Ghana School Feeding Program:
Re-Tooling for a Sustainable Future

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1. Executive Summary

This report on school feeding is the result of collaboration between the Haas School of Business, UC Berkeley and the Ghana Institute of Management and Public Administration (GIMPA) during Spring 2011. With research on existing literature combined with one week of fieldwork in various regions of Ghana, we were able to take a look at key learnings from other programmes, form a framework to characterize school feeding, create a costing tool, analyze stakeholder drivers and constraints, and develop a model to link local agriculture to school feeding.

From the comparison with other countries, we found that successful programmes are tightly integrated with national policy. Since school feeding requires a broad range of stakeholders, it is essential to establish a national framework to achieve efficient and effective coordination among them. The biggest challenge of a decentralized model lies in striking a balance between benefits for the local communities and for the programme as a whole.

A costing tool was developed to help the GSFP Secretariat calculate the costs involved in producing and delivering the food to the children. The tool allows the user to configure up to 50 menus and to select one of these menus for each day of the week. A database of prices of each ingredient per region must be entered and kept updated in order to calculate costs specific to the region where the school is located and to make comparisons of cost of menus across regions. While the costing exercise indicates that the cost of ingredients is higher than 40 pesewas for all menus using any price source, we believe there are some possible explanations for this result due to the desirability of the caterer position.

In developing a model to link local agriculture to school feeding, we were able to base our proposal on a few promising districts who are actively pushing forward the promotion of local agriculture. We also incorporated feedback from the fieldwork into the model and provide practical suggestions for implementing changes that support the model.

The Ghana School Feeding Programme has been very successful in achieving its goals of reducing hunger and increasing enrollment among school children. We hope that our work presented here will help GSFP accomplish its remaining goal of helping local farmers.
2. Introduction

After growing rapidly in the past six years, the Ghana School Feeding Programme is now looking at a total re-design in 2011. One of the main areas that will be addressed is the linkage between small, local farmers and school feeding; while it has been a goal of the programme to boost local food production, the farmers have not been connected to the market created by the programme. The Partnership for Child Development with the support of the Bill and Melinda Gates Foundation is aiding the re-design process in Ghana and has requested this joint Berkeley-Haas and GIMPA team to examine the cost trade-offs across different school feeding supply chains and develop a sustainable model to link local agriculture with the programme. Currently, there is a lack of understanding of the cost variation and drivers across the different supply chains throughout Ghana, making it difficult for policy makers to develop accurate budgets and contain costs. Our work presented here provides a background into what other countries’ school feeding programmes have done, a framework for analyzing costs, a costing tool for the daily meals, a model for linking local agriculture with school feeding, and practical suggestions for sustaining the programme.
3. Current GSFP Status

3.1. GSFP Objectives and Overview

The Ghana School Feeding Programme (GSFP) was launched in 2005 with the goals of contributing to poverty reduction and increased food security in Ghana. The three key objectives of the program are:

- Reduce hunger and malnutrition by providing all primary and kindergarten students in beneficiary schools a nutritious meal each school day.
- Increase school enrollment, attendance, and retention.
- Boost domestic food production by sourcing GSFP meals locally, and providing a sustainable market for food producers in the community.

These objectives align closely with the United Nations’ Millennium Development Goals (MDGs) surrounding hunger, poverty, and primary education. Figure 1 below illustrates the basic concept of the GSFP.

*Figure 1: GSFP objectives & main outputs*

Source: Ghana School Feeding Programme Annual Operating Plan 2010
The GSFP covers all 170 districts in Ghana. The Ministry of Local Government and Rural Development is the sector ministry who implements the GSFP in collaboration with other ministries and strategic partners. The GSFP budget for 2011 is GH¢67.1M (US$43M).

### 3.2. History

The GSFP’s historical progress is as follows:

- **Late 2005:** The GSFP began with 10 pilot schools drawn from each region of the country.

- **August 2006:** The GSFP expanded to 200 schools, covering 69,000 students in all of the then 138 districts.

- **December 2006:** The GSFP was in 598 schools with a total population of 234,800.

- **March 2007:** 975 schools were reached by the GSFP, benefiting 408,989 students.

- **December 2008:** 596,501 students were fed by the GSFP, which equates to 20% of all primary school students benefitting from the feeding programme.

- **October 2009:** The GSFP covered approximately 1698 public schools throughout the country, and approximately 656,624 students (22% of all primary and kindergarten students) were fed daily in all 170 districts.

- **December 2010:** The GSFP reached 697,416 students in 1741 schools.

Table 1 below shows the distribution of total number of beneficiaries as of December 2010.

