partners to add value in terms of knowledge and resources for both the “upstream” segments of school feeding value chains, from the farm to markets, and the “downstream” segments from the market to schools.

The ongoing collaborative process has provided useful insights not only into practical approaches for mainstreaming cross-cutting themes such as nutrition, gender, youth and climate issues into potential joint “flagship” initiatives, but also into options for partners in asserting their respective roles and functions as conveners, actors or facilitators of sustainable schools feeding value chains for human capital development and rural and structural transformation towards the targets of the 2020 Agenda.

The HGSF resource framework presents a set of harmonized concepts, definitions and approaches for helping to shape a common understanding and mind-set among the national and regional actors who will have to bring HGSF programmes to scale in order to make their multisector benefits a tangible reality. It provides a basis for purposeful partnerships in investments, policy dialogue and learning at the local, national and global levels.

In this respect, the resource framework will form the basis for an agreed, multi-partner package of assistance, including assessments, strategy development, programme design and, not least, capacity strengthening with respect to policies, institutions, resources, programme design and implementation and community involvement, all of which will be required in order to shape, strengthen and sustain national HGSF programmes at an ever increasing scale.

HGSF functions in changing contexts (such as food systems, smallholder farmer capacity to provide the food required for school feeding, etc.), and also aims to influence these contexts itself (strengthening food systems, enhancing smallholder farmer capacity, etc.). Given the dynamic nature of HGSF, targets, forms of partnerships and opportunities will evolve as programmes mature and a wealth of additional experience can be expected from the scale-up efforts of the coming years.

In order to maintain the current momentum in country-led processes and policy dialogue at the international level, the partners involved in elaborating the resource framework recognize the need for prompt implementation of the following actions, with support from the emerging community of HGSF practice:

- ▶ jointly monitoring progress in scale-up efforts;
- ▶ identifying, unpacking and sharing further examples of good practices from along school feeding value chains, and related incentives and accountability frameworks, as the basis for a joint reflection on trajectories for scale-up;
- ▶ documenting and sharing experiences to date, not least with South–South cooperation;
- ▶ mapping opportunities for linking ongoing or planned HGSF programmes at the country level to relevant ongoing or planned interventions and investments in support of agricultural development and rural transformation in selected countries;
- ▶ updating and refining tools for school menu planning and making them more easily adaptable to local conditions;
- ▶ exploring opportunities for linking cost–benefit analysis for school feeding programmes to cost–benefit analysis for rural investment programmes focusing on the “upstream” segment of school feeding value chains and their multiplier effects through linkages to local agriculture, and capturing more accurately the cost-effectiveness of multisector HGSF programmes in general;
- ▶ refining cost–benefit analyses for the essential package of interventions, together with other relevant accountability tools such as community score cards and social audits and other tools to facilitate operational synergy and thematic mainstreaming; this will not only strengthen the investment case and create fiscal space for school feeding programmes, but also lay the ground for generating sustainable impact at scale through the sustained engagement of all stakeholders; and
- ▶ incorporating new evidence and experience – for example, with respect to different operating models or any other, particularly innovative, approaches – into the resource framework during regular revisions.

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ANNEXES

ANNEX 1**CONDUCTING A CONTEXT ANALYSIS FOR SCHOOL FEEDING: GENERAL GUIDANCE AND SOURCES OF INFORMATION****Purpose**

The design and planning of any school feeding programme should start with a comprehensive analysis of the general context and an assessment of the existing relevant policies and programmes, including school feeding programmes.

The context analysis provides a comprehensive understanding of the prevailing situation in the country, including the needs of the population and the extent to which these needs are covered. It also identifies how a programme could complement and develop synergies with other strategies and programmes for addressing the identified needs.

Approach

A comprehensive context analysis helps establish the potential benefits of school feeding in the country; define or review the objectives of the HGSF programme, its targeting, food basket and nutrition norms; and determine the appropriateness and feasibility of different implementation models. It helps identify the potential for developing or scaling up a programme to reach larger numbers of vulnerable beneficiaries, recognizing the associated risks (see [Box A1.1](#)).

The analysis should also identify the gaps and existing and potential synergies with other social protection and development programmes, especially those that target school-aged children and smallholder farmers. To that end, the analysis should include the following:

1. **An assessment of the needs of the vulnerable population** and the prevailing situation in the country in terms of food security, nutrition, agriculture, poverty and social protection, access to employment opportunities, education and health, with a particular focus on school-aged children and adolescents and smallholder farmers. The analysis should consider:
 - trends – whether the situation is improving or worsening; and seasonality – variations during the year;
 - gender and social inequalities – some groups may be particularly affected, such as pastoralists, specific ethnic groups, orphans, internally displaced persons and refugees;
 - other vulnerability determinants; and
 - regional disparities.
2. **An analysis of the extent to which existing policies and programmes address these needs**, based on a review of:
 - relevant social protection and development policies, strategies and programmes with comparable objectives or targeting the same population, including their focus on school-aged children and adolescents and smallholder farmers;
 - the coverage and enrolment capacity of these policies, strategies and programmes;
 - to the extent possible, the quality of the services provided;
 - gaps in and existing and potential synergies with school feeding for fuller achievement of common objectives; and
 - policies and strategies under development that could support, accompany or underlie the school feeding strategy in the future – for example, a new national development plan, education sector plan, donor harmonization initiative, or decentralization process in the education sector – and ways of achieving greater integration and complementarity.

To avoid gaps and overlaps and to maximize synergies among different programmes – thus achieving more with the same or fewer resources. The analysis should follow a *life-cycle approach* for the different potential direct and indirect beneficiaries of the HGSF programme, from early childhood to the adult population.

BOX A1.1

GUIDING QUESTIONS FOR FORMULATING RECOMMENDATIONS FOR BETTER INTEGRATION

- ▶ How do the different problems affecting school-aged children and adolescents and smallholders interact? Which boys, girls, households and/or communities are most affected?
- ▶ How can better integration of different strategies and programmes help improve the achievement of common objectives?
- ▶ How can these programmes be scaled up in parallel to reach additional beneficiary groups?
- ▶ What are the mechanisms used to deliver social protection, nutrition and health interventions – health centres, schools, community centres, the media, etc. – for different age groups? What interventions are delivered through the school system?
- ▶ Should school feeding pursue additional objectives and include additional target groups in order to reinforce the impacts of specific social protection and development programmes?
- ▶ What would it take to achieve these additional benefits?

For home-grown approaches, the analysis should have a closer focus on food security and nutrition, and include the needs of additional groups of potential beneficiaries, including smallholder farmers and other poor households potentially involved in the supply of school feeding programmes from the production of food to the distribution to schoolchildren. An analysis of the food system in order to review the existing production potential of local agriculture and value chains involving smallholder farmers is also essential, and is covered in [subsection 2.3.2](#) of the resource framework.

Demographic trends, gender issues and the impact on the environment should be systematically included as cross-cutting themes. Data should be disaggregated by geographic area, age group, gender and other relevant criteria such as ethnic group and refugee or displaced person status.

Core sources of information:

- ▶ National development plans and poverty reduction strategies.
- ▶ Laws, policies, sector plans and sector review documentation related to education, nutrition and food security, agriculture and social protection.
- ▶ Budget allocations and eventual pooled funding such as the Global Partnership for Education Catalytic Fund and multilateral funding streams.
- ▶ Social and economic assessments, the assessments and reports of United Nations agencies, and joint assessment missions of the Office of the United Nations High Commissioner for Refugees (UNHCR) and WFP carried out in emergency contexts.
- ▶ Country reviews and data of the World Bank¹¹¹ and data from United Nations agencies.
- ▶ Legal instruments and policy and strategy documents related to school feeding and school health and nutrition, project documents, operational plans and implementation guidelines.
- ▶ Analyses, assessments and evaluations related to school feeding, relevant studies of HGSP and local food sourcing, such as WFP's Purchase for Progress assessments.
- ▶ Interviews with government officials at the policy-making level in relevant ministries, such as those of education, health and social protection, donors and development partners.

The following sections summarize elements of analysis in the thematic areas most relevant to school feeding: i) food security and nutrition; ii) Poverty, inequality and social protection; iii) agriculture; iv) labour markets and employment; v) education; and vi) health, with a focus on school health.

¹¹¹ World Bank country reviews are available at: <http://www.worldbank.org/en/where-we-work>; World Bank data are available at: <http://data.worldbank.org/country>

Food security and nutrition

By providing school meals, snacks, conditional transfers and an increasingly stable and structured long-term demand for diversified local food production, HGSF programmes can increase access to nutritious and diversified food for different categories of vulnerable beneficiaries. On the other hand, however, unhealthy school meals can contribute to micronutrient deficiencies and the rise of overweight among schoolchildren. Analysis of the nutrition and food security situation of vulnerable school-aged children is critical in defining the objectives of the school feeding programme and the nutritional content of the food offered at school.

The analysis of the overall food security and nutrition situation should also cover the potential direct and indirect beneficiaries of the HGSF programme, from early childhood to the adult population. Special attention should be paid to gender and regional disparities.

Food security and nutrition are cross-cutting issues that are often within the mandates of several different ministries. As a consequence, a review of the policies, strategies and programmes related to food security and nutrition may be vast and overlap with other areas of the context analysis, such as the analysis of poverty, agriculture or health. The review should therefore focus mainly on efforts to improve the food security and nutrition specifically of the target groups of school feeding in the country, from early childhood development to the adult population.

To understand the dynamics of food security and nutrition in a country, the following thematic areas need to be considered.

Thematic area	Indicators
Food security	Evolution of food consumption score/diet diversity score over years; accessibility of markets; coping strategies in times of hardship, such as the coping strategy index, which measures the frequency and severity of behaviours that households engage in when faced with food shortages
Determinants of factors in vulnerability	Nature and importance of various determinants, including household income; sources of food and income; food and income seasonality; types and values of assets, savings and other reserves; and share of expenditures allocated to food purchases
Nutrition status, particularly of school-aged children	Anthropometric measurements, non-anthropometric measurements, micronutrient deficiencies, etc.
Nutrition determinants, nutrition and health behaviours	Nature and importance of various malnutrition determinants; and attitudes, beliefs, knowledge and behaviours such as eating habits and physical activity
Core sources of information:	
<ul style="list-style-type: none"> ▶ Health, nutrition and food security surveys – multi-indicator cluster surveys, demographic and health surveys, household expenditure surveys – WHO’s Vitamin and Mineral Nutrition Information System, national nutrition surveys and national nutrition and health statistics. ▶ WFP’s comprehensive food security and vulnerability assessments, emergency food security assessments and UNHCR/WFP joint assessment missions in emergency situations. ▶ National nutrition plans, national nutrition and food security strategies and other national policies, strategies and plans related to nutrition, agriculture, health, rural development, food fortification, etc. ▶ Sector review documentation, capacity needs assessments, specific project assessments, country case studies and reviews such as WHO Nutrition Landscapes, FAO reviews and information collected from situation analyses by the Scaling Up Nutrition and Renewed Efforts Against Child Hunger and Undernutrition initiatives 	

Poverty, inequality and social protection schemes

One of the potential objectives of school feeding is to provide a social safety net to reduce the food insecurity and poverty of families with children through the delivery of school meals. In addition, financial transfers for local

purchases and programme implementation can benefit poor households participating in the supply of food to schools. A review of poverty in the country, based on secondary data, should aim to provide information on the potential of school feeding to address poverty in targeted subnational areas or among specific population groups.

Particular attention should be given to the links to other social protection schemes. School feeding programmes need to be well integrated into larger social protection systems in order to enhance their potential impacts and improve their financial sustainability.

In many countries, reports on existing social protection systems and programmes produced by members of the Social Protection Inter-agency Cooperation Board,¹¹² research institutions and regional bodies are already available and can provide a good basis for the analysis.

Useful tools for reviewing existing social protection programmes and their internal efficiency include ILO's assessment based national dialogues, the Social Protection Policy Options Tool and the Core Diagnostic Instrument for Inter Agency Social Policy Assessments.¹¹³

The databases of the World Bank's Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE)¹¹⁴ and ILO's Statistical Knowledge Base provide a wide array of data with respect to the coverage of social protection schemes:

- ▶ ASPIRE provides harmonized indicators to describe the country context in which social protection programmes operate. It is also used to analyse the performance of social assistance, social insurance and labour market programmes based on nationally representative household survey data from 120 developing countries. All indicators are regularly updated.
- ▶ ILO's Statistical Knowledge Base integrates data from the Social Security Inquiry and additional associated databases in order to gather, store and disseminate comparable statistics on social security programmes, their financing, expenditures, benefit levels and coverage. Main data and indicators are published in the World Social Protection Report.

Agriculture and agribusiness

The distinctive and innovative characteristic of HGSF programmes, compared with traditional school feeding programmes, is their direct linkage to local agricultural production and their prioritization and involvement of smallholder farmers. An analysis of the agriculture and agribusiness sectors is therefore highly relevant for the preparation of an HGSF programme.

Many countries start their HGSF programmes in food-surplus areas where farmers already have the capacity to supply schools throughout the academic year. This approach facilitates the development and implementation of adequate procurement, operational and administrative tools to start a programme and reduces the risk of supply breaks resulting from limited production, poor food quality or weak logistics capacity.

However, one of the objectives of HGSF programmes is to enhance the livelihoods of smallholders through the development and strengthening of market access opportunities for farmers who lack access to steady

¹¹² Board members are the Asian Development Bank, FAO, the Inter-American Development Bank, IFAD, the International Labour Organization (ILO), the International Monetary Fund (IMF), the International Social Security Association (ISSA), the Organisation for Economic Co-operation and Development (OECD), the United Nations Department of Economic and Social Affairs, the United Nations Development Programme (UNDP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Human Settlements Programme, the United Nations Children's Fund (UNICEF), the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the World Bank, WFP, WHO; and development and cooperation agencies in Australia, Belgium, the European Commission, Finland, France, Germany, Ireland, Italy, Sweden, the United Kingdom of Great Britain and Northern Ireland and the United States of America. International NGOs attend meetings as observers.

¹¹³ These tools are available at: <http://ispatools.org/core-diagnostic-instrument/>

¹¹⁴ ASPRIRE is available at: <http://datatopics.worldbank.org/aspire/>

markets and demand. This means that an HGSF programme should involve not only those smallholders who already produce food surpluses or have sufficient capacity to supply food for school feeding, but also farmers who have the potential sustainably to produce marketable surpluses of diverse, quality food but have not yet realized this potential. Such supply-side capacity support can be provided through complementary interventions either directly with farmers and farmer organizations or through extension services.

A thematic context analysis of aspects of the agriculture and agribusiness sector that are relevant to an HGSF programme should encompass:

- ▶ a general overview of the agriculture and agribusiness sector and its challenges; and
- ▶ a review of national agriculture strategies, policies and programmes.

General overview of the agriculture and agribusiness sector, its challenges and needs

To understand the dynamics of the agriculture and agribusiness sector in a country, the following thematic areas need to be considered.

Thematic area	Indicators
Food production	Assessed surplus areas; potential production capacity of smallholders in deficit areas; seasonal availability of food – year-round, predictable, or unpredictable
Food markets and food price fluctuations	Qualitative: volumes and gaps in food markets; degree of integration of market systems – strong, moderate, weak; market functioning – good, with seasonal variations, weak; food price and fluctuations – stable, seasonal variations, unpredictable, very unpredictable; food price information systems – present, weak, not present Quantitative: values of food on different markets; prices
Value chain and farmers' capacity	Efficiency, effectiveness and degree of nutrition-sensitiveness of existing food value chains in the country
Accessibility and infrastructure	Security situation throughout the year – stable, unpredictable, etc.; extent, capacity, state and accessibility of infrastructure – roads, aggregation points, warehouses, mills, primary processing units, etc.
Agribusiness partners along the supply chain	Status with respect to traders, transporters, processors, caterers, food product manufacturers, food safety and quality inspection services, packagers, etc.
Core sources of information:	
<ul style="list-style-type: none"> ▶ For general information and comparisons among countries, see FAO's annual publications <i>The State of Food and Agriculture</i> and <i>The State of Food Insecurity in the World</i> ▶ More relevant, because it is more specific to the particular context, are national information systems, including the latest agricultural census 	

This overview of the agriculture and agribusiness sector and its needs should be complemented by consideration of the specific situation of the smallholder farmers who might benefit from an HGSF programme. Schools providing school feeding are often located in areas where smallholders have limited production and other capacity for supplying schools. The thematic context analysis should analyse the situation of these smallholders, using criteria such as average plot size, average yields, ownership and management of plots, etc. Particular attention should be given to smallholders' level of poverty, risk of drought, vulnerability to climate change, cultivation of certain crops, risk of land degradation, or degree of urbanization.

Review of national agriculture strategies, policies and programmes

The review of national agriculture and agribusiness strategies, policies and programmes should reflect the government's efforts to develop the agriculture and agribusiness sector and include:

- ▶ a brief review of policies and strategies, including their focus on smallholder farmers;
- ▶ an analysis of past, current and future programmes, and challenges;

- ▶ information on the levels of investment and political commitment;
- ▶ an assessment of the business climate affecting relevant agribusinesses, for example, are tax and employment practices supportive or do they inhibit growth of the agricultural private sector? and
- ▶ collection of information and data on the quality of the services provided, focusing on those that serve smallholder farming.

Labour market and employment

School feeding programmes can create job opportunities for the local population, particularly women and young people. Understanding the levels of employment and wages in the formal and informal sectors, the human resources available and their characteristics is particularly relevant in informing programme design.

It is also useful to understand the prevailing needs and challenges that different population groups face with access to employment opportunities, and related national strategies, policies and programmes that are in place.

Examples of employment strategies and programmes that can have synergies with school feeding include public works programmes, vocational training programmes and programmes that support access to (micro)finance.

The dynamics of labour market and employment in a country are determined by factors that include:

- ▶ the overall structure of the economy, including the importance of the agriculture sector and its growth, and of the informal sector;
- ▶ characteristics of the labour market, especially in the agriculture sector – population of working age, levels of unemployment and informal employment, level of wages – and its challenges; and
- ▶ human resources and their characteristics – education and skill levels, health and employability.

The following thematic areas should be considered when analysing the labour market and employment in a country.