**Table 1: GSFP regional distribution of beneficiary schools and pupils**

<table>
<thead>
<tr>
<th>No.</th>
<th>Regions</th>
<th>Number of schools</th>
<th>Number of pupils</th>
<th>National percentages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ashanti</td>
<td>354</td>
<td>186,132</td>
<td>26.69</td>
</tr>
<tr>
<td>2.</td>
<td>Brong Ahafo</td>
<td>242</td>
<td>105,845</td>
<td>15.18</td>
</tr>
<tr>
<td>3.</td>
<td>Central</td>
<td>113</td>
<td>42,409</td>
<td>6.08</td>
</tr>
<tr>
<td>4.</td>
<td>Eastern</td>
<td>135</td>
<td>50,316</td>
<td>7.21</td>
</tr>
<tr>
<td>5.</td>
<td>Greater Accra</td>
<td>263</td>
<td>140,501</td>
<td>20.15</td>
</tr>
<tr>
<td>6.</td>
<td>Northern</td>
<td>125</td>
<td>41,065</td>
<td>5.89</td>
</tr>
<tr>
<td>7.</td>
<td>Upper west</td>
<td>59</td>
<td>19,781</td>
<td>2.84</td>
</tr>
<tr>
<td>8.</td>
<td>Upper east</td>
<td>64</td>
<td>32,301</td>
<td>4.63</td>
</tr>
<tr>
<td>9.</td>
<td>Volta</td>
<td>81</td>
<td>29,213</td>
<td>4.19</td>
</tr>
<tr>
<td>10.</td>
<td>Western</td>
<td>104</td>
<td>49,853</td>
<td>7.15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1,741</strong></td>
<td><strong>697,416</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Ghana School Feeding Programme Annual Operating Plan 2011*
3.3. **Programme Actors and Relationships**

The stakeholders of the GSFP can be divided into three different levels: national, regional/district, and local/community.

- **National Level:**
  The Ministry of Local Government and Rural Development and Environment (MLGRD) is the core of all inter-governmental cooperation and relations and has the role of overseeing the whole programme. The Program Steering Committee (PSC) was set up in 2008 and partly took over tasks from the Inter-Ministerial Committee (IMC), which facilitated the start of the programme, and the National Technical Committee. The National Secretariat (NS) is where the programme is coordinated and managed, and includes experts who advise the other national bodies on all aspects of the program. The NS is responsible for the execution of procedures on the national level and ensuring reporting and accountability. This body also supports the District Implementation Committees (DICs) and School Implementation Committees (SICs). All of the collaborating ministries have supportive and executing roles depending on their expertise.

- **Regional/District Level:**
  The Regional Coordination Offices (RCOs) play a key role in reporting and ensuring accountability to the national level and monitoring at the district level. The Regional Coordinating Council (RCC) supports the RCOs and is more practically involved in supporting the District Assemblies (DAs) in the development of their activities. DAs are the core implementation and managing body of the GSFP. They receive and distribute the funds for the programme and are responsible for good governance at the lower levels. Their tasks include setting up functioning DICs and SICs, providing necessary infrastructure, and mobilizing community support for the schools. District Implementation Committees are directly involved in overseeing the schools in the district as the main school-coordinating body, and an important role in the committee is the District Desk Officer (DDO) who provides feedback and communication to the higher and lower levels.

- **Local/Community Level:**
The School Implementation Committees implement, plan, and execute the feeding activities of the programme. In addition, the committees are tasked with leading community mobilization and providing direct oversight and supervision of the caterers.

Next to the governmental bodies, there are several strategic partners who play important roles in the GSFP. Whereas some of them, e.g. the Dutch Government, are solely financial sponsors, the civil service organizations (CSOs) often provide technical assistance and knowledge about prior school feeding programmes they have run. Since the strategic partners play various roles in the programme, the method and level of collaboration of each with the GSFP differs.

The list of GSFP stakeholders includes:

**Sector Ministry**
- Ministry of Local Government & Rural Development

**Collaborating Ministries**
- Ministry of Education
- Ministry of Health
- Ministry of Food and Agriculture
- Ministry of Finance and Economic Planning

**Strategic Partners**
- Embassy of Kingdom of Netherlands (Dutch Embassy)
- World Food Programme (WFP)
- Partnership for Child Development (PCD)
- Netherlands Development Organization (SNV)
- Social Enterprise Development Organization (SEND Foundation)
- International Centre for Soil Fertility and Agricultural Development (IFDC)
- Ghana Agriculture Initiative Network (GAIN)
- AgroEco
- Plan International, Ghana
- School Feeding Initiative Ghana Netherlands (SIGN)
In February 2011, the Partnership for Child Development (PCD), Imperial College London launched a five-year initiative that employs evidenced-based approaches to support government action in delivering cost-effective home grown school feeding (HGSF) programmes in sub-Saharan Africa. The PCD HGSF programme is supported in part by the Bill & Melinda Gates Foundation. Figure 2 below illustrates the relationships of the programme actors.

**Figure 2: GSFP programme actors and relationships**

![Diagram of programme actors and relationships](source: Ghana School Feeding Programme Annual Operating Plan 2011)

### 3.4. Financial Review for 2010

The feeding allowance per child is GH¢0.40 per day. During the period from January to December 2010, GH¢61,747,525 was transferred to the districts for food purchases and meal preparation. The total expenditure for the period under review was GH¢62,316,407. The breakdown of costs is shown in Table 2:
Table 2: GSFP Expenditures for 2010

<table>
<thead>
<tr>
<th>Jan – Dec 2010</th>
<th>GH₵</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Emolument</td>
<td>222,789.68</td>
<td>0.36%</td>
</tr>
<tr>
<td>Administration</td>
<td>202,371.87</td>
<td>0.32%</td>
</tr>
<tr>
<td>Service:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding Cost</td>
<td>61,604,845.16</td>
<td>98.86%</td>
</tr>
<tr>
<td>Other Service Activities</td>
<td>142,680.19</td>
<td>0.23%</td>
</tr>
<tr>
<td>Investment</td>
<td>143,720.50</td>
<td>0.23%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62,316,407.40</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Ghana School Feeding Programme Annual Operating Plan 2011

3.5. Crop Variety

The domestic economy is predominantly driven by subsistence farming, which employs almost 60% of the workforce and provides a livelihood for the 51% of Ghana’s population that resides in rural areas. Thus, small-scale farming and its subsequent development form a significant component of Ghana’s opportunity for poverty alleviation. Table 3 below shows the crop varieties cultivated by small farmers.

Table 3: Crops produced by small-scale farmers

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>Maize, millet, sorghum, rice</td>
</tr>
<tr>
<td>Industrial crops</td>
<td>Cocoa, oil-palm, coffee, cotton, tobacco, sheanut, cola nut</td>
</tr>
<tr>
<td>Legumes</td>
<td>Cowpea, bambara nut, groundnut, soybean</td>
</tr>
<tr>
<td>Fruits</td>
<td>Papaya, avocado, mango, cashew, watermelon, plantain</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Tomato, eggplant, onion, pepper, okra, cabbage, lettuce, carrot</td>
</tr>
<tr>
<td>Roots and tubers</td>
<td>Yam, cassava, cocoyam, sweet potato</td>
</tr>
</tbody>
</table>


3.6. Food Procurement

The GSFP’s procurement is highly decentralized and engages with the private sector to a large degree; it gives contracts to caterers to procure, prepare, and serve food to students in beneficiary schools. While the model instructs caterers to procure from the schools’ communities, and source from the district and national levels only when food items are not available, in practice caterers are sourcing the large majority of food from the market regardless of local availability. Caterers are advised to procure 80% of foodstuffs from local farmers, but this rule has not been enforced.
Payments to the caterers are made from the District Assemblies, under the supervision of the DICs, based on GH₵0.40 (US$0.26) per child per day. Caterers are not permitted to serve more than three schools each, and their profit is the savings made after the food has been procured, prepared, and distributed. The funds are intended to be released to the caterers every 2 weeks, although in practice payment is highly irregular.
4. High Level Comparison

4.1. In-country Programs: Plan Ghana International

Plan Ghana’s school feeding programme is a community-based initiative targeting kindergartens and primary schools and operating in five out of the ten regions of Ghana: Eastern, Central, Greater Accra, Upper West and Volta. It started its intervention in the Upper West region, the most deprived region in the country. A pilot programme was initiated by the Sissila West district, where most community institutions (facilitated by Plan Ghana) were already in place for school feeding implementation. Currently, there are seventeen pilots schools in the program with two (2) in the Sissila West district. As found within the Ghana School Feeding Programme Log Frame 2007 – 2010, Plan Ghana’s intervention is an integrated approach—this is because it has programmes in the areas of food production, health, education, income generation, water and sanitation.

Governance of School Feeding

Each community has a Unit Committee that is set up by the community elders with the responsibility of awarding cooking contracts to the VSLA Cooking Groups. Most of these committees have been trained in basic record keeping and on how to manage their communities’ bank accounts. The Community Base School Feeding consists of key committees and associations:

- Village Savings and Loans Associations (VSLA)
- School Management Committees (SMC)
- Parents’ Teachers Associations (PTA)
- Water Users Associations (WUA)

There are other sub-committees such as:

- VSLA Cooking Groups
- VSLA Foodstuff Contractors
- VSLA Financial Body
- WUA Marketing Cooperative
Supply Chain, Agricultural Production, and Processing

The supply chain in Plan Ghana’s school feeding programme utilizes existing local institutions. The production base of the whole feeding programme is vegetable and cereal that is produced mostly in the eight irrigation dams with an irrigable area of about one hundred hectares and other distant farms situated in the region. To this end, a special programme is being implemented to ensure a proper vegetable mix with an emphasis on high vitamin and mineral crops like moringa and soya bean.

Fish production for cooking is mainly from four dams that have been stocked with 825,000 fingerlings and increasing in population. Meat requirements are from the ruminant population in the local communities, which are also increasing in numbers as a result of the construction of water facilities for their drinking year round. Cooking oil is purchased from women who process it locally from groundnuts and shea nuts, and when needed, extra cooking oil is procured from the Upper West Agro Processing Company, Sombo, UWR where soya beans are locally processed. Other cooking ingredients like iodized salt are purchased from markets elsewhere within the UWR.

Food Procurement and Cooking

There are Water Users Associations in the eight dam communities, each with their own executives. These executives constitute a marketing cooperative that organizes the production of vegetables in the needed quantities and in a timely manner. The Village Savings and Loans Associations (VSLA) within the communities are made up of women associations with an average membership of twenty-five with total membership of over 1,900. These women constitute the VSLA Foodstuff Purchasing Firm who organise the food from the dam communities and elsewhere in the UWR with immediate and short-term financing from the VSLA. There is also a Local VSLA Food Cooking Group in each community that undertakes the cooking of the food with supplies purchased from the VSLA Foodstuff Purchasing Firm.
Local Community Involvement
Apart from the human resource aspect, another important community contribution is firewood. Some communities have forestation programs that encourage sustainable harvesting. Other communities that do not have forestation programs have invested in fast growing tree species. The communities also contribute to the purchasing of cooking utensils used for the program.