Thematic area	Indicators
Labour force characteristics	Population: age and sex composition, levels of migration Working-age population: labour force participation – levels of employment, unemployment and informal employment
Qualitative aspects of human resources	Education and skill levels, health and employability, investment in human resources development
Economic and employment growth – patterns and dynamics, incomes and poverty	Growth dynamics of employment and GDP; wages; income inequality, poverty and the working poor
Policies, strategies and programmes for ensuring better access to jobs and improved conditions for the active population	Wages; labour law and regulations; social protection policies; and institutions for the labour market
Core sources of information:	
▶ The most comprehensive source of information for these aspects is the ILO Statistical Knowledge Base and the national statistics and surveys that feeding into it	

Education

School feeding programmes are embedded, to varying degrees, in the education system and traditionally focus on providing equal education opportunities because, depending on the specific conditions, they can act as incentives for increasing school enrolment, reducing absenteeism and drop-out rates and enhancing schoolchildren's ability to concentrate and learn.

However, school feeding programmes alone cannot not achieve education outcomes. Adequate curricula, good and sufficient textbooks, trained and motivated teachers of both genders and a conducive learning environment are indispensable preconditions for learning. The benefits of school feeding are optimized when school feeding is part of a comprehensive education package and is well aligned with national priorities and policies in the education sector.

The school environment and available infrastructure may determine the feasibility of school feeding. The introduction of commodities that are locally procured from smallholder farmers often entails a change or adjustment in school feeding modalities and implementation, such as the introduction of a more diversified food basket that includes perishable foods. The feasibility of different options at the school level needs to be assessed. It is also important to ensure that the programme will not compromise the quality of education, for instance by encroaching on teaching and recreational space, or teachers' time.

Analysis of the education sector should look at the challenges that school-aged children face in obtaining access to education and learning effectively, and why the current situation prevails, because these aspects are directly linked to the potential educational outcomes of school feeding programmes:

- ▶ better access to education through enhanced enrolment, attendance and completion rates;
- ▶ improved ability among children to concentrate and learn for better educational achievement; and
- ▶ reduced disparities in access to education for different groups of vulnerable children.

The analysis should cover all education levels from early childhood or pre-primary education up to secondary school, and should consider the following thematic areas.

Thematic area	Indicators
Social, humanitarian and demographic context	Evolution of the school-aged population; impact of HIV/AIDS and malaria on education; and impact of conflict or crisis on education
Education system	Organization of the school system – pre-primary, primary, secondary education; school year – number of school days in the year; school day – length and breaks; shares of public and private education; and existing non-formal education programmes – type, target groups, and provider
Access to education and learning	Out-of-school children: estimated trends; analysis of the children's status and its causes; evolution of enrolment rates – gross and net enrolment, retention, attendance and drop-out; average number of school years completed, graduation and repetition rates; gender and other disparities
Determinants/barriers to education – supply- and demand-side	Possible causes of low enrolment, attendance and retention, and extent to which food can be an incentive for sending children to school and retaining them there – for example; direct and indirect costs of schooling, including fees and other financial contributions, uniforms, opportunity costs of education for the household; activities of boys and girls when they are not in school, including child labour; early pregnancy and early marriage rates; attitudes towards education among parents and in the society at large; and safety concerns Possible causes of poor leaning and performance, including linkages to food security, nutrition and health issues – short-term hunger, micronutrient deficiencies and poor health, possibly compounded by long walking distance to school; numbers and qualifications of teachers; and learning materials
School environment and physical facilities	Food storage and preparation facilities, sanitary facilities, access to potable water and cooking fuel, safety in school premises

Core sources of information:

- ▶ Impact evaluations of programmes and institutional mechanisms, and diagnostics, such as SABER reports
- ▶ Existing analyses of the education sector, including assessments and evaluations by UNESCO, UNICEF, the World Bank and UNESCO; data series from the UNESCO Institute for Statistics; data from the national education management information system
- ▶ In emergency and fragile contexts, assessments and plans produced by the education cluster where this is activated; the Inter-Agency Network for Education in Emergencies' data, statistics page, minimum standard and tools for initial assessments

Health, particularly in schools

School feeding programmes can contribute to improving the nutrition and health status of beneficiaries through better access to nutritious food and the promotion of life-long healthy habits. On the other hand, health issues affecting schoolchildren and their communities can compromise the effectiveness of school feeding programmes. Health issues may also compromise the capacity of local smallholder farmers and communities to participate in school feeding activities.

School feeding programmes are therefore best designed and implemented as part of an integrated package of interventions that address the nutrition and health needs of school-aged children. Schools are an excellent platform from which to reach school-aged children and adolescents, and provide opportunities for leveraging complementary interventions that are mutually supportive through integrated programmes at the school level. The distribution of deworming pills to schoolchildren is a common complementary activity, which aims to reduce the prevalence to helminth infections in areas of high prevalence and is key to ensuring that children are able to absorb the nutrients they eat. Water, sanitation and hygiene infrastructure – access to safe drinking-water, hand-washing facilities and awareness raising, separate toilets for girls, boys, and men and women teachers and staff, etc. – is another crucial area for complementary programmes.¹¹⁶

The following are the thematic areas to consider when analysing health issues.

Thematic area	Indicators
Health status	Prevalence of specific diseases related to food insecurity and malnutrition, such as soil-transmitted helminth infections and other water and hygiene-related diseases, malaria and HIV/AIDS; prevalence of malnutrition – stunting, wasting, overweight, underweight and micronutrient deficiencies; limitations on activities and restrictions on participation, such as absenteeism because of ill health; and well-being – measures of physical, mental and social well-being of individuals
Health determinants and behaviours	Nature and importance of various health determinants, particularly access to water and sanitation facilities, for the population and in schools; attitudes, beliefs, knowledge and behaviours, such as patterns of eating, physical activity, smoking and alcohol consumption and health seeking behaviours among schoolchildren and adolescents; child care practices
Policies, strategies and programmes	Existing policies and strategies, and initiatives and programmes targeting school-aged children, with a focus on school health policies and programmes, and the inclusion of school feeding in these; deworming combined with sanitation and hygiene education; micronutrient fortification; nutrition and food education, including school gardens and health education; and water and sanitation
Core sources of information:	
<ul style="list-style-type: none"> ▶ Sector policies and strategies; school health and nutrition policies and strategies ▶ Demographic and health surveys, multiple indicator cluster surveys and other national surveys ▶ WHO World Health Statistics¹¹⁵ ▶ SABER school health and school feeding tools and country reports¹¹⁶ 	

¹¹⁵ WHO's world health statistics are available at: http://www.who.int/gho/publications/world_health_statistics/en/

¹¹⁶ SABER materials on school health and school feeding are available at: <http://saber.worldbank.org/index.cfm?indx=8&pd=9&sub=0>

ANNEX 2**ASSESSING THE FOUR DOMAINS OF FOOD SYSTEMS**

The following sections provide additional details on selected issues in each of the four domains of food systems. Before embarking on an assessment of food systems, the planners of an HGSF programme should establish what kinds of nutritious food are locally preferred, and focus the analysis on these. It should be noted that the following information is not usually provided by HGSF planners, but should guide them in asking the right questions to specific experts, such as representatives of the ministry of agriculture.

a. Food production and supply

The potential for supplying an HGSF programme from local sources depends first and foremost on current and potential local production of relevant foods.

Food-producing areas overlap with zones defined by ecological characteristics such as altitude, rainfall and soil type. Distinguishing homogeneous zones allows the comparison of advantages and disadvantages among zones in terms of food production. To contain transport costs and maximize community engagement and benefits, most purchasing for HGSF should be carried out within a limited radius of where the food will be consumed. In practice, however, it is quite likely that some school food will need to be purchased and transported from other zones because of seasonal availability, the ecological requirements for producing some foods, etc. Where a programme area covers several zones with different conditions, different programme models may be chosen.

Candidate foods: A list of local products and their ranking by volume produced or space occupied will provide an indication of the potential components of a food basket. Identifying one or more staple foods is essential. Staple foods generally form a significant proportion of the intake of macronutrients – carbohydrates, proteins and fats – including energy. They vary from place to place, but are typically inexpensive, readily available and suitable for storage for long periods without decay (non-perishable). Typical examples of staples include tubers and roots, grains, legumes and other seeds.

Depending on local preferences, availability, seasonality and costs, the use of at least small amounts of vegetables, fruits, fish, meat, eggs and dairy products can be considered. These foods may be most practical if they can be preserved for extended shelf-life, for example by drying or canning fish, meat, fruits and vegetables and using milk to make cheese or yogurt.

Cash crops are grown primarily for sale to generate a profit, while subsistence foods are used primarily as food for the producer's household or livestock. Cash crops may account for only a small, but vital, part of a farm's total yield. Coffee, tea, cocoa, cashews, sesame and cotton are examples; in some areas fruits, vegetables or pulses may also be treated primarily as cash crops.

In many cases, a portion of the food crop produced for commercial sale or export may be perfectly edible and nutritious but is not sold commercially because of market or transport conditions, oversupply, or over-demanding quality standards. These foods may therefore be available at low cost for local use. In such cases, planners can consider whether to use the crop in their school feeding programme.

Nutrient value: As well as advantageous production conditions, the main food crops also reflect the consumption habits of the population and provide an indication of the general quality of the diet. For each of the potential crops identified, the nutrient value in terms of macro- and micronutrients can be estimated by consulting national and regional food composition databases. Existing tools for menu planning can also be used as they use available food composition data.¹¹⁷ Comparing the nutrient value of different foods with the requirements of a school feeding programme helps to narrow the list of potential components of the food basket. In the

¹¹⁷ Such tools include PCD's Meal Planner – <http://hgsf-global.org/en/bank/menu-planner>; the UNHCR/WFP NutVal 3.0 – <http://www.fsnnetwork.org/nutval-40>; and FAO-supported national and regional food composition tables – <http://www.fao.org/infoods/infoods/tables-and-databases/en/>

absence of such data, programme planners can recommend food groups, considering the diversity and colours of the food available. As a general rule, eating a diet of diverse, multi-coloured foods is recommended.

The supply that can be expected from a certain area depends not least on the agronomic performance of *cropping systems*¹¹⁸ at the plot level, and the agro-economic performance at the farm level, i.e., the *farming systems*.

Cropping systems are characterized mainly by the annual sequence and spatial arrangement of crops and fallow in a given area. The main output of the cropping system is the yield per crop of interest.

Farming systems¹¹⁹ are characterized as homogeneous groups of farms that have a broadly similar resource basis, enterprise patterns, cropping patterns, household livelihoods and constraints, and for which similar development strategies and interventions would be appropriate.¹²⁰ Such a typology provides a solid framework for both quantifying agro-economic performance at the farm level and designing a local procurement scheme for schools that is inclusive of local smallholder farmers. Several farming systems can usually be identified within a territory corresponding to the HGSF implementation area, among which some types of system can be seen as more vulnerable than other and should therefore be targeted for the HGSF programme at some stage.

Assessing the current and potential supply of relevant foods can also benefit from an assessment of the **capacity of local farmers and aggregators, including farmer organizations**, to provide the desired foods in sufficient quantities and quality.¹²¹

The **environmental impacts** of different foods are another factor to be considered. Different foods with similar nutrient properties can have very different impacts with respect to water use, biodiversity, etc.

Based on this information, a **food balance** can be established, which shows – for each identified candidate item in the food basket – whether the region is self-sufficient and able to satisfy the needs of its own population plus the potential additional demand of an HGSF programme. The size of demand constituted by an HGSF programme can be quantified from the number of schoolchildren (from the previous year for example), the number of school days on which meals will be provided and the quantity of each candidate food required for the desired food baskets. If a region's production exceeds the local demand for one or more commodities – normal demand plus the planned, additional demand from an HGSF programme – the programme can consider whether “exports” the surplus to other regions can help meet the HGSF demand outside the region. If there is local surplus compared with normal demand, but not (yet) enough to also cover the additional HGSF demand in full, the commodity can still be considered as partially fulfilling HGSF needs. The commodity is of particular interest to HGSF if there is potential for increasing its production to respond to the additional needs for HGSF and if there is support available from complementary supply-side programmes.

Seasonality: Seasonal and climate characteristics affect agricultural production. For each candidate food on the shortlist, supply patterns – to the extent that they are predictable – can be plotted against the monthly requirements of an HGSF programme. This will show the season(s) in which a crop should be available in sufficient quantities and at a reasonable price.

If agricultural production is insufficient for one or more of the seasons relevant to the HGSF programme, temporary substitutions – alternative crops from within the area or imports from other countries or other regions within the country – of the same or another adequate crop can be considered to fill the gap. In some

¹¹⁸ A livestock system has a similar framework to a cropping system, but is for animal husbandry activities.

¹¹⁹ A farming system can be seen as a decision-making unit comprising the farm household and the cropping and livestock system, which transform land, capital and labour into useful products that can be consumed or sold (Fresco and Westphal, 1988). Farming systems can also be seen as resource management strategies for achieving agricultural production that meets the diverse requirements of the farm household sustainably (Lal and Miller, 1990).

¹²⁰ See, for example, FAO's Farming systems and poverty site, available at: http://www.fao.org/farmingsystems/description_en.htm

¹²¹ More details on such capacity assessments can be found in WFP, 2017a.

cases, particularly when there are seasonal gluts followed by no production, seasonality can be mitigated through improved storage, food preservation or processing.

Good agriculture practices during on-farm production and post-production processes are intended to result in safe agricultural products and are of immense importance in ensuring a safe food supply. Good agricultural practices need to be applied on the farm to ensure food safety and quality during pre-production, production, harvest and post-harvest – the first part of the HGSF supply chain. They include safe storage; safe use of chemicals such as fertilizers and pesticides; safe irrigation; good hygienic practices during handling, packing, storage and transportation; and environmental hygiene related to the soil and water and to waste disposal.

b. Food handling, storage, preservation and processing

Food losses in developing countries occur mainly at the early and middle stages of the food value chain – harvesting, post-harvest, processing, etc. – and have negative effects on the food security and livelihoods of smallholders. It is important to understand the specific causes of food losses in the area under consideration so that complementary interventions that address these causes can be planned in parallel to the HGSF programme.

Potential **food safety hazards** can be introduced during handling, packaging, storage and processing – the second part of the HGSF supply chain. Hazards may be physical, such as stones or metal, chemicals such as pesticide residues, or microbiological, such as infectious diseases or parasites from animal droppings or infected persons. It is crucial to prevent food-borne illness among the end-consumers – schoolchildren – through preventive measures that control these risks all along the value chain.

Handling is critical throughout the food supply chain, from the input stage with the choice and use of seeds, to in-field management with weeding and protection from other pests, harvesting with careful treatment that does not damage the food, drying of grains and pulses, storage and transport and on to the end consumer.

Some forms of **on- and off-farm storage losses** can be mitigated by the use of relatively inexpensive technologies such as solar drying systems, hermetic bags, metal or plastic containers and improved storage management. Skilled use of traps and barriers, rodenticides, fertility controls or other methods of control can also reduce in-field and post-harvest losses to rodents, insects and birds.

Food preservation and processing present several opportunities for HGSF programmes: they can positively affect HGSF supply chains by expanding market opportunities while reducing food losses for smallholders, for example, through drying, transforming and/or packaging, and improving logistics-related functions in terms of shelf-life and storage; they can have a positive impact on nutrition through fortification, increased digestibility of raw foods, increased use of nutritious traditional food; and, not least, when carried out at the local level they can increase the benefits for the local economy through the creation of employment and value added. Because of these potential positive effects, it is important to have a good picture of the potential for and bottlenecks in food processing, even if areas it involves only small and medium enterprises or farmers in rural areas. Also with respect to food processing, focused interventions in, for example, technical assistance, training and access to affordable credit can be designed to accompany HGSF in order to address potential bottlenecks or challenges and otherwise support business success and job creation.

c. Food trade and marketing

In its most decentralized model, HGSF links producers directly to schools, without any intermediary aggregation and distribution actors such as traders, wholesalers or retailers. When an HGSF programme uses this model, the focus can be on *strengthening producers, processors and their organizations*. When a programme foresees the inclusion of other market actors, however, additional market analysis is recommended.

Food markets are shaped by economic conditions, including land rights, market demand, the availability of inputs and labour, consumers' choices and ability to pay and competition, infrastructure, actors and relationships. In an HGSF programme, a school or other local purchaser of the school food becomes an economic actor in the local food system when buying locally some or all of the food required. Before designing or changing a

programme, it is therefore important to understand how markets function and the factors that influence prices for different food commodities. The most important of these factors are described in the following paragraphs.

Food distribution chains channel food from producers to consumers. An understanding of existing food distribution chains, their challenges and potential is an important basis for the design of an HGSF operating model. The retail sector can be a solid partner for schools, particularly where the sector is connected to farmer organizations that can aggregate smallholders' production and provide food in sufficient quantities and quality. The retail sector includes and can be organized through:

- ▶ supermarket chains that are found in major cities;
- ▶ independent supermarkets that are dominant in secondary cities;
- ▶ open-air markets that sell locally produced foods, including animal products; and
- ▶ small shops in villages, which sell a variety of products, in addition to food, in small quantities.

Prices are the outcome of market activity and are driven by the determining forces of supply, access and infrastructure and demand. The supply is the quantity and accessibility of the product at the time of its purchase. It is determined by the production costs and challenges, timing – for example, in relation to harvest – the accessibility of the product, transport and handling costs, and competition among suppliers of the product. Demand hinges on demographic factors, including population density, and consumers' incomes, tastes and preferences. Prices can be highly volatile for many reasons, including weather conditions, fuel prices and timely access to inputs. Governments may attempt to stabilize prices through direct or indirect measures such as price support mechanisms or stock management operations. An HGSF programme benefits from prices that are both reasonable and reasonably stable.

At the same time, however, an HGSF programme can also affect prices – for example, pushing prices up if local demand increases too quickly or is not in harmony with harvest or availability, and reducing prices or making them more stable by helping to ensure predictable levels of increased and diversified production and/or providing complementary support for increased production of the commodities needed. The analysis needs to determine which potential foods for the HGSF programme are inherently less prone to higher price volatility in the markets under consideration. HGSF planners can then focus on the commodities for which HGSF implementers can:

1. acquire knowledge of price patterns and determine what are reasonable prices and when to buy to achieve favourable prices (see the paragraph on *market information* on next page);
2. ensure a reasonable level of competition among potential suppliers of the required food – a degree of competition assists the programme, but too much can hurt the farmers;
3. deliver the needed nutritional value in a menu that meets food preferences; and
4. negotiate stable prices within a small range, for an entire school term, for example.