Key Learnings from Plan Ghana School Feeding Program
- The integration of local farmers into the school feeding programme provides a sustainable model for school feeding.
- It is community driven from the design to implementation levels, with technical and financial support received from Plan Ghana and its development partners.
4.2. **In-country Programs: Bonsaaso Millennium Villages Project (MVP)**

The Millennium Villages Project (MVP) was established as an intervention of the Millennium Development Goals in eradicating extreme poverty and hunger, achieving universal primary education, and reducing child mortality. In Ghana, the MVP started operation in March 2006 in the Bonsaaso Cluster in the Ashanti region. From three schools in 2007, the program was scaled-up to cover all twenty-two schools in 2009. The MVP is anchored in three interlinked components:

- The principle of community participation, leadership, and cost-sharing
- Appropriate science-based innovations and local knowledge
- A costed national action plan for the time-bound and targeted objectives of the Millennium Development Goals (MDGs)

The model of the MVP is based on community participation and a supply-driven school feeding programme. By the end of 2009, the processing of fresh palm fruit by the Juabeng Oil Mill earned farmers GH¢20,071.90. Farmers make direct contributions of farm produce to support the school meals programme and also assist in the establishment of school gardens to provide fresh vegetables—gardens are currently present in twenty-two primary schools. The MVP is supported by the Rural Enterprise Project, Care International, Japan International Development Agency (JICA), Ghana Government (Energy Commission), District Education Directorate, Ministry of Health and allied health service providers, Ministry of Food and Agriculture, and others.

**Governance of School Feeding**

Each community has a Unit Committee that is responsible for administration and execution at the local level. For the school feeding programme, there is a School Implementation Committee consisting of the following:

- Representatives of the Ministries of Education, Health, Agriculture (community level)
- MVP representative
- Head teachers of schools
- Parent Teacher Association (PTA)
**Cost Per Child Per Day**
The school meals programme operates at an average cost of GH¢0.18 (~US$0.13) per meal per child. The MVP and the participating communities share the cost of the program almost equally. The MVP bears the cost of the staples and some relatively costly but nutritious ingredients such as fish and beans while the communities provide water, fuel, wood, and some ingredients for cooking. Essentially, all the food items such as maize, gari, okro, yams, plantain, and palm oil are purchased from the community thereby boosting local production. Based on a common understanding, each community adopts its own strategy for mobilizing funds to meet the recurring cost. In most cases parents agree to contribute GH¢0.50 or GH¢0.10 per week per child.

**Cash Transfer Scheme**
In pursuit of the development objectives, there was the signing of a Memorandum of Understanding (MOU) with 4 communities. The MOU enabled these communities to receive the direct transfer of funds into a community account at a designated local bank. The primary objective that drove the design of the MOU was to create an opportunity for local communities to experience the full cycle of project management, especially at the level of fund mobilization and utilization, and within a culture of transparency and accountability.

**Supply Chain, Agricultural Production, Processing, and Marketing**
The supply chain in the MVP model is based on the supply driven approach of school feeding where farmers in the communities push supply to the programme. Although we cannot generalize the supply chain implemented in the various communities, there were similarities in the approach adopted by all twenty-two communities. Taking a look at one community in particular, the Bonsaaso Cluster is made up of six villages with approximately 30,000 residents, and located in the Amansie West district of the Ashanti region of Ghana. With over 8,434 pupils and expanding, the community in benefitting tremendously from the MVP.
With support from the World Food Programme (WFP) under the auspices of the United Nations Development Program (UNDP), the two communities of Apenimadi and Watreso are to have oil palm processing equipment manufactured and installed. Some communities have formed cooperatives for easy access to microcredit and marketing of their products, including vegetables, fish, and cocoa.

**Local Community Involvement**

The MVP believes that the effective administration and implementation of the school feeding programme is at the Unit Committee level, which is the basic level of administration under the decentralised local government system. Thus, various training programmes were initiated to strengthen the leadership role of the Unit Committee in mobilizing support to improve community-based monitoring and evaluation on all project activities. This has enhanced community ownership of the projects, and the local population has demanded accountability and transparency in the execution of community-based facilities under the inspired leadership of the transformed Unit Committees.
Key Learnings from MVP School Feeding Programme

- The school feeding programme under the MVP is supply driven where farmers are the driving force behind the success of the programme.
- The improved access of farmers to agricultural inputs is critical, namely seedlings for maize, cowpea, cocoa and organic fertilizer.
- The construction of warehouses is critical in reducing post-harvest losses.
- All 8,434 pupils from the twenty-two primary schools were provided with school meals at a cost of 18 pesewas (GH₵0.18) per meal.

4.3. Other Countries’ Programs

In order to understand alternative models of school feeding and their pros and cons, we looked at other countries’ school feeding programmes in the context of the following:

- Governance of school feeding
- Cost per child per day
- Cash transfer scheme
- Supply chain/procurement mechanism
- Nutrition standards
- Involvement of local community

4.3.1. India

Brief Description

A mix of public and private partnerships in implementation, India has both state administered programmes and those supported by private sector organizations. The Mid-Day Meal (MDM) Programme, the largest school feeding programme in the world, operates through the Food Corporation of India (FCI), which procures food domestically and then distributes it to a network of FCI stores, where it is then transported to individual schools and villages. The program is largely decentralized by the state, with operations varying throughout the country.

There are no local procurement targets as Home Grown Procurement is less important in India (as a net exporter of grain). The massive public distribution system based on the procurement of

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1 Rethinking School Feeding, Bundy et al, Cardiff India Desk Review, Swaminathan Foundation SFP in India, Kumar A case study of Mid Day Meal Scheme.
vast quantities of grain from farmers at minimum support prices makes the SFP much less important as a source of demand for grains. However, there is scope for the local procurement of vegetables and condiments.