Turnover, profit margins and prices depend on the type of activity but, in general, low turnover – the amount of a commodity sold or used in a given period – implies higher prices, and vice versa. Traders always try to sell products at prices that are as high as possible, and not below the minimum price required to generate a profit. This minimum price is usually lower for supermarket chains because they have higher turnovers than small village shops, which have to apply higher mark-ups to compensate for the low volumes sold against the shops' fixed costs and the costs of the products. On the other hand, the only limitation on the maximum price obtainable for a product is the **demand** for that product, i.e. the combination of consumers' willingness – reflecting their needs, tastes and preferences – and ability (purchasing power) to pay and the **competition** among traders: the lower the competition for a product that is in demand, the higher the profit margins will be because consumers who are willing and able to pay cannot turn to another trader willing to sell at a lower price.

Price collusion can be a problem, and can occur at any point in the supply chain – at the producer, aggregator, processor, transporter or trader/merchant level. If it is easy for new actors to start producing and/or selling the commodity or service, or if profit margins are slim, price collusion is unlikely. Estimating costs and margins among actors enables programme designers to evaluate the competitiveness, profitability and risk of different actors, which are important aspects to consider when deciding on the operating model for an HGSF programme.

The availability and quality of **market information** – consumer demand for the products in question, the quantities and quality of the products available for sale, and the price of a given product at the time it is to be purchased – depend on how information that is relevant to prices is disseminated among the economic actors in the area where the commodities are to be purchased. The actors in an HGSF value chain need to obtain reasonable and fair prices for the goods and services they sell and buy. Through which communication channels – newspaper, radio, cell phone, open-air market – will a school or other HGSF purchasing entity be able to monitor prices? How frequently can it acquire the needed information, and how reliable is the information? The HGSF buyer has to decide whether the price of a commodity in the food basket at the quantity and quality needed is fair – compared with the prices at other locations and for commodities that could be substituted – and consistent with prices in national markets at the time the purchase is made.

HGSF can function where sufficient quantities of quality food are available on the market and where prices are reasonable and sufficiently stable. Both conditions are strongly influenced by **market integration**. The degree of market integration determines how quickly a market can adapt to changes in demand or supply. Market integration depends on factors such as transport distances and infrastructure, weather and road conditions, security, and competition among market actors. **Road conditions and security concerns** compromise market integration. Road networks have a major role in supporting a country's economic development, providing connectivity with the rest of the country, neighbouring regions and beyond. Transport costs will depend in part on road conditions. In extreme cases, road conditions are the decisive factor of the availability of certain goods in certain seasons.

In a well-integrated market, even if the additional demand of an HGSF programme is considerable, it can be accommodated with a minimum of lead time by actors in the value chain. By contrast, where a market is weakly integrated, an increase in demand, particularly if it is sudden, can lead to shortages and price increases. It should be noted that even a small market can be well integrated, for example, if it is located close to major trade or road corridors, or if local traders have good connections to wholesalers or neighbouring markets.

The analysis should seek to determine the degree of market integration in the area and for the crops of interest. The greater the integration, the lower the risk of the HGSF programme causing market disruption, particularly if the market is given sufficient notice of the additional demand expected from the programme. On the other hand, the more integrated a market, the greater the competition for local producers and the higher the probability that the HGSF programme will benefit traders more than local farmers and communities, unless specific measures are planned, such as complementary supply-side support to local producers in order to help them become more competitive, or procurement rules and procedures that partly compensate for the limited competitiveness of local producers, etc.

Food demand for HGSF is usually not high enough to cause food scarcity in local markets and lead to price hikes. Although the risk is low, however, food supply and demand should be compared periodically, preferably monthly. This will allow the seasonality that might influence the availability of food to be factored into programme plans, for example, by providing for temporary food substitutions. Taking such local conditions

BOX A2.1

MARKET STUDY IN KENYA'S ARID AND SEMI-ARID LANDS IN PREPARATION FOR HGSF

In Kenya, a large-scale market study was carried out in 2012/2013 to explore the potential for diversifying the food assistance modalities – conditional and unconditional transfers and school feeding – in the country's arid lands. The study focused on: i) market performance and integration; ii) the availability of cost-efficient financial services; and iii) livelihood and gender aspects. Schools covered by the national school feeding programme, which at the time served only semi-arid areas, reported that they had no difficulty in procuring food from local traders or, in schools located on a main transport corridor, wholesale markets. Traders in most markets stated that they needed a lead-time of one month to accommodate increasing demand. However, market integration is lower in remote, small markets, particularly where road infrastructure and security concerns hamper transport, at least in some seasons. Since the study was carried out, WFP has shifted to a "cash-to-schools" modality in preparation for the gradual hand-over of schools to the national school feeding programme, which will proceed in one arid county after another, starting in the counties with the greatest market integration is greatest.

into account facilitates the design of an optimum operating model and decision-making regarding the kind and number of suppliers to be contracted.

The prevailing **policy environment** for food markets should be considered to determine whether it could be made more conducive to HGSF activities. Of particular relevance to HGSF are policies that:

- ▶ stabilize prices and markets;
- ▶ promote agricultural production and productivity;
- ▶ support organizations of small-scale producers and processors;
- ▶ facilitate access to affordable credit for small producers and processors;
- ▶ ensure food safety and quality;
- ▶ promote dietary diversity and the use of nutritionally valuable local foods, especially locally available and traditional foods; and
- ▶ establish procurement rules that enable small-scale producers and enterprises that meet basic programme requirements to participate successfully in the national school feeding programme.

The analysis should look for opportunities as well as potential pitfalls or contradictions, especially opportunities that are more relevant to some choices of crops or operating models than to others.

d. Consumer demand, preferences and food preparation

Among the different foods produced in an area of interest, the diagnosis should determine which are consumed routinely, which constitute the dominant portion of the local standard diet, which are favoured by consumers and which are appropriate for school-aged children.

For HGSF, it can be interesting to see whether there are **traditional or indigenous** foods and dishes that were once popular in an area but may have lost or be losing favour – for example, because of the introduction of imported foods, advertising, etc. – and that meet nutrition standards and may be better adapted to local production and preparation conditions such as climate, soil and water. If such foods exist, HGSF can play an important role in protecting and promoting them, contributing to crop and dietary diversity and possibly to greater climate resilience.

Food preparation has a strong effect on the nutritional value of the food consumed, its safety and the practical feasibility of using the particular food in an HGSF programme. The cooks preparing meals for an HGSF programme are normally from the local community and bring their traditions and habits with them. Having an idea of such habits helps assess, for example, whether one of several candidate foods is preferable to others, whether overcooking is less damaging to the micronutrients in one food than others, or whether basic hygienic practices are observed during preparation and serving.

The amount of time and energy required for preparing meals is another aspect to be considered. For example, dried whole maize and some types of beans can take five hours of boiling on a “three-stone” fire, which may not be feasible because of the amount of fuelwood required and because the long cooking time does not allow the food to be served early enough in the school day to benefit children’s ability to concentrate in class. Some foods may also require manual processing – pounding, grating, peeling, shelling, etc. – or other energy-consuming pre-cooking preparation. Solutions to these challenges include:

- ▶ substituting a food item that requires less cooking time and energy;
- ▶ using broken grains or foods that have received first-stage processing treatment – milling, husking, cleaning, shelling, etc. – off-site, prior to delivery to the school food preparer or final preparation site;
- ▶ using fuel-efficient stoves, which have the added benefits of reducing indoor pollution and avoiding the environmental damage caused by the use of large amounts of fuelwood; and
- ▶ using other appropriate processing equipment or steps that reduce the workload and time requirements for food preparers.

Findings regarding the opportunities for using local food production in food systems inform the design of HGSF menus and operating models and the identification of complementary programmes with which the HGSF programme should seek synergies.

ANNEX 3

ANALYTICAL TOOLS FOR ASSESSING SCHOOL FEEDING PROGRAMMES

Subject	Description and links
0. SABER SF	<p>Helps benchmark and identify the strengths and weaknesses of an existing school feeding programme and the main areas for focusing investments. SABER SF can provide the basis for developing a national action plan for addressing identified gaps and strengthening school feeding-related policies, systems and programmes</p> <p>Further information and guidance: Annex 5</p>
1. Context and needs analysis	<p>Helps analyse the prevailing situation with respect to food security and nutrition, poverty, children’s status, protection issues, etc., providing the basis for an informed discussion on programme objectives, modalities and potential targeting</p> <p>Further information and guidance: Annex 1</p>
2. Policy review and integration with social protection framework	<p>Helps identify existing policy responses, potential gaps and the need for harmonization with and integration into social protection framework and policies. The policy review can also be integrated into the context analysis</p> <p>Further information and guidance: Annex 1</p>
3. Operational review	<p>Helps analyse programme planning, coordination, implementation and performance, and identify options for making improvements</p>
4. Stakeholder mapping	<p>Helps analyse the interrelations among different stakeholders, the respective roles and responsibilities of stakeholders, and potential inefficiencies in coordination or in the flow of goods, services, funds and information</p>
5. National cost assessment	<p>Helps identify existing cost factors and options for cost reductions</p> <p>Further information and guidance: The tool is being updated – a link will be provided shortly</p>
6. Cost–benefit assessment	<p>Helps identify the rate of return to the national economy of each United States dollar invested in school feeding</p> <p>Further information and guidance: The tool is being updated – a link will be provided shortly</p>
7. Nutrition gap assessment	<p>Helps identify the nutrition gap to be covered by school meals, and options for food baskets that address these gaps</p> <p>Further information and guidance: A tool is under development</p>
8. Supply chain assessment	<p>Reviews key activities from food production to consumption, identifies options for maximizing efficiency and local benefits</p> <p>Further information and guidance: Comprehensive terms of reference are under development</p>
9. Food system analysis	<p>Helps analyse the elements and activities that contribute to providing food to a population in a territory, and options for food baskets and delivery modalities that maximize nutritional and socio-economic effectiveness</p> <p>Further information and guidance: Comprehensive terms of reference are under development; see also references in Module 2 subsection 2.3.2</p>

Subject	Description and links
10. Food basket planning (further information in Annex 7)	<p>Food composition tables</p> <p>A directory of regional and national food composition tables for many countries can be found at: http://www.fao.org/infoods/infoods/tables-and-databases/en/</p> <p>Some data require updating</p>
	<p>NutVal</p> <p>A spreadsheet application for planning and monitoring the nutritional content of a food basket/ration, developed by UNHCR and WFP is available at: http://www.nutval.net/</p> <p>Does not include all relevant foods, particularly very local ones</p>
	<p>Meal Planner</p> <p>Help in calculating the nutritional content and cost of a ration, developed by PCD, is available at:</p> <p>Online – http://www.hgsf-global.org/en/bank/menu-planner; offline – http://www.hgsf-global.org/en/bank/downloads/doc_details/382-offline-menu-planner-tool</p> <p>Relies on food composition tables, so is available for only a few countries; some data require updating and price data are not always robust</p>
	<p>Cost of diet</p> <p>Help in calculating the cost of the cheapest diet that meets the nutritional requirements of families using only locally available foods, developed by Save the Children UK, is available at: http://www.securenutrition.org/resource/cost-diet-tool-v2</p> <p>Requires a six-week process for data collection – which could be partly integrated in a food system assessment – entering, analysis and reporting</p>
	<p>OptiFood</p> <p>A software application that allows public health professionals to identify the nutrients that people obtain from their local diets, formulate and test population-specific food-based recommendations and specify the lowest-cost combination of foods, developed by WHO in collaboration with the London School of Hygiene and Tropical Medicine, Food and Nutrition Technical Assistance (FANTA) and Blue-Infinity</p> <p>Further information and guidance: https://www.fantaproject.org/tools/optifood; and https://blog.usaid.gov/2013/09/optifood-to-improve-diets-and-prevent-child-malnutrition-in-guatemala/</p>
11. OMEGA +	<p>Helps assess the cost-effectiveness of different food baskets with respect to nutritional value and costs per meal</p> <p>Further information: http://documents.wfp.org/stellent/groups/public/documents/resources/wfp271102.pdf; and http://fcluster.org/sites/default/files/documents/CV%20on%20Omega%20tool%20%20for%20FSC%20in%20Kin%2029January2014.pptx</p> <p>Example of application: WFP Kenya. 2014. Evaluation of Fresh Food Voucher Pilot for Refugees in Dadaab.</p>
12. Effects on the local economy	<p>Association Française d'Agronomie (AFA) (CIRAD)</p> <p>Helps in analysing the local economic benefits of a programme, developed by AFA and the International Cooperation Centre of Agricultural Research for Development (CIRAD) is available in French at: http://www.cirad.fr/enseignement-formation/formation-professionnelle/methodes-d-analyse-des-filieres</p>
	<p>Local economy-wide impact evaluations (LEWIE) (FAO)</p> <p>Help in analysing the local economic benefits of a programme, developed by FAO, is available in English at: http://www.fao.org/docrep/018/aq661e/aq661e.pdf</p>
13. Assessment of the monitoring, reporting and evaluation system	<p>Helps analyse the extent to which a system is fit to capture, analyse, relay, store and share relevant information, inform support programme management and promote learning, and helps identify options for improvements</p>

ANNEX 4**SABER SCHOOL FEEDING**

Using new diagnostic tools and detailed policy information, the World Bank Group's **Systems Approach for Better Education Results** (SABER) tools have been developed for different domains of policy-making that have a crucial bearing on education results and that include school health and school feeding, for which the SABER SH and SABER SF tools have been developed.¹²²

SABER-SF is a global initiative developed by the World Bank Group, WFP and the Partnership for Child Development (PCD). It disseminates **comparative data and knowledge** on education policies and systems, presenting detailed and overall pictures of countries' progress in the transition to national ownership of school feeding programmes.

The information is used to help a country to **identify strengths and weaknesses in its school feeding system** and areas in which to focus investments, and to **develop an evidence-based national action plan** for strengthening national policies, systems and programmes related to school feeding.

SABER SF is based on case studies and global evidence on **the most important factors for the development and implementation of a successful school feeding programme** as both a safety net and a fiscally sustainable investment in human capital. Based on this research, five core policy goals form the basis for an effective school feeding programme.

For each policy goal, specific policy levers/indicators help define the stage of development – latent, emerging, established or advanced – of school feeding in a country. The overall SABER SF framework is illustrated in [Figure A4.1](#).

The exercise usually includes three steps:

1. Preparation and data collection – desk review using a standard questionnaire.
2. Workshop discussion, using *framework rubrics* to compare the results of the diagnostic with agreed standards.
3. Publication of the SABER SF report and validation of the action plan – the SABER-SF report is drafted together with a national action plan.

SABER SF promotes dialogue among and the engagement of all ministries and stakeholders involved in school feeding in order to enhance national capacity. It can support governments in their efforts to improve their policies, systems and programmes by:

- ▶ providing a comprehensive framework based on a thorough review of global evidence and related diagnostic tools;
- ▶ assisting countries in better understanding where their policies and programmes stand in comparison with good practice, and diagnosing where the strategic focus for improvement should lie by identifying strengths and gaps; and
- ▶ assisting countries in responding and developing national action plans for improving their school feeding programmes, and identifying areas where each player can contribute.

¹²²The domains currently cover levels of education – early childhood development, primary and secondary school, workforce development, and tertiary education; resources and support – school finance, school health and school feeding, and teachers; areas of governance – engaging the private sector, and school autonomy and accountability; information sources – education management information systems and student assessments; and cross-cutting themes – equity and inclusion, information and communication technologies, and resilience.

FIGURE A4.1 The SABER SF framework



Source: Bundy et al., 2009.

As a high-level assessment, SABER SF has the aim of stimulating dialogue and identifying core areas in which to focus support for school feeding. These areas themselves may provide more in-depth tools that can be utilized for strategic planning as school feeding develops. The framework rubrics do not capture the details of activities and their implementation.

SABER SH and SF has been developed on the basis of existing international consensus¹²³ and advice from an advisory committee of experts.¹²⁴ The *Rubrics and Questionnaire*¹²⁵ to be discussed at a SABER SF workshop are shown on next pages.

Resources:

- ▶ Additional information and tools on SABER SF, including the **Manual for SABER-SF exercise**¹²⁶ jointly developed by PCD, the World Bank and WFP, provide detailed guidance on how to plan and conduct a SABER SF exercise.
- ▶ Framework paper: **What matters most for school health and school feeding: a framework paper.**¹²⁷

¹²³ Guiding principles include the standards contained in the joint World Bank and WFP publication, Bundy et al., 2009.

¹²⁴ Including representatives of GlaxoSmithKline, the International Food Policy Research Institute, the London School of Hygiene and Tropical Medicine, PCD, Save the Children, UNICEF, the World Bank, WFP and WHO.

¹²⁵ The rubrics and questionnaire are available at: <http://saber.worldbank.org/index.cfm?indx=8&pd=9&sub=0>

¹²⁶ World Bank, WFP and PCD, 2016.

¹²⁷ World Bank, 2012.