**Governance of School Feeding**

India has a federal system of governance with a central government, twenty-eight state governments, and seven Union Territories. India attained self-sufficiency in food grains by the 1970s and is now a grain surplus country and a leading exporter of food grains.

The Department of Food and Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution is in charge of managing the food economy of the country. A public distribution system (PDS) managed by the Food Corporation of India (FCI) operates alongside a free market. The objectives of the FCI are primarily:

1. Effective price support operation for safeguarding the interests of the farmers.
2. Distribution of food grains throughout the country by the Public Distribution System (PDS).
3. Maintenance of satisfactory level of operation and buffer stocks of food grains to ensure National Food Security (Food Corporation of India, 2007).

The FCI procures food (wheat, paddy, rice) through purchase centers at pre-announced ‘procurement prices’ fixed by the Central Government. This food is then sold to State Civil Supplies Corporations or Food Corporations at an issue price that is also fixed by the government. The state then distributes the food to the public through fair price shops or ration shops at ‘ration’ or ‘issue’ prices.

The central government supports the states by providing free food grains (for example, rice or wheat) to implementing state agencies and reimbursing the cost of transportation to the district authorities. States pay for any additional food items required and for food preparation, and they can choose from providing cooked meals at school or dry rations. Efforts have been made since 2001 to improve school infrastructure for the programme, especially regarding the construction of kitchens, and to tackle challenges related to clean water, appropriate utensils, and eating facilities. Still, challenges remain in guaranteeing the quality and stability of the programme in all of the states under a decentralized system.
Cost Per Child Per Day
Primary: Rs. 3.30, Upper Primary: Rs. 4.92

Cash Transfer Scheme
There is a great deal of importance assigned to the preparation of the Annual Work Plan & Budget (AWP&B) by the states and administration. Data collected through participatory processes at the school level and aggregated at the Block, District, and State levels prove that this is the case. A comprehensive picture of the implementation of the program is provided, containing details such as management structure, implementation processes, monitoring systems, sociological break up of target groups, infrastructure position, findings of evaluation studies, strategies to tackle problems, community participation, best practices, new initiatives, etc.

Government financial assistance includes:

- Supply of food grains such as wheat, rice
- Reimbursement of transportation cost from food storage point to the school
- Provision of cooking ingredients including vegetables, oil, etc.
- Assistance in construction of kitchen, store
- Kitchen utensils, devices
- Management, Monitoring, and Evaluation (MME) at 2% of total assistance

In addition to its support during the school year, the central government supports a MDM programme during summer vacation in drought-affected areas. The state governments supplement the central government support with a minimum of 0.20 (northeastern states) or 0.50 rupees (all other states) for cooking costs including stipends for cooks, and fuel or firewood for cooking. States are required to contribute in order to receive central government funding.
Supply Chain/Procurement Mechanism

Procurement of food grains and ensuring continuous availability of adequate food supply is the responsibility of the FCI. The State Government makes arrangements for the transportation of food grains from the nearest FCI depot to each school (via state appointed transport agencies). See figure 5 below.

Figure 5: India’s School Feeding Supply Chain

Nutrition Standards

Nutritional norms prescribed under MDMS:

- Primary: 450 Calories, Protein 12g.
- Upper Primary: 700 Calories, Protein 20g.
- Both: Adequate quantities of micronutrients like iron, folic acid, and vitamin A.

Menus vary according to local eating customs.

Involvement of Local Communities

The involvement of local communities has been minimal; there have been recent attempts to increase participation in supervision and contribution.

Key Learnings from India’s Case

- Highly integrated into policy
- Mix of public-private partnerships in implementation
- Food provided and distributed by central and state governments (who keep large stocks to ensure constant demand and uninterrupted supply)
- Funds provided for monitoring of program, kitchen construction/improvements, utensils, etc.
• Summer funding available in drought affected areas
• Very thorough annual reporting requirements in order to qualify for the scheme
• Rations based on nutritional requirements (by age)

Challenges in India
• Children out of school not covered
• Flow of funds
• Actual implementation patchy and hard to monitor
• Indian infrastructure resources not applicable to Ghana

4.3.2. Kenya

Brief Description
The WFP provides meals to 770,000 children in Kenya’s arid and semi-arid lands, with the aim of increasing enrollment, stabilizing attendance, increasing completion rates, and improving the government’s capacity to manage the school feeding programme through training. The WFP is supporting a gradual handover of its SFP to the government’s HGSFP, which targets 538,000 in semi-arid areas. A targeting exercise identified twenty-eight marginal agricultural districts with access to markets for the new programme.

There is no official target for the procurement of food, but ‘local’ is defined as (i) from parents of school children (ii) within the school zone (iii) near school, in community, or (iv) from the local market. The current proposal includes food produced in the whole of Kenya.

Governance of School Feeding
The SMC and School Feeding Sub-Committee (SFC) directly manage the HGSF program at the school level. Each school has an SMC that includes the head teacher as the secretary, a chairperson who is a parent, and other parents who are members. Schools currently have two separate bank accounts—one is a general-purpose account and the other is for instructional materials and supplies. A third is required for the school feeding programme. There are three bank signatories: the head teacher, the chairperson, and the treasurer. Schools have experience with financial management and procurement, and the MoE is basing their school feeding

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Rethinking School Feeding (Bundy et al), USDA Assessment of Local Production for School Feeding in Kenya, HGSM Progress Report and Technical Assistance Plan
procurement model upon already existing structures for monitoring and evaluation and procurement that are used to purchase textbooks and other school supplies.

General responsibilities are:

(i) Standards and regulations are set by the MoE (nutritional requirements, storage and handling guidelines, etc.), as well as fundraising, advocacy, and coordination and implementation at the national level.

(ii) Supervision, reporting, M&E, and technical assistance (trainings and advice in nutrition, storage, preparation, bookkeeping, etc.) occur at the district level.

(iii) The head teacher keeps records, prepares a procurement plan, and confirms quantity and quality of commodities delivered, and signs for delivery.

(iv) The SMC and SFC, led by the head teacher, manage the HGSF program at the school level.

Parents represented by the committees are responsible for overseeing general management of the programme, which includes overseeing food deliveries, signing off on reports and delivery notes, and making procurement and management decisions. To access funding at the school level, three parties must sign for it (head teacher, SMC chairperson, and the SFC chairperson).

Cost Per Child Per Day

The average daily average cost per child in the MoE HGSF program is approximately US$0.09—a little over half of the WFP feeding program price at US$0.16 per child. The HGSF transfers do not include funds for energy efficient stoves or infrastructure.

Cash Transfer Scheme

The MoE funds are disbursed to the schools twice a year, directly into a specified bank account for each school. The account is designated for only the local purchase of cereals, pulses, and oil.

Supply Chain/Procurement Mechanism

The MoE HGSF issues local tenders for cereals, pulses, and oil, while the parents source salt and firewood. A school’s ability to purchase locally grown products is hindered because all schools in the HGSF program are within semi-arid areas, where production capacity is limited. As a result, the MoE has suggested using traders as a fallback in times of decreased rainfall. When
food prices are at their lowest, directly after harvest, schools will purchase as much as possible to ensure a supply sufficient for the entire term. Storage, however, is a challenge for many schools. See figure 6 below for Kenya’s supply chain.

Figure 6: Kenya’s School Feeding Supply Chain

Nutrition Standards
The nutrition standards are set by the MoE and historically have focused on two major components: access to education and addressing short-term hunger, while also improving health and nutrition. The MoE has not established menu options for the HGSF program, but has instead adopted the WFP’s daily hot lunch ration, which includes 150g of cereals (mainly maize), 40g of legumes (mainly beans or yellow split peas), 5g of fortified vegetable oil, and 3g of iodized salt.

Involvement of Local Communities
Community participation and involvement are strong. Each household is asked to contribute to the SFP, and typical contributions include firewood, water, cash for cooks’ salaries, and salt. When households cannot contribute, the SMC makes alternative arrangements with the family, and the remaining supplies are purchased from the community through a tender process. Because the tenders come from members of the community, the SMC knows them and what they are capable of producing and delivering. The SMC offers preferential tendering terms to the local community.

Key Learnings from Kenya’s Case
- Programme targeted to poorest areas
- Strong community participation
• Each household is asked to contribute to the SFP. Typical contributions include firewood, water, cash for cooks’ salaries, and salt. When households cannot contribute, the SMC makes alternative arrangements with the family.
• Managed at school level—funds are directly disbursed twice a year to the designated school bank accounts (so less frequent delays and issues with the caterers)

Challenges in Kenya
• Low Capacity – risk of program leading to price increases
• Disparity in costs
• Funding shortfalls from fluctuating food prices
• Delays in disbursements

4.3.3. Brazil

Brief Description
Brazil’s National School Feeding Programme (now called “PNAE”) started in 1955 and serves 37 million children across the country. The Brazilian model is a decentralized home grown school feeding programme and its local procurement target is 30%. The PNAE is administered by the National Fund for Educational Development (Fundo National de Desenvolvimento da Educaçao or FNDE). The FNDE provided R$1.5 billion (about US$750 million) in 2006. Since 2008, the PNAE has been supported by the National Constitution and highly integrated with national policy.

Governance and M&E of School Feeding
Each municipality or state government sets up a School Feeding Committee (Conselho de Alimentacao Escolar or CAE). The CAE is mainly responsible for the execution of the PNAE at the local level and members are re-elected every two years. The CAE usually consists of the following:
• One executive representative (from the municipal or state secretariat of education)
• One legislative representative (from the municipal council)
• Two teacher representatives

• Two parent representatives (usually elected members of Parents and Teachers Association)
• One representative of a related segment of civil society such as Rural Workers, Syndicates, producers, associations, or NGOs which support these producers

In order to participate in the PNAE, the state, federal district, or municipal government must:

1) Apply for financial resources (for school food) from the FNDE
2) Allow the CAE to monitor its fiscal status, submit a statement of account for every transfer, and send in the yearly statement every January
3) Follow the FNDE’s instructions and rules in using the resources (For example, the FNDE suggests that the responsible government involve at least one qualified nutritionist to guarantee the level of nutrition in each school meal.)