SABER SF diagnostic tool
A framework for dialogue

Policy goal 1: Policy and legislative frameworks

Capacity levels	Latent	Emerging	Established	Advanced
1.1 National level poverty reduction strategy or equivalent national strategy as well as sectoral policies and strategies (education sector plan, nutrition policy, or social protection policy) identify school feeding as an education and/or social protection intervention, clearly defining objectives and sectoral responsibilities	There is recognition of school feeding as an education and/or social protection intervention, but school feeding is not yet included in the published national-level poverty reduction strategy, equivalent national policy, or sectoral policies and strategies.	School feeding is discussed by members and partners during preparation of national-level poverty reduction strategy, equivalent national policy, or sectoral policies and strategies, but not yet published	School feeding included in published national-level poverty reduction strategy or equivalent national policy (including specifications as to where school feeding will be anchored and who will implement); published sectoral policies or strategies have clearly defined objectives and sectoral responsibilities	School feeding included in published national-level poverty reduction strategy or equivalent national policy (including specifications as to where school feeding will be anchored and who will implement and accompanied by targets and/or milestones set by the government); published sectoral policies or strategies have clearly defined objectives and sectoral responsibilities, including what school feeding can and cannot achieve, and aligned with the national-level poverty reduction strategy or equivalent national strategy
1.2 An evidence-based technical policy related to school feeding outlines the objectives, rationale, scope, design and funding and sustainability of the programme and comprehensively addresses all four other policy goals (institutional capacity and coordination, financial capacity, design and implementation, and community participation)	There is recognition of the need for a technical policy related to school feeding, but one has not yet been developed or published	A technical policy and situation analysis under development by the relevant sectors that address school feeding	A technical policy related to school feeding is published, outlining the objectives, rationale, scope, design, funding and sustainability of the programme and covering some aspects of all four other policy goals, including links with agriculture development	A technical policy related to school feeding is published, outlining the objectives, rationale, scope, design, funding and sustainability of the programme and comprehensively covering all four other policy goals with a strategy for local production and sourcing, including links with agriculture development and small holder farmers; policy is informed by a situation analysis of needs and aligned with national poverty reduction strategies and relevant sectoral policies and strategies

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Policy goal 2: Financial capacity

Capacity levels	Latent	Emerging	Established	Advanced
2.1 National budget line(s) and funding are allocated to school feeding; funds are disbursed to the implementation levels (national, district and/or school) in a timely and effective manner	<p>There is recognition of the need to include school feeding in the national planning process, but this has not yet happened</p> <p>The government is fully reliant on external funds and does not have provision in the national budget to allocate resources to school feeding</p> <p>There is recognition of the need for mechanisms for disbursing funds to the implementation levels, but these are not yet in place</p>	<p>School feeding is included in the national planning process and national funding is stable through a budget line but unable to cover all needs</p> <p>There is no budget line at regional and school levels.</p> <p>Existing school feeding funds are disbursed to the implementation levels intermittently</p>	<p>School feeding is included in the national planning process and is mainly funded through a national budget line</p> <p>All ministries involved in the programme implementation have a budget line or funds allocated</p> <p>Budget lines also exist at regional and school levels</p> <p>School feeding funds are disbursed to the implementation levels in a timely, effective manner</p>	<p>School feeding is included in the national planning process and is fully funded through a national budget line consistent with the SF policy and situation analysis, including options for engaging with the private sector</p> <p>Budget lines and plans also exist at regional and school levels, sufficient to cover all the expenses of running the programme.</p> <p>SF funds are disbursed to the implementation levels in a timely, effective manner and implementers have the capacity to plan and budget as well as request resources from the national or sub-national level</p>

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Policy goal 3: Effective and accountable institutions

Capacity levels	Latent	Emerging	Established	Advanced
3.1 multi-sectoral steering committee coordinates implementation of a national school feeding policy	Any multi-sectoral steering committee coordination efforts are currently non-systematic	A sectoral steering committee coordinates the implementation of a national school feeding policy	A multi-sectoral steering committee from at least two sectors (e.g. education, social protection, agriculture, health, local government, water) coordinates the implementation of a national school feeding policy	A multi-sectoral steering committee from at least 3 sectors (e.g. education, social protection, agriculture, health, local government, water) coordinates implementation of a national SF policy. This government-led committee and provides comprehensive coordination (across international agencies, NGOs, the private sector and local business representatives) and is part of a wider committee on school health and nutrition
3.2 national school feeding management unit and accountability structures are in place coordinate with school level structures	A specific school feeding unit does not yet exist at the national level Coordination between the national, regional/ local (if applicable), and schools is lacking	A school feeding unit exists at the national level, but it has limited resources and limited staff numbers and lacks a clear mandate. Coordination mechanisms between the national, regional/ local (if applicable), and school level are in place, but they are not fully functioning	A fully staffed school feeding unit with a clear mandate exists at the national level, based on an assessment of staffing and resources needs. Coordination mechanisms between the national, regional/local (if applicable), and school level are in place and functioning in most instances	A fully staffed school feeding unit exists at the national level, based on an assessment of staffing and resources needs, with a clear mandate, and pre- and in-service training. Coordination mechanisms between the national, regional / local (if applicable), and school level are in place and fully functioning
3.3 School level management and accountability structures are in place	Mechanisms for managing school feeding at the school level are non-uniform and national guidance on this is lacking	National guidance on required mechanisms for managing school feeding are available at the school level, but these are not yet implemented fully	Most schools have a mechanism to manage school feeding, based on national guidance	All schools have a mechanism to manage school feeding, based on national guidance, with pre- and in-service training for relevant staff

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Policy goal 4: Effective programme design and implementation

Capacity levels	Latent	Emerging	Established	Advanced
4.1 A functional monitoring and evaluation (M&E) system is in place as part of the structure of the lead institution and used for implementation and feedback	The importance of M&E is recognised, but government systems are not yet in place for M&E of school feeding implementation	A government M&E plan exists for school feeding with intermittent data collection and reporting occurring especially at the national level	The M&E plan for school feeding is integrated into national monitoring or information management systems and data collection and reporting occurs recurrently at national and regional levels	The M&E plan for SF is integrated into national monitoring or information management systems and data collection and reporting occurs recurrently at national, regional and school levels; analysed information is shared and used to refine and update programmes; baseline is carried out & programme evaluations occur periodically
4.2 Programme design identifies appropriate target groups and targeting criteria corresponding to the national school feeding policy and the situation analysis	The need for targeting is recognised, but a situation analysis has not yet been undertaken that assesses school feeding needs and neither targeting criteria nor a targeting methodology has been established as yet	Targeting criteria and a targeting methodology is being developed corresponding to the national school feeding policy; a situation analysis assessing needs is incomplete as yet	Targeting criteria and a targeting methodology exists and is implemented corresponding to the national school feeding policy and a situation analysis assessing needs	Targeting criteria and a targeting methodology exists and is implemented corresponding to the national school feeding policy and situation analysis (including costing for various targeting and designs); M&E information is used to refine and update targeting and coverage on a periodic basis
4.3 Food modalities and the food basket correspond to the objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements	There is recognition of the need for national standards for food modalities and the food basket, but these do not exist yet.	National standards on food modalities and the food basket have been developed and correspond to two or more of the following: objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements.	National standards on food modalities and the food basket have been developed and correspond to objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements	National standards on food modalities and the food basket have been developed and correspond to objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements; M&E information is used to refine and update food modalities and food

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Policy goal 4: Effective programme design and implementation

Capacity levels	Latent	Emerging	Established	Advanced
4.4 Procurement and logistics arrangements are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline	There is recognition of the need for national standards for procurement and logistics arrangements, but these do not exist yet.	National standards on procurement and logistics arrangements have been developed and are based on three or more of the following: procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline	National standards on procurement and logistics arrangements have been developed and are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline	National standards on procurement and logistics arrangements have been developed and are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline; M&E information is used to refine and update procurement and logistics arrangements

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Policy goal 5: Sustainability and continuity – community roles, reaching beyond schools

Capacity levels	Latent	Emerging	Established	Advanced
5.1 community participates in school feeding programme design, implementation, management and evaluation and contributes resources (in-kind, cash or as labour)	Systems and accountability mechanisms are not yet in place for consultation with parents and community members on the design, monitoring and feedback of the school feeding programme	A school feeding management committee exists but parent and community member participation could be strengthened and awareness on the opportunity to monitor and feedback on the school feeding programme is lacking	The school feeding management committee comprises representatives of teachers, parents, and community members and communities have accountability mechanisms to hold school feeding programmes accountable at the school level	The school feeding management committee comprises representatives of teachers, parents, and community members and has clearly defined responsibilities and periodic training. Accountability mechanisms are in place by which communities can hold school feeding programmes accountable at the school, regional, and national levels.

ANNEX 5**GUIDING LIST OF CRITICAL ISSUES TO CONSIDER FOR HGSF**

The standard SABER SF framework rubrics and questionnaire¹²⁸ in combination with the following questions can be used to assess the current situation of school feeding in a country. Some of the additional questions are useful for any school feeding programme, while others are specifically important when a switch to or a scale-up of HGSF is intended. The questions also serve as a checklist of issues to consider when setting up or scaling up/strengthening an HGSF programme.

Policy and legal frameworks**General**

- ▶ Do relevant development plans, policies and strategies define clear objectives and accountability mechanisms and clarify sector responsibilities? Are they supported by adequate national legislation and norms? If not, how can the gaps be addressed?
- ▶ To what degree does a relevant technical school feeding policy follow a multisector approach? To what degrees is it evidence-based and integrated into the national social protection system? And to what degree does it provide the basis for costed action plans? Indications of good integration include mentions of school feeding in an overall national social protection policy or strategy that presents school feeding as, for example, part of a lifecycle approach to social protection. Further indications include the explicit pursuit of synergies and complementarities among programmes, the consideration of social protection issues in order to guide the targeting of a school feeding programme, the adoption of children's participation in school as a necessary condition for a household's receipt of other social protection benefits, the reflection of school feeding in the overall budget for social protection, mentions of referrals among programmes, etc.

HGSF-specific

- ▶ Is school feeding mentioned in the agriculture sector plan, strategy or law, and/or in a national nutrition and food security policy, strategy or law?
- ▶ How specific are these documents on school feeding – do they include objectives, targets and details on the implementation of the programme? Do they link school feeding to local and/or smallholders' production?
- ▶ Is there a specific national school feeding policy? Does the policy include HGSF – does it make links among school feeding, agricultural production/smallholder farmers, and nutrition and food security? Does it define a fixed target for the amount/proportion of food to be procured locally and/or from a specific type of supplier? Does it clarify the roles of the various ministries involved, including the ministry of agriculture?
- ▶ Is there a formal programme for implementing the national school feeding policy? Do the policy's design, targeting principles and implementation strategy correspond to the specific objectives relevant to HGSF identified in the previous questions?
- ▶ Do existing legal frameworks support HGSF implementation requirements adequately, marginally or not at all? Are there legal and/or administrative barriers to the participation of smallholder farmers in school feeding markets?
- ▶ Is there an information and advocacy strategy to ensure broad understanding and support?
- ▶ Do existing legal frameworks ensure the continuity of national HGSF programmes as they become difficult to abandon?

Financial capacity**General**

- ▶ How much of the budget for school feeding is provided from national or subnational sources – less than 20 percent; between 20 and 50 percent; between 50 and 80 percent; or more than 80 percent?

¹²⁸ Available at: <http://saber.worldbank.org/index.cfm?indx=8&pd=9&sub=4>

- ▶ Are funds for school feeding disbursed in a transparent and accountable manner?
- ▶ Describe the disbursement mechanisms in detail.
- ▶ Discuss the results of a national cost assessment, or whether such an exercise would be useful.

HGSF-specific

- ▶ Has the actual cost per child per year for the HGSF programme(s) been calculated – set-up and running costs? If the school feeding programme were sourced locally, how would that affect the costs?
- ▶ What is the government's annual allocation for these activities? How has the amount evolved in recent years?
- ▶ Are the resources allocated sufficient to meet the programme's operational objectives without breaks in food supply?
- ▶ Overall, how embedded is school feeding in national- and local-level planning and budgeting processes? Does the government, through its ministries, have provisions in the national budget to allocate resources to school feeding?
- ▶ Does the ministry of agriculture have a budget line for school feeding? Are funds from relevant ministries, such as agriculture and health, allocated to operating the HGSF programme – for example, for food quality control – and implementing complementary activities such as capacity development on the supply side or smallholder agricultural development?
- ▶ Overall, what is the capacity of the government to finance the programme, from its own resources of external funds?
 - What are the sources of financing and support for school feeding? How are these divided among national, international and local sources?
 - What other potential, untapped sources of financing are available at the international, national and local levels in the country?
- ▶ Are there specific financial guidance and procedures for HGSF?
- ▶ To what extent can existing delivery systems and funding infrastructure be used to implement HGSF?
- ▶ Do existing financial procedures facilitate or compromise local procurement and/or procurement from smallholder farmers, cooperatives and community-based organizations?

Institutional capacity and coordination

General

- ▶ Is there a national steering committee that involves all the relevant stakeholders and representatives? Does it coordinate not only the implementation of a policy, but also a national school feeding programme? Is this committee actually functioning – how often does it meet, and which decisions has it taken in recent years?
- ▶ Does a school feeding programme management unit exist at the national and/or subnational level? Are there clear accountability lines from the central to the regional/subnational and school levels? To what extent are the unit's resources adequate to fulfil its mandate – staff, infrastructure, equipment, systems and tools? To what extent do staff benefit from pre- and in-service training – what kind of training and how often?

HGSF-specific

- ▶ Is the national-level coordination body mandated to coordinate the implementation of the school feeding strategy/policy (if any) also responsible for coordinating the strategy and activities related to HGSF, such as carrying out studies, assessments and pilot programmes, and designing or adapting guidelines and procedures? Does it include all relevant sectors? Is the coordination body effective in making decisions for the programme?
- ▶ Do the school feeding unit, the ministry of agriculture and other relevant ministries have a joint strategy for school feeding, with coordination at the national and central levels?
- ▶ Does the national school feeding programme have any formal agreements with relevant sectors – such as the ministries of agriculture, trade and health – and with external stakeholders? Are new formal agreements under discussion?

- ▶ What regional institutions, South–South cooperation, bilateral and multilateral technical assistance and technical cooperation could be mobilized to accompany and support the national school feeding programme?
- ▶ Are there clear institutional arrangements, structures, budgets and responsibilities for HGSF at the national, regional, district and school levels? Do current arrangements need to be modified or adapted? Are there clear terms of reference for each level of implementation? Have managers already developed plans of action for achieving the objectives?
- ▶ Do the units in charge of implementing school feeding at different levels have a sufficient staff to fulfil responsibilities related to HGSF? Are staff trained and knowledgeable in HGSF issues and the new procedures to be established?
- ▶ How good are communications between the central and local levels for programme implementation?
- ▶ Is there a national M&E unit collecting relevant data on agriculture and education? Does it have a mechanism for ensuring that all major interested parties submit their reports to the unit?

Design and implementation

General

- ▶ In addition to the aspects included in the SABER SF tool, what is the quality of the data collected – is the information reliable, timely and adequately disaggregated by sex and, if applicable, age? What is the quality of the reports produced, their frequency, and the extent to which they are shared with all relevant stakeholders and promote joint learning? Have the reports been used, for example, to update policies or programmes – redirection, inclusion of additional partners, expansion or reduction, shift in modalities or food basket, etc.?
- ▶ Include a robust context analysis on poverty, education, child status, social protection and nutrition to inform discussions during the SABER SF workshop in order to ensure that issues that can be addressed by school feeding are clearly reflected and accounted for in the situation analysis (see [Annex 1](#)).
- ▶ When was the last situation analysis undertaken? Does it include gender analysis? How often is targeting revised/updated, and who is involved in the exercise? To what extent is the programme able to adapt to changing conditions?
- ▶ How are national guidelines disseminated? How are relevant staff trained to apply their contents? How are communities sensitized to national guidelines? (This last question is important for accountability and community participation.)

HGSF-specific

- ▶ Are there implementation guidelines for the school feeding programme that can be used for implementation of and training in HGSF? Do they need to be adapted or revised to integrate HGSF approaches?
- ▶ Does the food basket take into consideration local habits and include as much locally produced food as possible? Are elements of the food basket not available in the country, such as corn-soya blend? If so, why were they chosen?
- ▶ What methodology is applied for the impact evaluation of HGSF, if any? Is there a baseline for the HGSF components of the programme? Is there a mid-term or end-of-term evaluation?
- ▶ Is there a tendering process for food procurement? Are there guidelines for the national and provincial levels on how to engage small-scale farmers in supplying school feeding? Do the systems enable small-scale farmers to meet requirements for the tendering and procurement process?
- ▶ Are there systems in place for organizing small-scale farmers in more structured and sustainable groups? Is there a system in place for sensitizing small-scale farmers to the opportunity for selling their commodities to the school feeding market? Are there guidelines for small-scale farmers on producing food for school feeding programmes?
- ▶ What percentages of total food requirements for the existing programme(s) are sourced from small-scale farmer associations or community groups, local markets, national markets, in-kind food assistance and international or regional procurement?
- ▶ Has a feasibility study been conducted on connecting small-scale farmers to markets – specifically school feeding markets – in the country?

Community participation

General

- ▶ What forms of community participation are present? Is it possible to identify which community members participate and how? How are communities involved in discussions of the design of a school feeding programme, as well as the management?

HGSF-specific

- ▶ Are the members of parent-teacher associations and school committees and head teachers trained in school feeding management and record keeping?
- ▶ Has the community been involved in deciding which products are provided in the food basket? Are communities engaged in the definition of menus and in food procurement?
- ▶ Are school-level implementation arrangements sufficiently efficient to avoid disrupting teaching time during school hours?



ANNEX 6**SHORT DESCRIPTIONS OF MENU PLANNING TOOLS**

Several tools support the design of menus that are in line with nutrient targets and will ensure that they are met. The tools can be applied both at the initial design stage and when meals have to be adjusted according to food availability. They allow programme designers to establish menu options and meals that are composed entirely from local sources, combine both local and imported food or include fortified foods in various quantities. To achieve a degree of variety, programme designers can identify several adequate meals and determine how often each should be served.

It should be noted that each of these tools has its own advantages and disadvantages. In particular, in most instances, the foods covered by the tools are not (yet) sufficiently diverse to allow the full consideration of local foods in many different geographical areas. This research gap needs to be addressed as soon as possible.

Regional and national food composition tables, developed and supported by FAO, are core tools used by practitioners to calculate the nutrient composition of meals and recipes. The tables are based on national or regional consumption patterns, so they include country-specific foods, recipes and brand-name foods and incorporate underutilized foods and biodiverse crops. These features are particularly relevant to HGSF and when trying to integrate nutritious traditional foods and recipes into school meals.