The FNDE can stop the disbursement of funds if the CAE does not submit an account statement on time. The FNDE and the Federal Account Tribunal (Tribunal de Contas da União, or TCU) started providing manuals to all the municipalities in 2004 to prevent this. Even so, in 2007, about 1,000 municipalities did not send the account statements and properly form their CAEs. Additionally, school feeding committees monitor quality and composition of menus and the tendering process and the FNDE regularly inspects the performance of the committees in order to prevent fraud in the food procurement process. Since July 2008, a computerized monitoring system was implemented in all municipalities.

Cost Per Child Per Day
Although the cost per child per day varies across the country, the FNDE uniformly provides the following support and state governments and municipal governments cover the rest.

• R$0.18 daily per student for municipal or state-run crèches, pre- and primary schools, and philanthropic schools (mostly subsidized by the federal government)
• R$0.35 for schools in indigenous people reserves and quilombos

Local governments are obliged to spend 70% of the transferred money on basic foodstuff, preferably acquired from local producers in order to simultaneously enhance local economic development.
Cash Transfer Scheme
The funds are transferred from the FNDE to all the municipalities across Brazil. In 1998, the financial transfer from FNDE to local governments became automatic, reducing paperwork. In 2001, the transfer became a regular arrangement of ten installments per year (each payment is expected to cover food for 20 school days).

Supply Chain/Procurement Mechanism
The supply chain in the Brazilian decentralized system varies among municipalities, reflecting the differences in community involvement and existing networks or infrastructure. This variation is also attributable to the fact that Brazil is a federal republic comprised of states with a certain degree of autonomy. Although the decentralized school feeding programme reflects the diversity of municipalities, it also sometimes leads to disparity in quality. For example, when a municipality wants to introduce new local products to the school menus, the municipal government needs to train cooks and nutritionists. Some municipal governments cannot afford these new material arrangements and recede to old industrial food provision by commissioned enterprises. As we cannot generalize one typical supply chain implemented in the PNAE, we would like to describe two examples: the state of Sao Paulo and the state of Castanhal.

The Case of the Municipality of Campinas, the State of Sao Paolo
The municipality of Campinas has a population of one million, and 160,000 students in the municipality across 518 public crèches, pre-schools and primary schools benefit from the PNAE. The school feeding programme in Campinas is considered to be one of the most successful models in Brazil. In Campinas, the executer of the PNAE is the Nutrition Coordinator affiliated with the Municipal Secretary of Education, and the state-run Supply Centre and Assistance Services (Central de Abastecimento e Servicos Auxiliares, or CEASA). The CEASA works as an intermediary among schools, local farmers, wholesalers, FNDE, the state government, and the municipal government (see figure 7 below for details). The CEASA not only transfers funding from governments to local farmers/wholesalers, but also educates cooks about the nutritional aspects of menus, sanitary matters, and culinary experiments.
The Case of Castanhal, the State of Pará

In the north region of Brazil, many of municipalities need improvement in basic infrastructure such as clean water, electricity, roads, and storage. Under these conditions, the State of Pará, through the State Secretariat of Education, has been promoting the process of ‘regionalisation’ of school food since 1997. Many municipal governments and the State Secretariat of Education provide financial support as complementary to the FNDE’s funding by combining the school feeding programme and agricultural extension services and associated funds. It is also beneficial for local producers’ cooperatives and associations who can barely commercialize their products due to logistical problems and a lack of market (see figure 8 below for details).
The nutrition standards also differ from one municipality to another. In general, nutrition intake is focused on vitamins, proteins, and iron, which can be found in fresh vegetables, fruits and meat.

Involvement of Local Communities

The CAEs are supposed to reflect “local reality” in menu development and food procurement by respecting local eating habits or preferences for basic and fresh products. This connects the PNAE with the regional agricultural activities partly supported by the Food Security and Nutrition Programme of the Zero Hunger Project, which promotes several support programmes for small farmers. Food procurement is decentralized and largely school-based. The school procures fruit, vegetables, meat, and bread from local producers with financial support from the
municipal government. The Ministry of Agriculture’s Programa de Aquisição de Alimentos (Food Procurement Programme) organizes and trains the small producers to become suppliers of the school feeding programme. Many municipalities have started to buy fruits, flour, and beans from local rural producers’ cooperatives and associations, benefitting local rural producers rather than large-scale providers.

Key Learnings from Brazil’s Case

- Integration with the national policy
- Autonomy of municipalities to reflect differences in economic status and local taste
- Combination of funding sources to create market and technical supports that optimize food supply

Challenges in Brazil

- Difficulty in overseeing and managing numerous municipalities
- Disparity in quality among municipalities

4.3.4. Chile

Brief Description

The school feeding programme in Chile started in 1929 and in 1976, began using an auction system to choose a school’s food service provider. 1.8 million children from low-income families in 9,800 schools are served by the programme. The meals have different nutritional content and are distributed approximately 180 days per year. The Chilean model is driven by a public-private partnership and has no local procurement target. The National Board of School Assistance and Scholarships (La Junta Nacional de Auxilio Escolar y Becas, or JUNAEB) is mandated by Chilean Law No. 15720 to administer the school feeding programme.4

The Auction System

The Chilean model is characterized by the use of a mathematical auction system developed by the University of Chile’s Department of Industrial Engineering in 1997. The following is a brief explanation of how the auction system works.