FAO coordinates the **International Network of Food Data Systems (INFOODS)**, which was established in 1984 as a worldwide network of food composition experts working to improve the quality, availability, reliability and use of food composition data. INFOODS also serves as a forum for harmonizing, supporting and advocating for activities related to food composition at the international level. INFOODS is organized into several regional data centres¹²⁹ with a global coordinator, through which INFOODS and FAO provide guidelines, standards, compilation tools, databases, capacity development tools, policy advice, advocacy tools and technical assistance at the country level. The centres also serve as fora for linking activities in agriculture, biodiversity, food systems, health and nutrition in order to achieve better nutrition worldwide. A directory of regional and national food composition tables can be found at <http://www.fao.org/infoods/infoods/tables-and-databases/en/>

NutVal is a planning, calculation and monitoring application for food assistance programmes funded by the Office of the United Nations High Commissioner for Refugees (UNHCR), WFP, the Global Nutrition Cluster, the United States Agency for International Development (USAID)/United States Department of Agriculture (USDA), the Emergency Nutrition Network (ENN) and University College London, and used by multiple food assistance agencies. It is used to calculate the macro- and micronutrient contents of food items entered into the tool, and the overall nutrition content of a meal. It also specifies how much of the daily nutritional requirements of different target and age groups are provided by the quantities of individual and collective items entered by meal planners. NutVal is found at: <http://www.nutval.net/2007/05/downloads-page.html>

The **School Meals Planner** was designed by the Partnership for Child Development (PCD), initially for the Ghana HGSF programme, and facilitates the design of nutritional school meal menus by showing the overall nutrition content of a meal. It breaks down various common food commodities by their essential macro- and micronutrient contents, and shows – using “gingerbread man” drawings – the extent to which a meal or snack meets nutrition requirements in up to six different areas – energy, fat, protein, iron, iodine and vitamin A. When linked to local market prices for raw ingredients, it can also calculate the cost of a meal and thus be used as a budgeting tool. The current planner is based on food items and prices in Ghana, but can be adapted to any other context for which the necessary data are available. The tool along with an instruction manual can be found at: <http://www.hgsf-global.org/en/bank/menu-planner> – offline versions at: http://www.hgsf-global.org/en/bank/downloads/doc_details/382-offline-menu-planner-tool

¹²⁹ Links to these centres are available at: <http://www.fao.org/infoods/infoods/regional-data-centres/en/>

The **Cost of Diet tool**, developed by Save the Children UK, analyses the amounts, combinations and costs of the local foods needed to provide families with a nutritious diet. A Cost of the Diet assessment follows a logical process that takes about six weeks to complete, from identifying the food security and nutrition problem, through data collection, entering and analysis to the drawing up of recommendations and conclusions. The Cost of Diet software uses linear programming to find optimal combinations of available foods that meet energy, macronutrient and micronutrient needs. In its newly released version, the tool has been completely revised to provide a more stable program, which is available for use free of charge. Save the Children has used the software in Bangladesh and Myanmar, for example, to assist in measuring the impacts of the 2009 food price crisis and determining cash transfer amounts in a cash-for-work programme. The tool is modelled on a family of five people, including children under two years of age, pregnant women and adolescent girls, but it can also be modelled for school-aged children; there is a plan for piloting its use with school-aged children in Madagascar in the near future. In addition to the software, several guidance documents are available, and an online forum for discussions and problem solving. The tool is available at: <http://www.securenutrition.org/resource/cost-diet-tool-v2>

Optifood was developed by the World Health Organization (WHO) in collaboration with the London School of Hygiene and Tropical Medicine, Food and Nutrition Technical Assistance (FANTA) and Blue-Infinity. It is a linear programming software application that allows public health professionals to: i) identify the *nutrients* people obtain from their local diets, and formulate and test population-specific recommendations regarding the foods that people need in order to meet their nutrition needs; and ii) apply optimization analyses to help specify the *lowest-cost combination* of local foods that will meet or come as close as possible to meeting the nutrient needs of specific target groups.



ANNEX 7**EXAMPLES OF DIFFERENT OPERATING MODELS**

HGSF programmes can be implemented in many different ways; each country develops its own model, and mixed models are common – for example, a more centralized model may be chosen for non-perishable staples and a more decentralized one for perishables.¹³⁰ Each model has its own advantages and involves its own trade-offs in terms of benefits for farmers, schools, children, food quality, and efficiency. This section provides some concrete examples as a source of inspiration.

Centralized school feeding models

Centralized models are more specific to regular school feeding programmes than to HGSF. Such models are based on having a single entity procuring for a large number of schools large quantities of dry commodities that can be stored and transported over long distances. Involving only few contracts – one per dry commodity per year – tendered once a year, it is unlikely that smallholders can take part in such models or compete with imports from highly productive countries. Some dry products can, however, be procured locally.

The procurement of fresh products is always decentralized, unless there is a cold chain, which is rare in vulnerable areas.

Semi-decentralized HGSF

In this model, both the funds to purchase the food and the procurement authority are transferred to intermediate structures in charge of procuring and delivering food to schools. These intermediate entities can be NGOs, as in Togo, catering companies, as in Ghana, or central kitchens, as in Tunisia. Any country can find additional solutions, as implementation modalities have to be adapted to each context.

Semi-decentralized models increase the scope for independent decision-making, providing the opportunity to connect demand to local production. They also increase the complexity of the programme by increasing oversight and interventions – supply-side interventions. Semi-decentralized models do not support long-term government capacity building.

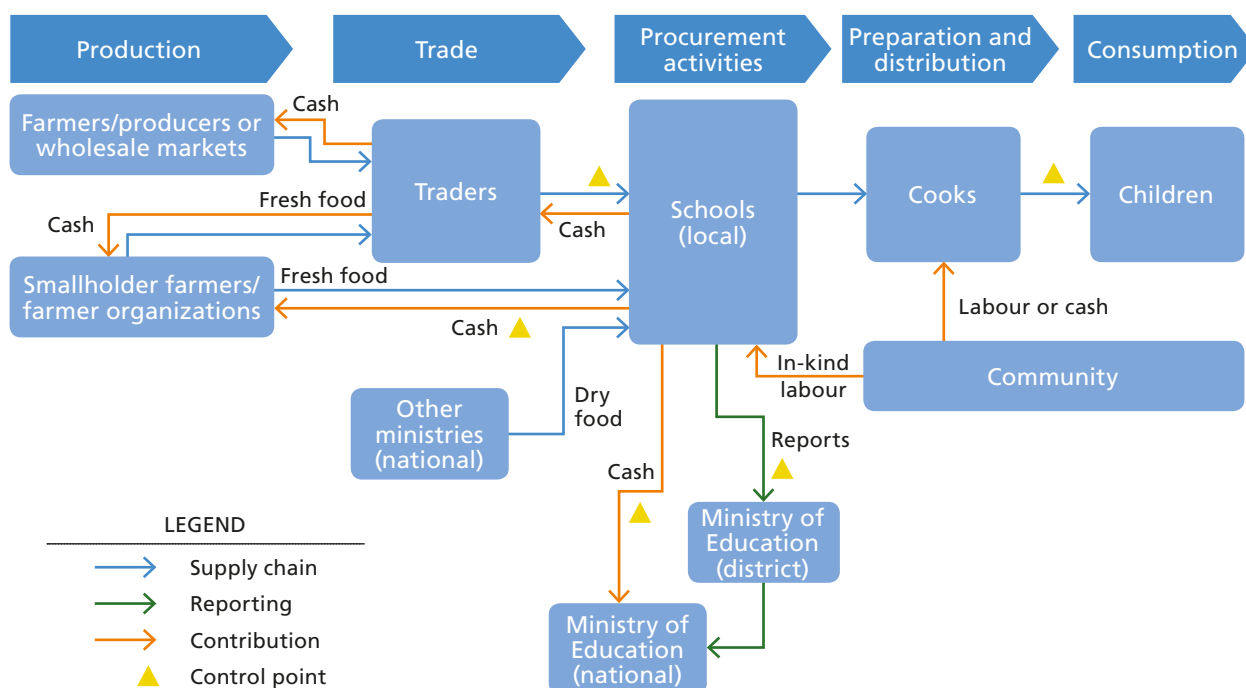
Decentralized HGSF

In decentralized models, cash and procurement authority are delegated to the schools. Transport volumes are small because of the small-scale transactions at the school level. Traders maintain a level of stocks, while smallholder producers typically sell immediately after harvest. Some stock is stored at the school level.

The following pages present examples of different operating models. Each example includes a short description of the model, an illustration of relations and resource flows, considerations, a summary of risk factors and a list of control points.

¹³⁰ Gelli *et al.*, 2012.

A) Bhutan: cash transfers to schools, purchases on local market, meals cooked in schools



Source: authors' elaboration.

Bhutan's school feeding programme combines:

1. central procurement of imported dry foods, by WFP for regular school feeding;
2. central procurement of locally produced dry foods, by ministries for HGSE; and
3. decentralized procurement of fresh foods, by schools for HGSE.

Considerations: The home-grown aspects of the programme are based on a cash-value stipend per child, of which 60 percent is used for central procurement of non-perishable foods and 40 percent for local purchases of vegetables, meat, fish and condiments. Transport costs are managed separately, as the remote locations of some schools make transport expensive. The stipend value was increased in recent years in response to difficulties in meeting nutrition needs adequately.

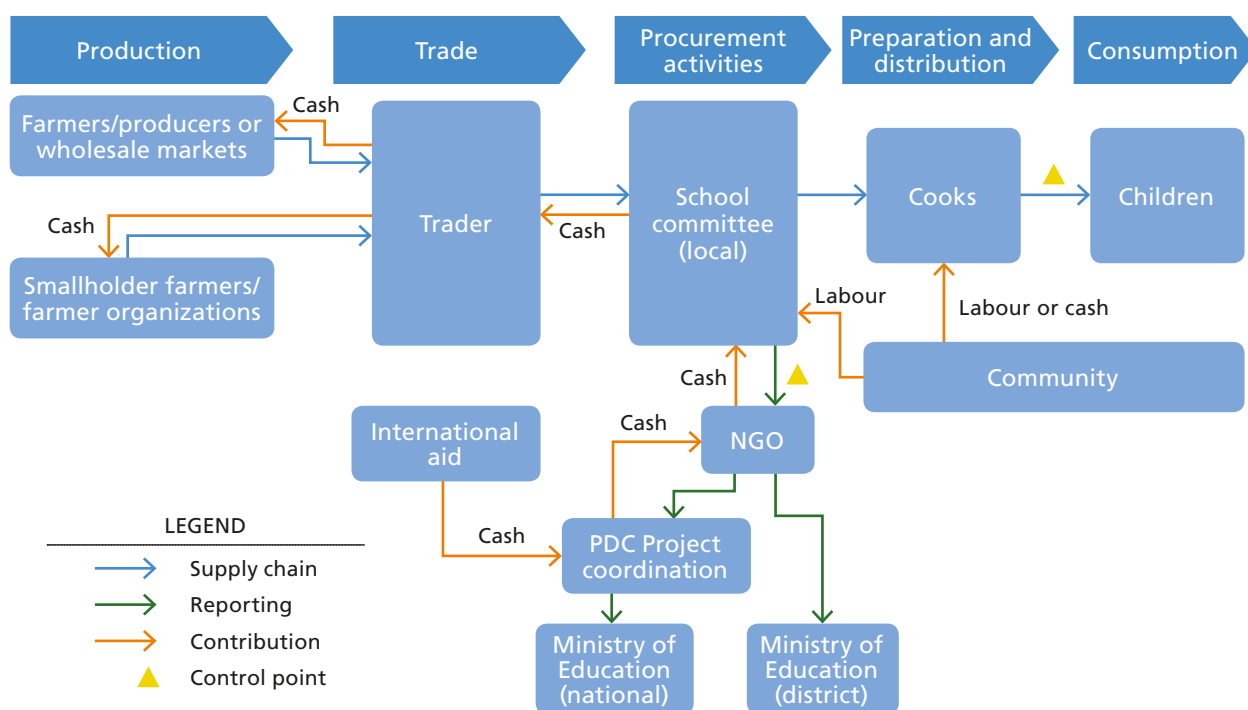
The process is based on an import pipeline that delivers four fortified commodities about three times per year. A gradual process of hand-over to government is accompanied by concerted capacity development efforts. Stocks are reported on twice per year, and are used with enrolment figures and biannual reports of student numbers to determine future deliveries.

Summary of risk analysis: Food storage can present a challenge in both the government- and WFP-led elements of the programme. Rural storage is often inadequate, and fumigation and warehouse cleaning are not always available at the school level. During the monsoon in June to August, roads and trails are frequently cut off, so supplies for the programme need to reach the schools before the start of the monsoon.

Control points

1. Distributions of food to schools are monitored through waybills and supporting documentation.
2. Numbers of meals provided and school attendance are recorded daily.
3. Local purchases can be tracked, especially through the tendering system, by the government.
4. Schools report back to the centre on a quarterly basis.

B) Togo: Cash transfers to committees, which buy from market and cook in school



Source: authors' elaboration.

The Togo school feeding project is developing sustainable solutions for school feeding with two main objectives: increasing institutional and human capital development at the central and local levels, and strengthening the local production sector through stronger linkages to schools. The project is led by a World Bank-funded project management unit, which is currently coordinated by PCD and not embedded in the Ministry of Education. It serves about 80 000 pupils at 308 primary schools.

The unit sends money, based on numbers of children attending school, to local NGOs that work with school canteens. A local committee, which includes representatives of the school, the NGO and the village chief, is responsible for project implementation at the school level. The committee recruits women volunteers to purchase and cook the food for the project.

Considerations: Capacity in the field is generally fairly low, and is being enhanced through training in management and basic accounting for members of local committees. Capacity development activities include sensitization of school feeding management committees to minimum standards, sensitization to gender issues through training and communication to increase girls' enrolment, and inclusion of nutrition sensitivity. The canteen "mamans" who buy the food from the market are volunteers, and there is currently insufficient budget for allowances to cover their transport and other expenditures.

Summary of risk analysis: The current approach is probably not sustainable in the medium term. Stakeholders from the ministries of agriculture, social protection, education, planning and finance will need to become more engaged in the project to ensure its sustainability.

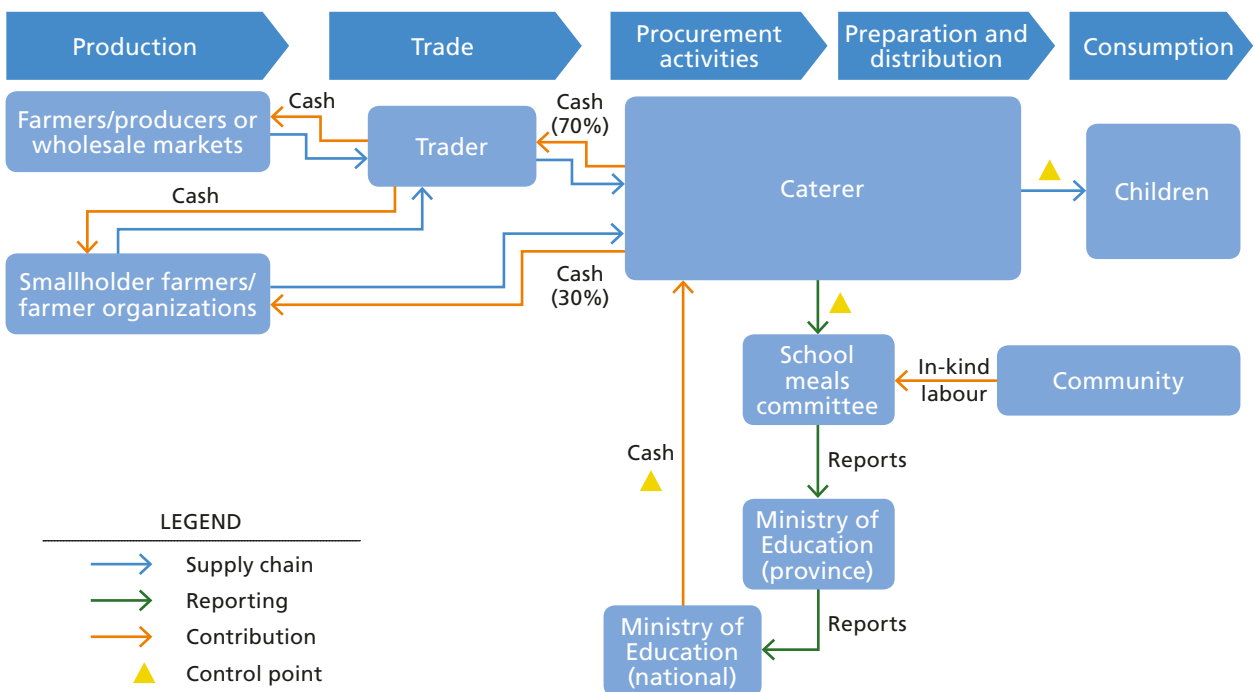
NGOs are responsible for project implementation at the school level, and for monitoring and reporting on activities. It may prove challenging to ensure appropriate levels of compliance with standards.

Communities do not contribute actively and their engagement in and ownership of the project is not guaranteed.

Control points

1. Field monitors from NGOs, sometimes accompanied by monitors from the central school feeding unit, work at the school level to ensure that students are fed. The information they collect is independent of the main education reporting mechanism.
2. The cash transfers to NGOs can be reconciled against the reported numbers of students fed, using a standard cost per student.

C) Tunisia: purchases on local markets, provision of cooked meals



Source: authors' elaboration.

In Tunisia's pilot model for HGFS, several small rural schools are served by a caterer operating from a regional hub. The model builds on the Government's model for providing meals in boarding schools. The pilot is currently operating in a single region and serves ten schools, all of which are less than 15 km from the provincial centre (the *Commissariat*). About 1 300 meals per day are delivered from the central kitchen in modified mini-vans. As the model develops, it is hoped that small farmers and women's groups – both specifically targeted by the programme – will supply about 30 percent of the food procured. Scale-up plans involve reaching additional schools from the existing kitchen, and government replication of the system in other appropriate locations.

Considerations: Small primary schools are not normally budget holders; budgets for school feeding and other aspects are held at the *Commissariat* level. Food procurement is via annual tenders using a centrally generated reference price list.

Inputs for the productive sector include agricultural extension support to small-scale farmers and specific financial and technical support for women’s groups through training and development activities. A steering committee supports the programme both in Tunis and at the *Commissariat* level, with members including WFP, FAO, the Ministry of Agriculture and other stakeholders.

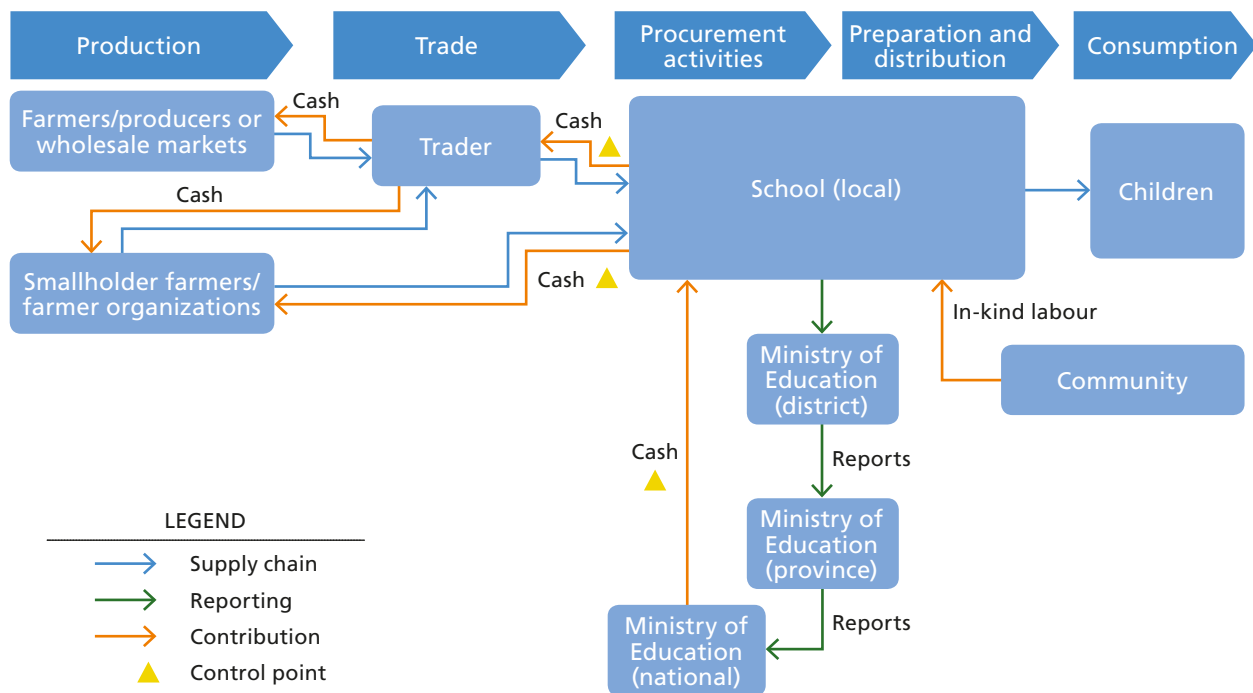
Schools also maintain nutrition gardens, which provide a platform for nutrition education.

Summary of risk analysis: The reconfiguration of the money transfer process provides an opportunity for some elements of the population to protest or hold demonstrations because of concerns about the potential for fraud. This risk is countered by community engagement and effective communications. However, community engagement is not yet as strong as required, and work is planned to strengthen the engagement of pupils, parents and other community members in the programme. The school feeding pilot clearly provides a better-quality meal, and there are additional multiplier effects in terms of community engagement and the development of the productive sector. Meals are more expensive per head than in previous systems, however. The model does not foresee the pre-financing or the provision of affordable credit to caterers that is provided in Ghana.

Control points

1. Cash transfers made to the provincial-level caterer from the Ministry of Education.
2. Numbers of meals actually produced by the kitchen and delivered to the schools in the programme, as reported by the caterer.
3. Numbers of meals received at the school level and served to children.

D) **Mozambique: cash transfers to schools, purchases on local markets and provision of cooked meals in schools**



Source: authors' elaboration.

Mozambique's National School Feeding Programme has three interlinked pillars/objectives: provision of school meals, nutrition education and agricultural production. The pilot project includes decentralized food procurement in 12 schools, with about 14 000 pupils. The pilot schools are located in various agroecological zones in the framework of a tripartite agreement among the Ministry of Education and Human Development, WFP and the Brazilian Cooperation Agency.

Considerations: In the pilot, WFP transfers funds to the Ministry of Education and Human Development at the central level, and the ministry sends them directly to schools for the local procurement of food commodities.

The pilot has a fairly simple payment structure, but has a long reporting chain, which can make timely reporting and reconciliation difficult. This in turn affects cash flow for the project; government rules and procedures are followed for the management of funds. In addition, the pilot still experiences challenges associated with low capacity in some areas.

All schools must have a bank account as a precondition for participating in the project. Funds are transferred to the school bank account and managed by a named staff member – normally the school director or administrator – with oversight from the district-level officer responsible for procurement and tendering and the district school coordinator.

Summary of risk analysis: The local market may not be able to meet school feeding needs consistently. It is therefore essential critical to support the supply side through various modalities using technical assistance and augmentation. The home-grown components of the programme address this issue.

Management capacity at the school and district levels is a risk area, particularly regarding fund management, procurement guidelines, handling of commodities, diversification of menus and food and nutrition education. As implied by the project's emphasis on food handling and storage, food safety is a risk, which the project seeks to address through improved quality control and technical support.

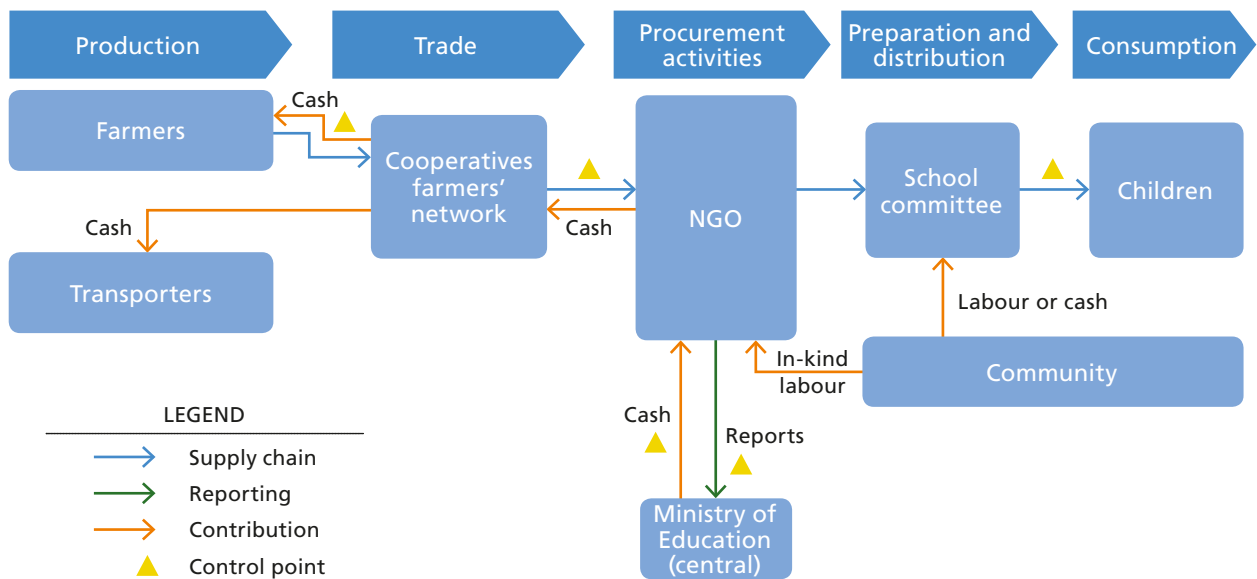
A recommendation recently adopted from the evaluation is that non-perishable food (staples) be purchased at the district level, and be complemented by the purchase of fresh foods – which will probably amount to 10–20 percent of total food – at the school level.

In order to participate in public procurement, local farmers need to be registered with legally recognized organizations that present purchase receipts for justification purposes and transparency.

Control points

- ▶ Cash transfers made by the school to the trader or the farmer organization
- ▶ Cash transfers made by the Ministry of Education to the school
- ▶ Numbers of meals received at the school level and served to children as reported by the school.

E) Haiti: NGO partners using cash to buy commodities from producers and school committees preparing meals for students



Source: authors' elaboration.

This pilot serves 3 500 children in 24 schools with the objectives of improving nutrition and increasing retention in school. In addition, the programme seeks to strengthen national capacity for a more autonomous school feeding model and to promote smallholder farmers' food production and market access.

The project seeks to build capacity at a number of levels simultaneously: at the school level by empowering the respective management committees; and at the production level by providing farmers with technical training, support and small-scale agricultural credit. The pilot requires school management committees, supported by a local NGO, to procure food commodities that are produced locally, using funds provided by WFP during the pilot – eventually, the Ministry of Education will provide the funds, as shown in the illustration.

Considerations: Environments in Haiti can be challenging for school feeding operate, as reflected in the resource flows shown in the diagram above. The process introduced by the pilot is fairly complex, and the control and monitoring system were set up accordingly. Simplifying monitoring for scale-up while ensuring control over the use of resources and maintaining a steady supply chain may prove challenging.

The seasonal availability of food was taken into account in the design of school feeding menus, which are meant to be nutritionally complete and balanced and vary throughout the week. Menus are set centrally and are common to all schools. Deliveries of local dry food – cereals and pulses – are monthly, while fresh vegetables and root crops are delivered weekly to schools.

The transfer values are determined based on three-monthly price monitoring of local markets, pupil numbers and the standard menu for the season. They include components for transport and overheads.

Relationships are formalized. A three-party letter of understanding will be signed by WFP, the Ministry of Education and the Ministry of Agriculture at the national level, and there are field-level agreements with the Farmers' Network and the NGO. The Farmers' Network signs individual purchase contracts with small agricultural groups, while the NGO signs agreements with schools.

Summary of risk analysis: Market analysis and prior attempts to procure locally have identified challenges with maintaining quality and quantity in the procurement of staples. For this reason, the pilot was planned at a small scale, and development of the productive sector has been a core consideration from the start.

Participating farmer organizations have indicated that they lack adequate access to agricultural inputs including seeds, fertilizers, pesticides and equipment. Difficult access to credit was also mentioned as a factor that prevents higher productivity and better quality of agricultural products.

Inadequate post-harvest handling and processing facilities affect food conservation in farmers' silos and schools' storage facilities.

The weak planning and management capabilities of farmer organizations, including in organizing supply chain logistics such as for the transport of commodities from the field to schools, have been closely followed since the start of activities.

The project may have an inflationary impact locally and cause market distortions. Extreme droughts may also affect the project negatively.

Control points

1. Cash transfers to the NGO.
2. Purchase requisitions and subsequent cash transfers to the Farmer's Network.
3. Payments made to farmers.
4. Distribution monitoring – quantities of food delivered to school committees.
5. Field monitoring of numbers and quality of meals served to children.
6. Consolidation and reporting on all of these aspects by the NGO and the Farmers' Network to WFP and the Ministry of Education.



ANNEX 8**GUIDANCE ON AND EXAMPLES OF HGSF-RELEVANT OUTCOME AND OUTPUT INDICATORS**

The following examples relate to the outcome and output indicators proposed for the monitoring of and reporting on HGSF programmes. For all of the indicators listed in this annex, the following applies:

- ▶ All person-based indicators should be disaggregated by sex.
- ▶ Summary data from consecutive reports issued throughout the year should be shown in annual reports to allow trend analysis.
- ▶ To ensure the feasibility of carrying out regular surveys of smallholder farmers, it is worth considering the establishment of a representative sample of smallholder farmers that includes both those who received support from the programme and those who did not, and the adoption of a survey system based on telecommunications technology, for example, using cell phones.
- ▶ Care should be taken to avoid multiplying surveys: ideally, only one regular survey should be carried out to collect information for all survey-based indicators. Similarly, questionnaires must not be too long or complicated, as this will reduce households' willingness to participate and the quality of the answers obtained.

OUTCOMES

There are two HGSF-specific outcomes, *increased market participation of smallholder farmers*; and *schoolchildren's access to fresh and diverse food*.

For the first outcome, three outcome levels can be differentiated:

1. the degree of participation of smallholder farmers in the HGSF programme;
2. the effects that this participation has on smallholder farmers' production and productivity; and
3. the effects that increased production, productivity and market participation have on smallholder farmers' vulnerability.

Under the second outcome, there are two outcome levels:

4. the effects of higher acceptance of HGSF meals; and
5. the effects of greater diversity or quality of HGSF meals.

Indicators for each of these outcomes and outcome levels are proposed in the following subsections. For each, a short introductory analysis considers the relevance, strengths and weakness of the indicator, and provides information on where to obtain further guidance. Examples of relevant reporting on the indicator are given, along with any additional relevant considerations.

Increased market participation of smallholder farmers with quality and diversified products**(1) The degree of participation of smallholder farmers in the HGSF programme**

Four indicators are proposed for this outcome level:

1. volume and value of food purchased by the HGSF programme from smallholder farmers, by commodity;
2. number of smallholder farmers who sold food to the HGSF programme;
3. volume and value of sales from smallholder farmers to targeted aggregators; and
4. number of smallholder farmers who sold food to targeted aggregators.

1. Volume and value of food purchased by the HGSP programme from smallholder farmers, by commodity

Relevance:	This is the ideal indicator for assessing the extent to which smallholder farmers actually participate in the market opportunities provided by an HGSP programme.
Strengths:	The indicator shows the direct connection between the HGSP programme and the sales made by smallholder farmers.
Weaknesses:	Information can be difficult to obtain, particularly if the programme follows competitive procurement rules that do not limit food purchases to those from smallholder farmers or smallholder farmer-friendly aggregators.
Further guidance:	WFP. 2017. <i>School meals monitoring framework</i> . Rome.

Quantitative reporting could take the following form:

Commodity	Unit (bags, kg, etc.)	Quantity purchase from SHF			% purchased from women HHH	Value purchased from SHF (US\$)				% purchased from women HHH
		Women heads of household	Men heads of household	Total		unit price	from women	from men HHH	Total value	
Commodity A		42	89	131	32.1	21	882	1869	2 751	32.1
Commodity B		21	94	115	18.3	45	945	4230	5 175	18.3
Commodity C		12	2	14	85.7	102	1 224	204	1 428	85.7
Total		75	185	260	28.8		3 051	6 303	9 354	32.6

HHH = heads of household; SHF = smallholder farmers.

This summary information can be collected from each school and aggregated for subnational areas, as relevant.

Smallholder farmers can provide food to schools directly or – more probably – through an aggregator. Where an HGSP programme provides vouchers that enable schools to obtain relevant food from selected smallholders or smallholder-friendly aggregators, such as farmer organizations, the information required can be obtained from school registers and the registers of aggregators. Aggregators may be obliged to share summary information on food quantities and the sex of farmers/heads of household as part of the agreement entitling them to redeem the vouchers.

Obtaining relevant data is more difficult where schools or caterers obtain food through open tendering procedures. In these cases, food may be provided to schools by normal, commercial traders. Monitoring of the indicator would therefore require:

- ▶ identifying the share of food bought by the aggregator from smallholder farmers;
- ▶ identifying the share of food sold by the trader to HGSP schools; and
- ▶ deriving from this information an estimate of the quantity of food produced by smallholders that was consumed at school.

This is possible, but is very labour-intensive and fraught with challenges, as traders may not be willing to disclose the sources of their purchases, and estimates may be inaccurate. For this reason, use of the indicator is recommended mainly for HGSP programmes that issue vouchers for redemption with selected aggregators only, or for semi- or fully decentralized programmes when the buyer has information on the producer.

The frequency of data collection should be adjusted to the purchasing cycles of the programme. These can be by school term or by month, for example. Where different HGSP commodities have different cycles – for example, cereals and pulses have one cycle, and fresh vegetables, fruit, milk or egg another – data collection can be adjusted accordingly. Reports should be prepared at least once per term, with data from shorter food purchase periods aggregated to cover the whole term. Term reports should include a comparison of data on the same commodities for the same period in the previous year.

2. Number of smallholder farmers who sold food to the programme

Relevance:	This indicator complements information on food quantities in order to help assess how widespread the benefits of the programme are in terms of increased market participation.
Strengths:	The indicator shows the direct connection between the HGSF programme and the sales made by smallholder farmers.
Weaknesses:	Information can be difficult to obtain, particularly if the programme follows competitive procurement rules that do not limit food purchases to those from smallholder farmers or smallholder farmer-friendly aggregators.
Further guidance:	WFP, 2017.

Information for this indicator can be obtained at the same time and through the same processes as for indicator 4.1.1.1. Gathering the same information over time will allow trend analysis of overall numbers and the participation of women and men.

School / Caterer	Number of SHF			% women
	women	men	total	
School A / Caterer A	8	21	29	27.6
School B / Caterer B	28	89	117	23.9
School C / Caterer C	51	102	153	33.3
School D / Caterer D	0	0	0	0.0
Total	87	212	299	29.1

3. Volume and value of sales from smallholder farmers to targeted aggregators

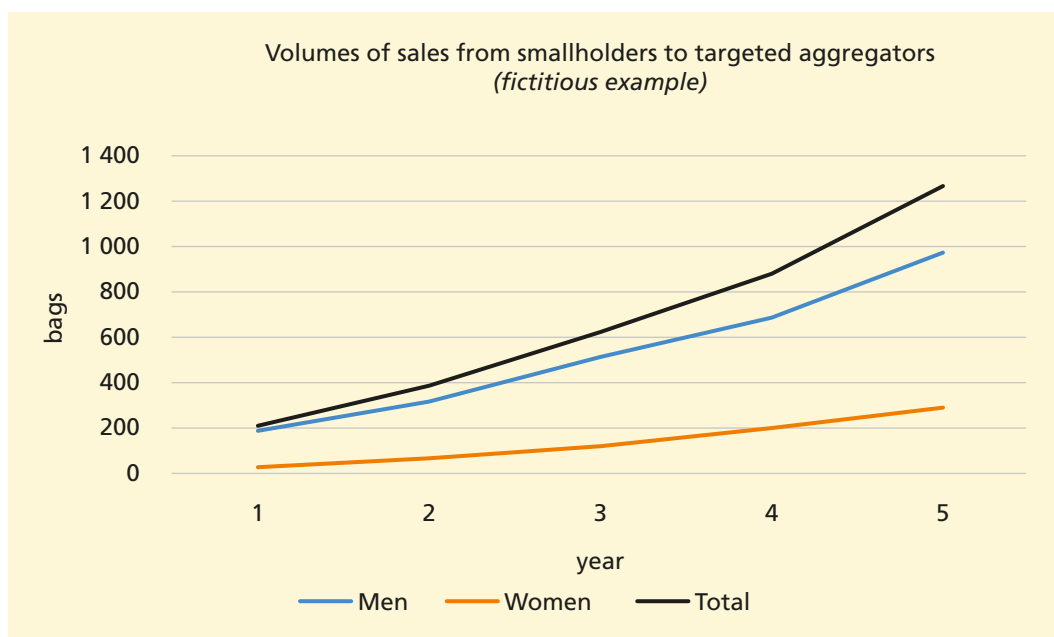
Relevance:	This indicator does not require that the food sold by smallholder farmers is actually consumed in the HGSF programme. It is based on the assumption that the support provided to smallholder farmers and their organizations enables them to produce and sell food to anyone, not just schools.
Strengths:	The indicator provides information on smallholder farmers' participation in markets without requiring that the farmers be directly linked to the HGSF programme.
Weaknesses:	It is very difficult to obtain reliable information from buyers who are not involved in the programme. Private and informal buyers are hard to find and do not have the information required. Formal buyers without direct links to the programme, such as commercial traders, may not have records of their purchases with the required information, or may not be willing to disclose information on their sources of food. For this reason, the indicator is limited to smallholder farmers' sales of food to targeted aggregators that are involved in the programme, such as farmer associations that receive support under the programme, and that can be obliged to share the required information as part of their agreement with the programme. It also means that only a share of the total sales made by smallholder farmers are captured by the indicator.
Further guidance:	WFP, 2017a.

Smallholder farmers and local food processors will often only gradually be able to increase their production to meet the level of the increased local demand.

For this reason, volumes and values of sales should be recorded at least annually, and more often as relevant, for example, after each purchasing round or each harvest season. Over time, the programme managers could establish an overview table, as shown here. Total changes in volumes and values can best be shown in a simple graph, as shown below. The sample table and graph are for volumes, but the values of sales can be shown in the same form.

		Volume (kg, bags or other unit as adequate)					Difference	Percent Increase
		Year 1	Year 2	Year 3	Year 4	Year 5		
School 1	Men	14	25	22	36	48	34	243
	Women	2	4	4	10	19	17	850
School 2	Men	6	12	21	25	38	32	533
	Women	1	4	8	12	14	13	1 300
School 3	Men	34	39	51	48	62	28	82
	Women	3	5	12	20	24	21	700
School 4	Men	21	32	56	58	80	68	324
	Women	4	9	16	25	38	34	850
School 5	Men	4	9	21	28	33	35	875
	Women	1	2	4	8	15	14	1 400
School 6	Men	11	18	24	39	88	77	700
	Women	1	3	4	14	22	21	2 100
School 7	Men	17	35	78	124	169	152	894
	Women	5	14	21	36	48	43	860
School 8	Men	17	65	98	120	159	112	238
	Women	2	17	21	32	46	44	2 200
School 9	Men	22	32	49	89	145	123	559
	Women	4	4	16	25	36	32	800
School 10	Men	12	31	59	96	146	134	1 117
	Women	1	5	8	16	29	28	2 800
Total	Men	188	319	511	693	983	795	423
	Women	24	67	118	202	291	267	1 113
	Total	212	386	629	895	1 274	1 062	501
	% women	11.3	17.4	18.8	22.6	22.8		

The table and graph facilitate analysis, which can be presented in a narrative, as in the following example:



“Over the first five years of the programme, smallholder farmers and local producers increased the volume of their sales for consumption in schools by XX percent. Women smallholders were able to increase their sale volumes by XXX percent. The share of women smallholders in the total increase or decrease in sales changed from XX.X to XX.X percent over the same period.”

As the indicator does not require that food bought by the aggregator is consumed by the HGSF programme, quantitative information should be supported by an additional narrative that explains how an observed change (if any) can be attributed to the programme.

4. Number of smallholders who sold food to targeted aggregators

- Relevance: This indicator parallels indicator 2, but it captures smallholder farmers who sold to targeted aggregators rather than to HGSF schools or caterers.
- Strengths: The indicator does not require that there be a direct link between smallholder farmers and the HGSF programme.
- Weaknesses: The same limitations apply as for indicator 2: only part of smallholders’ total sales are captured.
- Further guidance: WFP, 2017a.

Monitoring results can be reported in a similar way as for indicator 2.

Targeted aggregator	Number of SHF			% men SHF
	women	men	total	
Aggregator A	28	51	79	35.4
Aggregator B	44	32	76	57.9
Aggregator C	21	33	54	38.9
Aggregator D	87	0	87	0.0
Total	180	116	296	60.8

(2) The effects that smallholders' market participation has on their production and productivity

Five indicators are proposed for this outcome level:

5. number of farmers who have increased their agricultural output, by commodity;
6. number of farmers who have increased their agricultural productivity (yield/ha), by commodity;
7. number of farmers who have diversified their agricultural production;
8. number of farmers who have reduced post-harvest losses through improved techniques or participation in post-harvest handling and storage services; and
9. number of farmers who have obtained access to credit for increasing their production and/or productivity.

Relevance: The first four of these indicators concern the question of whether smallholder farmers have increased their agricultural activities and managed to produce more efficiently and with reduced losses. The fifth indicator, on the use of credit, the indicator captures the degree to which the HGSF programme has had the spin-off benefit of greater financial inclusion of smallholder farmers.

Strengths: No difficult calculations or contextual analysis are required.

Weaknesses: The indicators require surveys among participating smallholder farmers, both before the HGSF programme starts and at regular intervals thereafter; to allow the attribution of results to the programme, surveys of non-participating smallholder farmers are also required.

Further guidance: WFP, 2017a.

5. Number of farmers who have increased their agricultural output, by commodity

6. Number of farmers who have increased their agricultural productivity (yield/ha), by commodity

7. Number of farmers who have diversified their agricultural production

8. Number of farmers who reduced post-harvest losses through improved techniques or participation in post-harvest handling and storage services

To obtain information for measuring these indicators, it is necessary to interview smallholder farmers at regular intervals to find out whether they have received complementary support (see output indicator 7 below) and to ask about their post-harvest losses. Ideally, the same sample of farmers will be surveyed at the baseline and thereafter at regular intervals. Each programme should include only relevant questions such as where the HGSF programme has provided support to smallholder farmers in order to increase or improve their production.

Surveys of smallholder farmer should include a number of questions that are specific to the HGSF programme, which will yield the information for this and other indicators. These questions concern:

- ▶ the size of the farm;
- ▶ the total yield for each crop; and
- ▶ the use of the harvest – consumed, sold to school, sold to targeted aggregator, sold to others or lost.

This information can be captured in a summary sheet such as the one shown below, or – better – in a database that allows multiple queries and disaggregated data analysis.

	Farm size (ha)	Yield (bags, kg, etc.)					Use of harvest (bags, kg, etc.)				Lost (bags, kg, etc.)			
		Com 1	Com 2	Com 3	Com 4	Com 5	Own consumption	Sold to school	Sold to targeted aggregators	Sold to others	Rot	Pests	Theft	Other
Farmer 1														
Farmer 2														
Farmer 3														
Farmer 4														
Farmer 5														
Farmer 6														
Farmer 7														

Developments in each of the indicators can then easily be tracked by comparing the corresponding information from consecutive surveys.

9. Number of farmers who have obtained access to credit for increasing their production and/or productivity

An important aspect of the market participation and financial inclusion of smallholder farmers is their access to affordable credit. An HGSF programme that purchases food from smallholder farmers directly or through aggregators can have the spin-off benefit of enabling smallholder farmers to gain access to such credit. Information can be obtained through the same survey as used for indicators 5 to 8 by adding a set of simple questions concerning the sources of credit to which farmers have access: informal loans, credit from traders, credit from financial institutions, etc.

(3) The effects that increased production, productivity and market participation have on smallholder farmers' vulnerability

The following four indicators are proposed for this outcome level:

10. diversity of crops and animal products produced;
11. dietary diversity score and food consumption score of smallholder farmers;
12. coping strategy index of smallholder farmer households; and
13. share of expenditure spent on food by smallholder farmer households.

10. Diversity of crops and animal products produced

Relevance: This indicator helps to assess whether an HGSF programme has led to greater diversity in the food produced in the area. Greater diversity also helps to reduce the vulnerability of farmers to climate or price shocks.

Strengths: Information can easily be obtained from the same surveys as required for indicators of agricultural production and productivity.

Weaknesses: Surveys of smallholder farmers and control groups are required in order to allow the attribution of results to the HGSF programme.

Further guidance: WFP, 2017a.

Information for this indicator has to be obtained through surveys of farmers in the HGSF catchment area. Data should be collected at least once per term. Consecutive reports from interviews with the same farmers will allow trend analysis, understanding of seasonality, etc.

Commodity	Unit (bags, kg, etc.)	Quantities produced by SHF who received support			% of women SHF	Quantities produced by SHF who did not receive support			% of women SHF
		women	men	total		women	men	total	
Commodity A		15	26	41	36.6	10	28	38	26.3
Commodity B		5	87	138	37.0	4	75	117	35.9
Commodity C		3	19	22	13.6	0	15	15	0.0
Commodity D		17	42	59	28.8	19	35	54	35.2
Commodity E		22	10	32	58.8	21	9	30	70.0
Commodity F		9	32	41	22.0	5	24	29	17.2
Commodity G		55	16	71	77.5	31	10	41	75.6
Commodity H		31	74	105	29.5	24	51	75	32.0
Commodity I		28	21	49	57.1	12	19	31	38.7

For this indicator, programme planners need to decide whether to include only commodities that are actually consumed in the HGSF programme or also to include other commodities that smallholder farmers produce as a result of the programme's technical support to production and productivity.

11. Dietary diversity score and food consumption score of smallholder farmers

Relevance: These two scores are indicators of the food security of a household. The short recall period makes the dietary diversity score very sensitive to any changes in diets, including seasonal changes, so this score is a useful tool for monitoring changes. The food consumption score reflects the quantity and quality of a household's diet and can be used as a proxy for household food security.

Strengths: Both indicators are well established and tested.

Weaknesses: Information on access to diverse foods produced by smallholder farmers can partly be derived from information on the number of farmers who have diversified their food production, overlaid with information on farmers' use of the food they produce. However, this method is not straightforward and may lead to misleading conclusions. Surveys of smallholder farmers and control groups are required in order to allow the attribution of results to the HGSF programme.

Further guidance: WFP, 2016.

The household surveys conducted with smallholder farmers who have and who have not received support from the programme should include questions on the actual food consumption of households.

The dietary diversity index and scoring system developed by the International Food Policy Research Institute (IFPRI) captures information on how many of seven food groups¹³¹ were consumed by a household during the seven days prior to the survey interview. The short recall period makes the score very sensitive to any changes in diets, including when households add a new food group to their diets after an intervention. A point is assigned for each food group consumed without considering the frequency of consumption.

The score to be reported is the average dietary diversity of all the smallholder farmers households surveyed, disaggregated by the sex of the head of household and by whether or not the household received support from the programme.

Food groups	Which of these food groups did you eat during the past seven days?							Score
	Cereals, roots and tubers	Pulses and legumes	Dairy products	Meats, fish and seafood, and eggs	Oils and fats	Fruits	Vegetables	
Household 1	1	1			1	1		4
Household 1	1	1	1		1		1	5
Household 1	1		1					3
Household 1	1	1	1	1	1		1	6
Household 1	1				1			2
Total number of households	5						Total:	20
							Average:	4.0

The household food consumption score reflects the quantity and quality of a household's diet and can be used as a proxy for household food security. The score is a measure of dietary diversity, food frequency and the relative nutritional importance of the foods consumed by a household. The higher the score, the higher the probability that a household's nutrient intake is adequate.

The food consumption score is calculated from information on the household's consumption of eight food groups – plus a ninth group for small quantities and condiments – over the previous seven days. An additional seven groups are used to calculate the food consumption score – nutrient adequacy analysis, which focuses on the intake of protein, iron and vitamin A. Ideally, both food consumption score and the nutrition adequacy should be calculated; where this is not possible or feasible, the food consumption score based on nine food groups should be monitored.

Information for the food consumption score is collected through household surveys; ideally, the person who prepares the household's meals is interviewed. For more detailed guidance on the food consumption score and the standard food consumption data collection module see the guidance provided in WFP's Indicator Compendium (WFP, 2016).

¹³¹ The food groups are: i) cereals, roots and tubers; ii) pulses and legumes; iii) dairy products; iv) meat, fish and seafood, and eggs; v) oils and fats; vi) fruits; and vii) vegetables.

12. Coping strategy index of smallholder farmer households

Relevance:	The coping strategy index is a direct measure of a household's food insecurity and vulnerability.
Strengths:	The indicator is well established and tested.
Weaknesses:	Surveys of smallholder farmers and control groups are required in order to allow attribution of results to the HGFSF programme.
Further guidance:	WFP, 2016.

The coping strategy index measures the frequency and severity of the behaviours that households engage in when faced with food shortages.¹³² It is a numeric value calculated as the sum of the weighted frequencies of different standard coping strategies, each with a specific weight.

Coping strategies are divided into two types: those that affect the *food consumption* and those that affect the *livelihoods* of targeted households.

Consumption-related coping strategies – for which the recall period is seven days – and their respective weights are as follows:

- ▶ Rely on less expensive and less preferred food – weight 1.
- ▶ Borrow food or rely on help from relative(s) and friend(s) – weight 2.
- ▶ Limit portion size at meals – weight 1.
- ▶ Restrict consumption by adults in order for small children to eat – weight 3.
- ▶ Reduce number of meals eaten in a day – weight 1.

The value reported for the consumption-related coping strategy index is the:

average reduced coping strategy index.

Livelihood-related coping strategies vary according to context. Surveys should include at least ten strategies from the master list. When selecting strategies to include in the module, a combination of four stress strategies, three crisis strategies and three emergency strategies should be selected. The master list of strategies, which can be expanded as required, includes the strategies listed in the following table. The recall period for surveys of these strategies is 30 days.

Stress	<ul style="list-style-type: none"> ▶ Sold household assets/goods ▶ Spent savings ▶ Sold more non-productive animals than usual ▶ Sent household members to eat elsewhere ▶ Purchased food on credit or borrowed food ▶ Borrowed money ▶ Moved children to less expensive school
Crisis	<ul style="list-style-type: none"> ▶ Sold productive assets or means of transport – sewing machine, wheelbarrow, bicycle, car, etc. ▶ Withdrew children from school ▶ Reduced expenses on health, including drugs, and education ▶ Harvested immature crops, such as green maize ▶ Consumed seed stocks that were to be saved for the next planting season ▶ Decreased expenditures on fertilizers, pesticides, fodder, animal feed, veterinary care, etc.

¹³² The coping strategy index is applied at the household level and does not indicate which individuals in a household engage in which strategy. HGFSF programme managers seeking intra-household disaggregation have to complement the index with additional indicators.

Emergency	<ul style="list-style-type: none"> ▶ Sold house or land ▶ Begged ▶ Engaged in illegal income-generating activities such as theft or prostitution ▶ Sold last female animals ▶ Entire household migrated
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The values reported on the livelihood-related coping strategy index are the:

percentage of households not using livelihood-based coping strategies;

percentage of households using stress coping strategies;

percentage of households using crisis coping strategies; and

percentage of households using emergency coping strategies.

Detailed guidance and survey forms, etc. can be found in WFP's Indicator Compendium 2017–2021.

13. Share of expenditure spent on food by smallholder farmer households

Relevance:	This indicator is based on the premise that the greater the importance of food expenditure within a household's overall budget – relative to other items and services consumed – the more economically vulnerable is the household. ¹³³
Strengths:	The indicator is well established and tested. Households are usually more at ease disclosing information on their spending priorities than on their available income.
Weaknesses:	Surveys of smallholder farmers and control groups are required in order to allow attribution of results to the HGSF programme.
Further guidance:	WFP, 2016.

The previous indicators covered mainly whether and to what degree smallholder farmers have increased their market participation. This indicator indicates whether target groups have actually benefited from their increased sales.

A direct measurement of such an outcome would be the increased income of smallholder farmers. However, years of experience have shown that heads of household are not usually willing to disclose this information. For this reason, "decreased share of expenditure spent on food by households of smallholder farmers", disaggregated by sex of the head of household, is proposed as a good indicator of the positive outcome of (economic) access to markets.

Relevant questions that would yield the information required can be integrated into a household survey.

¹³³ WFP, 2015: p. 23.

Schoolchildren's access to fresh and diverse food

(4) The effects of higher acceptance of HGSF meals

Only one indicator is proposed for this outcome area.

14. Absenteeism of boys and girls after introduction of HGSF

Relevance:	One of the purposes of HGSF is to provide more diverse and local foods that are known and accepted in the area. When HGSF meals are more acceptable and palatable to schoolchildren, they are likely to have greater potential to promote regular attendance in school.
Strengths:	Information can be easily obtained from daily attendance registers.
Weaknesses:	Adequate disaggregation and reliable reporting can be challenging.
Further guidance:	WFP, 2017.

Monitoring and reporting on this indicator should make use of the established system of registering and tracking schoolchildren's attendance in class. Where this system does not allow sufficiently accurate tracking or an analysis of any correlation between class attendance or absenteeism and the provision of school meals, the system may require review and strengthening.

(5) The effects of greater diversity or quality of HGSF meals

For this outcome area, two indicators are proposed:

15. dietary diversity score of children receiving school meals; and
16. absenteeism of boys and girls because of ill health.

15. Dietary diversity score for children receiving school meals

Relevance:	One of the purposes of HGSF is to provide more diverse food. In addition, an HGSF programme may have spin-off effects such as greater dietary diversity in the community at large, if participating farmers produce a greater variety of products.
Strengths:	The indicator provides a comprehensive picture of schoolchildren's diet at home and at school.
Weaknesses:	The indicator requires surveys of schoolchildren, which can be a challenge as the methodology has undergone far less testing than that for household-level surveys.
Further guidance:	WFP, 2017.

The dietary diversity score and food consumption score for schoolchildren have the same function as they have for smallholder households (see indicator 11). Both of these scores are normally obtained for households; for schoolchildren, there are two ways of obtaining the necessary information.

The first way is based on interviews with cooks and school principals to ask them about the food that was *actually provided to children in school meals*. The interviews thus provide information on the extent to which the planned menus were actually provided, and also capture any additional, unforeseen food provided, such as from donations made by the community or others, own production in school gardens or additional food bought by the school. Ideally, agreements between the government and schools should foresee that at the school level, records are kept of the food actually provided. These records can then be used to calculate the dietary diversity score and the food consumption score.

The second way of obtaining the scores is to carry out interviews with schoolchildren. The recall period for reporting consumption of the different food groups would be the same as in household surveys, but interviews would focus on all the foods eaten by the children interviewed – i.e., *both the food provided at*

school and the food eaten at home. Under this methodology, the dietary diversity score not only measures the dietary diversity of schoolchildren, but also contributes to a better understanding of the overall food security situation in the school's catchment area.

In its normal food security and nutrition surveys, WFP does usually not interview children. The interview guide and survey guidance for the dietary diversity score and the food consumption score provided by WFP's Vulnerability Analysis and Mapping Unit is tailored to conducting household interviews. By contrast, a recent study by PCD on the impact of HGSF in Ghana included interviews with 5 000 schoolchildren aged between 5 and 17 years.

When adjusting existing tools to guide interviews with children (instead of households or caregivers), several aspects have to be taken into consideration:

- ▶ Before interviewing children, it is necessary to obtain the agreement of school authorities, parents and any other relevant stakeholders.
- ▶ The questions asked will have to be adapted to the understanding of young interviewees.
- ▶ HGSF programme managers and survey staff must assess whether individual interviews or focus group discussions are the best way of obtaining sufficient and reliable information. Focus group discussions may be more efficient in prompting discussion and correction of misperceptions among the children, but they may also yield inaccurate information if group pressure or opinion leaders skew the information provided. In any case, a sufficient sample size in every school should be selected to ensure sufficient robustness of the information obtained. Group discussions with the recording of individual responses could be an efficient way of interviewing a large number of children while obtaining data that is disaggregated at the individual level.

These considerations may create complications for the second way of obtaining information for this indicator. Ideally, when programme managers consider using this indicator, they should ensure that they can use school-level records or work with experienced partners with a proven track-record in the sensitive interviewing of children for surveys.

Calculation of the dietary diversity score and the food consumption score for schoolchildren follows the same procedure as for households.

16. Absenteeism of boys and girls because of ill health

Relevance:	One of the purposes of HGSF is to provide more diverse and local food that is locally known and accepted. If HGSF meals are more acceptable and palatable to schoolchildren, they will have greater potential to promote regular school attendance.
Strengths:	Information can be obtained through daily attendance registers. The indicator provides information on schoolchildren's health without having to revert to anthropometric indicators or, for example, blood tests.
Weaknesses:	It may be difficult for teachers to establish whether a schoolchild is absent because of ill health or another reason, such as helping with household chores or working in fields. Adequate disaggregation and reliable reporting can be challenging.
Further guidance:	WFP, 2017.

Reduced frequency of ill health among children attending school serves as proxy for improved nutrition and health status without requiring any anthropometric measurements or blood samples. In addition to providing nutritious and diverse food, achievement of this outcome requires activities that sensitize children to healthy nutrition and health-seeking behaviours and contribute to better sanitation and hygiene at school, and improved access to health services.

The monitoring school children's absenteeism related to illness provides information regarding whether the combined effect of providing food and complementary activities results in children suffering less ill health thus attending classes more regularly. However, the indicator has two main drawbacks: i) it depends on the availability of information; and ii) it is difficult to attribute results to the HGSP programme.

To obtain relevant information, data collection requires teachers to record not only pupils' absences, but also the reasons for absences. This could be done by, for example, adapting the normal attendance record by either adding columns for the different reasons for absenteeism or using a colour code. When marking a student as absent because of illness, the teacher has to ensure that this is the true reason for the absence. If the teacher has reasonable doubts and suspects other reasons, she or he should not mark the days as absent because of ill health.

Regarding attribution, it is important to ensure that any observed changes can plausibly be attributed, at least partly, to the HGSP programme. There are many causes of ill health, and there can be many reasons why sickness levels increase or decrease, for example, because of environmental factors – such as more or less rain than usual resulting in increased water-borne diseases or strong winds carrying dust – outbreaks of epidemics or pandemics and conflict and violence. For this reason, the information collected must be put into context, for example, by considering any unusual phenomena or events, by discounting for normal seasonal or other tendencies, or by comparing information with information from other areas with similar conditions but no school feeding.

OUTPUTS

Schools include food from smallholder farmers in their menus

1. Number of schools that include food from smallholder farmers in their menus
2. Number of boys and girls who consume food from smallholder farmers through the programme

These two indicators are relevant in situations where it is possible to establish the extent to which food provided by smallholder farmers is consumed in the HGSP programme (see outcome indicators 1 and 2). For both indicators the programme should compare actual figures with planning figures and track developments over time.

Sub-national area	Planned				Actual							
	Schools	Girls	Boys	Total	Schools		Girls		Boys		Total	
					No.	% of planned	No.	% of planned	No.	% of planned	No.	% of planned
Area 1	45	3 862	4 211	8 073	44	98	3 987	103	4 304	102	8 291	103
Area 2	26	2 142	2 056	4 198	27	104	2 368	111	2 758	110	4 626	110
Area 3	79	5 589	5 994	11 583	81	103	5 756	103	6 142	102	11 898	103
Area 4	114	7 264	8 921	16 185	105	92	7 538	104	9 078	102	16 616	103
Area 5	36	3 049	2 966	6 015	36	100	3 217	106	3 255	110	6 472	108
Total:	300	21 906	24 148	46 054	293	98	22 866	104	25 037	104	47 903	104

3. Quantity and share of food from smallholder farmers provided through school meals

This indicator also requires that food from smallholder farmers used for the programme be tracked. The indicator reflects the fact that smallholder farmers will rarely be able to provide all the food consumed by a programme. Information should be disaggregated by commodity, and developments tracked over time.

Commodities	Unit (bags, kg, etc.)	Food sources			
		SHF	Other sources	Total	% SHF
Commodity 1	bags (90 kg)	5 662	26 487	32 149	18
Commodity 2	bags (90 kg)	669	1 589	2 258	30
Commodity 3	bushets	547	512	1 059	52
Commodity 4	kg	89	45	134	66

4. Number of schools covered by the programme

5. Number of boys and girls covered by the programme

These two indicators are relevant in cases where it is not possible to track food provided to the programme by smallholder farmers (outcome indicators 3 and 4). In these cases, it is important to demonstrate the scope of the programme, comparing planned and actual figures.

The information can be presented in exactly the same way as for output indicators 1 and 2. The only difference is that all the schools and schoolchildren in the programme are counted and not only those receiving food from smallholder farmers.

6. Quantity of food provided through the programme

This indicator is parallel to output indicator 3 and is used in cases where the food provided to the programme by smallholder farmers cannot be tracked. The points made regarding the presentation and disaggregation of information for output indicators 1 to 5, including comparisons between planned and actual average food baskets, also apply to this indicator.

Smallholder farmers, including women, are supported in producing quality food surpluses that can be purchased for school feeding programmes

7. Number of farmers who received support in increasing and diversifying their production and improving their productivity

This indicator aims to quantify the beneficiaries of support to market access provided by the HGSP programme. It also includes *indirect* beneficiaries, particularly the farmers and processors who are members of associations that received support. A sample of the calculation and presentation is shown in the table.

Description	Programme plan		Total beneficiaries	Actual programme	
	Direct beneficiaries	No.		No.	% of plan
Technical assistance activity 1	Farmer association 1	1	23	0	0
	Farmer association 2	1	69	69	100
	Farmer association 3	1	22	0	0
	Farmer association 4	1	84	96	114
	Farmer association 5	1	54	66	122
	Farmer association 6	1	110	124	113
	Subtotal:		362	355	98
Technical assistance activity 2	Aggregators	12	12	2	17
Technical assistance activity 3	Farmers	824	824	978	119
Technical assistance activity 4	Processors	29	29	16	55
	Total:	866	1 227	1 351	110

8. Numbers and value of inputs provided to farmers, by type

This and the following indicator serve to show the support that the programme has provided to smallholder farmers and their organizations. Examples of such support include the provision of physical inputs (indicator 8) or technical assistance, including training (indicator 9). The tables show examples of how a programme can report on these indicators quantitatively.

Input	Description	Unit	Number			Value (price)		
			Planned	Actual	% of planned	Planned	Actual	% of planned
Agricultural tools	Hand ploughs	piece	260	241	93	26 000	24 100	93
Water storage	Plastic tanks	hectolitre	15 000	13 680	91	150 000	157 320	105
	Plastic hoses	metre	30 000	28 640	95	9 000	7 160	80
Water piping	Water pipes	metre	1 000	1 250	125	2 000	2 750	138
	Gutters	metre	1 500	1 400	93	4 500	4 340	96
Building materials	Cement	bags	2 600	2 800	108	26 000	36 400	140
	Roofing sheets	m ²	800	850	106	8 000	6 800	85
Storage items	Pallets	pieces	1 200	1 100	92	18 000	13 200	73
						243 500	252 070	104

This information should be complemented by qualitative explanations of any shortfalls, major discrepancies between plans and actual activities, and potential lessons learned.

9. Numbers and kinds of assistance provided to smallholder farmers in different areas

An HGSP programme should report exactly what has been done to enable local smallholder farmers and processors to increase and diversify their production, improve their productivity and participate in the market provided by schools. Such activities normally take the form of specific technical assistance, such as the provision of non-food items or training, and capacity support – coaching, networking, etc. – directed to farmer associations or aggregators in order to promote market access for smallholder farmers and aggregators and improve their profit base and livelihoods. Areas of technical assistance can include the operation and management of farmer associations, marketing, food quality and safety, and storage and packaging; and a range of supply-side support, such as improved agricultural techniques, irrigation and extension services; and, not least, advocacy and support with respect to access to land, etc. The exact form of such technical assistance and capacity development depends on the specific context, the capacity gaps identified, the availability of relevant partners and other factors.

A programme can obtain the information required for this indicator from reliable registers of activities and beneficiaries, or from partners based on their contracts for delivering services. Reporting on actual outputs delivered against programme plans is then a straight forward exercise.

Individual activities should be described in detail, and activity delivery, shortfalls and changes should be briefly explained.

Description	Programme plan		Actual programme
	Direct beneficiary	No.	No.
Technical assistance activity 1	Farmer association	6	4
Technical assistance activity 2	Aggregators	12	2
Technical assistance activity 3	Farmers	824	978
Technical assistance activity 4	Processors	29	16

School-aged children receive school meals

10. Number of girls and boys in relevant age groups who received school meals

This is the same as output indicator 5.

11. Amount of food provided in an average school meal, by food group: actual versus planned

This is the same output indicator 6.

12. Macro- and micronutrients provided by an average school meal, as percentage of daily requirements of children in the respective age group: actual versus planned)

Any school feeding programme should provide a balanced diet. Children in half-day schools should receive between 30 and 45 percent of their daily caloric requirements through the school meals and snacks provided.¹³⁴ This corresponds to 555–830 kcal for primary school children and 390–585 kcal for pre-primary school children.¹³⁵

The programme design should explain the extent to which the planned food basket will fulfil these daily requirements. WFP's NutVal 4.1 is a tool for calculating this. The following example shows the calculation for a very simple half-day primary school meal of 150 g of sorghum, 40 g of black-eyed cowpeas, 5 g of vegetable oil and 2 g of iodized salt.

The calculation shows that the planned meal provides 681 kcal per day, which corresponds to 37 percent of the daily calorie requirements of a primary school child.

¹³⁴ WFP, 2000: pp. 46 ff.

¹³⁵ In full-day schools, 60–75 percent of calorie requirements should be provided, corresponding to 1 110–1 390 kcal in primary schools and 780–975 kcal in pre-primary schools. In boarding schools, school feeding should provide 85–90 percent of daily calorie requirements – 1 570–1 665 kcal for primary schools.

RATION CONTENTS		Daily Ration	Energy	Protein	Fat	Calcium	Copper	Iodine	Iron	Magnesium	Selenium	Zinc
		g/person/day	kcal	g	g	mg	mg	µg	mg	mg	µg	mg
SORGHUM, GRAIN		150	509	17.0	5.0	42	1.6	-	6.6	285	18.3	2.3
COMPEAS, BLACK-EYED		40	134	9.4	0.5	44	0.3	-	3.3	74	3.6	1.3
OIL, VEGETABLE (WFP)		5	44	0.0	5.0	0	-	-	0.0	-	-	-
SALT, IODISED (WFP)		2	0	0.0	0.0	-	-	80	-	-	-	0.0
Ration totals:		197	687	26	10	86	2.0	80	9.9	359	21.9	3.7
Beneficiary requirements for: 05 to < 10 years		1 640	41.0	31.0	660	0.7	108	10.0	90	21.4	10.8	
% of requirements supplied by ration:			42%	64%	34%	13%	289%	74%	62%	397%	102%	35%
% of energy supplied by protein or fat:				15.3%	13.7%							

The actual average daily calorie provision is determined by several factors:

- ▶ the number of beneficiaries, which often becomes higher than planned because of migration, the participation of non-enrolled siblings, etc.
- ▶ the quantity of food provided (see output indicator 6), which is often somewhat lower than planned because of resource constraints, pipeline breaks, etc. and
- ▶ the actual number of school days.

When reporting on the average food basket provided compared with the planned food basket, it is important to include information on these factors as they shed light on the underlying reasons for any deviations from programme plans, and provide a basis for further analysis.

$$\text{Average food basket provided (g/day)} = \frac{\text{Actual quantity provided (mt)}^{136} \times 1\,000\,000}{\text{number of children} \times \text{number of days}}$$

The resulting daily quantities can then be entered into the NutVal table to obtain the actual provision of food and the percentages of daily requirements in energy (calories), fat and protein. Reporting on this part of the indicator can then be presented in table form, as shown in this example.

Commodity	Programme plan				Actual provision					
	Planned food basket		Planned commodities		Actual programme		Actual average food			
	gram per day	kCal	No. of children	No. of school days	total quantity (metric tons)	No. of children	No. of school days	gram per day	kCal	
Sorghum	150	509	150,000	195	4 387.50	170 000	180	122.29	414	
Cow Peas, black-eyed	40	134			1 170.00			684.00	22.35	74
Oil, veg (WFP Specs)	5	44			146.25			146.25	4.78	44
Salt, iodized (WFP Specs)	2	0			58.50			58.50	1.91	0
Total:		687			5 762.25			4 630.75	151.33	532
% of daily requirement:	Energy	42					Energy	32		
	Protein	64					Protein	46		
	Fat	34					Fat	30		

In addition – based on the assumption that children will receive the remaining nutrients at home – any school feeding programme should provide at least 30–45 percent of micronutrient requirements in half-day schools, 60–75 percent in full-day schools and ideally 100 percent in boarding schools. For programmes with a nutrition objective, half-day schools should provide at least 70 percent of micronutrient requirements and full-day schools at least 80 percent.

¹³⁶ output indicator 6.

Calculation of the micronutrients provided by the planned food basket and the average food basket actually provided applies the same tools (NutVal) and formula as for calorie requirements. For reporting, the table shown above can be adjusted to include information on calcium, iron, iodine, vitamin A, thiamine, riboflavin, niacin and vitamin C.

Material investments are made to reduce sources of disease and infection

13. Quantities and kinds of non-food items provided or facilities built or improved

The nutrition of schoolchildren is determined not only by their food consumption, but also by the avoidance of infections, diarrhoeal diseases, parasites, etc. Providing deworming tablets is one form of support to such avoidance; sensitization and training with respect to nutrition, sanitation and hygiene is another. A strong and direct form of support to schoolchildren's health and nutrition is in providing a school environment in which the most important forms of infection are avoided and health-seeking behaviour is facilitated. Such infrastructure can also help children to form healthy habits, which they can bring home to their households, maintain and pass on to their own children after their schooling.

Meaningful investments can be made in the infrastructure that is directly related to school meals, such as food storerooms, kitchens and refectories or eating areas. Non-food items that complement such infrastructure include storage pallets, shelves and weighing scales; easily washable plates, cups and cutlery; hygienic cooking pots and utensils; and improved stoves that save fuel and ensure that cooking smoke can exit the kitchen area.

Auxiliary infrastructure could relate to access to safe drinking-water for use in school feeding. Other infrastructure could concern the provision of sufficient good-quality and healthy sanitation.

These are only examples. Other investments may be as or more appropriate, depending on the context.

Monitoring and reporting on the delivery of these investments and non-food items should be a straightforward exercise of comparing programme plans with actual outputs delivered during the reporting period. Any significant shortfalls or changes should be explained.

Investment item	Description	Programme	Actual programme	
		plan	No.	% of plan
Improved storerooms	Standard storeroom, 8 m ² , roof, windows and storing utensils	50	35	70
Improved kitchen	Standard kitchen, 18 m ² , roof, windows, floor	50	32	64
Improved stoves	Standard stoves, for 25 litre pots, incl. chimney	100	80	80
Kitchen utensils	Standard set of pots, spoons, scoops etc. (for 2 stoves and 2 cooks)	50	50	100
Dishes for eating	Pupil set of plate, cup, spoon	25 000	25 000	100
Improved toilets	Standard latrine, x m ³ receptive, exhaust, walls and roof	150	70	47
Boreholes	Standard borehole 40 m deep, including outlet	20	10	50
Water tanks	Standard plastic tank, 8 m ³ , incl. housing and fittings	30	25	83
Water piping	School set, average of 300 m plastic pipes and 10 outlets	50	35	70

14. Numbers of schools and children that gained access to an improved drinking-water source

This indicator complements output indicator 13 and focuses on the provision of access to safe drinking-water. Quantitative reporting is straight forward.

HGSF schools distribute diverse and fresh foods

15. Number and percentage of schools covered by the HGSF programme that distribute diverse and fresh foods as specified by national guidelines

This indicator requires comparison of the meals actually provided by each participating school with relevant national guidelines or, in cases where such guidelines are not available, with the meals and nutrient contents recommended by international practice (see Tables on page 141). Information on the former is obtained by monitoring output indicator 11. For each school, it can then be established whether the average macro- and micronutrients provided by each meal correspond to national guidelines or international recommendations.

HOME-GROWN SCHOOL FEEDING

RESOURCE FRAMEWORK

TECHNICAL DOCUMENT

For more information and comments:

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