4 International Approaches to School Feeding: Country Experiences from Mali, Chile, and India, Rachel Winch, 2009.
i) For the purposes of the auction, Chile is divided into approximately 120 school districts or territorial units (TUs).

ii) The JUNAEB holds auctions for school catering services in one-third of these districts every year, awarding three-year contracts.

iii) The JUNAEB then evaluates the companies from a managerial, technical, and financial point of view and eliminates those that don’t meet minimum reliability standards.

iv) Qualifying vendors are classified according to two characteristics: their financial and operating capacity, and their technical and managerial competence.

v) Potential vendors submit their bids through an online system. Each bid includes a technical project for meal service and its price. The technical project must meet regulations established by the JUNAEB, such as nutritional and hygiene requirements.

vi) Vendors that satisfy these conditions remain in the bidding process and compete on price, through their respective bids. A bid can cover anywhere from one to twelve TUs, depending on the vendor’s classification. Vendors can submit as many bids as they want. When the JUNAEB accepts a company’s bid, the company must provide all meal services in the corresponding TUs. (Because JUNAEB allows companies to submit bids that cover multiple TUs, vendors can take advantage of economies of scale.)

vii) The JUNAEB asks companies to quote alternatives to these services, such as improvements to the nutritional quality of the meals. Vendors also quote prices for different levels of demand, thereby reducing the risk the vendors would face if they provide fewer meals because of unforeseen events, such as teacher strikes. Firms can also offer discounts if the real demand turns out to be higher than anticipated.  

**Cost Per Child Per Day**

The cost per child per day is determined by the auction system in Chile. The JUNAEB pays approximately $1.13 per child per day for breakfast and lunch, with some variation by region and method of preparation. 

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6 International Approaches to School Feeding: Country Experiences from Mali, Chile, and India, Rachel Winch, 2009.
Cash Transfer Scheme

The JUNAEB controls the programme budget and pays the school food service providers. The school food service providers are responsible for providing the JUNAEB with documentation of the number of meals served since they are paid per meal served to an eligible student. In each school both a staff member from the private contractor and a designated teacher from the school record daily meal participation and ensure that the correct students receive meals. At the end of each month, the JUNAEB pays the private contractors for the number of meals served in the previous month.

Supply Chain/Procurement

Although the JUNAEB sets the nutrition and quality standards of meals, procurement of ingredients falls under the operation of the food service providers. See figure 9 below.

Figure 9: Chile’s School Feeding Supply Chain

The Case of Chile

- Oversees the auction and execution
- Determines nutrition standards for the programs

Avg. $1.13/child/day

Documented of # meals served*

*Both a staff member from the private contractor and a designated teacher from the school record daily meal participation and ensure that the correct students receive meals.
Nutrition Standards
The JUNAEB and Junta Nacional de Jardines Infantiles (JUNJI) set and control nutrition standards for their programmes, including number of calories per meal, quantity of protein, quantity of fruits and vegetables, and requirements for variety.

Involvement of Community
As explained in previously, the procurement of ingredients falls under the operation of food service providers who won the auction. The programme does not appear to have much community involvement.

Key Learnings from Chile’s Case
- Integration with the national policy
- Highly transparent and open selection process
- Cost efficiency achieved by market mechanism

Challenges in Chile
- Not necessarily contributing to local economy

4.4. Conclusion
Since each school feeding programme is unique due to differences in the state of the economy, infrastructure, and agriculture, it is hard to generalize findings from the international benchmark. However, we would like to highlight two findings:

- **Successful programmes are tightly integrated with national policy.**
  In India, Brazil, and Chile, the school feeding programmes are tightly integrated with their national policies. As the stakeholders associated with school feeding ranges from Ministry of Agriculture to Education, from Economy to Health, tangible commitment from the government is key for success. It is essential to establish a national framework for school feeding to achieve efficient and effective coordination among the different stakeholders.
• The biggest challenge of a decentralized HGSF lies in striking a balance between benefits for the local community and for the programme as a whole.

Balancing both pros and cons of a decentralized HGSF simultaneously is a huge challenge. It can help stimulate local agriculture and enable municipalities to reflect locality into school feeding. At the same time, it fails to enjoy cost reduction through economies of scale (both in administration and procurement) and sometimes leads to disparity in the quality of school feeding.

The table below summarizes the key learnings and challenges from the countries examined.

Table 4: International Comparison of Learnings and Challenges

<table>
<thead>
<tr>
<th>Learnings</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>India</td>
</tr>
<tr>
<td>- Targeted to poor community participation</td>
<td>- Children out of school not covered</td>
</tr>
<tr>
<td>- Strong community participation</td>
<td>- Flow of funds</td>
</tr>
<tr>
<td>- Flexible Parental contribution</td>
<td>- Actual implementation patchy and hard to monitor</td>
</tr>
<tr>
<td>- Managed at school level – funds disbursed 2x p.a.</td>
<td>- Indian infrastructure resources not applicable to Ghana.</td>
</tr>
</tbody>
</table>

4.5. Practical Checklist of Best Practices

The checklist below was developed based on the comparison with school feeding programmes in Kenya, India, Brazil and Chile, and on the field research done by our team. For a more comprehensive checklist, please review Appendix 3 of “Rethinking School Feeding: Social Safety Nets, Child Development, and the Education Sector,” a 2009 publication from the World Bank.
Integration with national policy

- Is the school feeding programme integrated with the national policy?
- Is the school feeding programme supported by the Constitution and/or laws?
- Is there an independent agency of the school feeding programme who chiefly funnels various efforts, ranging from financial supports to technical supports, to the school feeding programme?

Autonomy of municipalities to reflect difference in economic status and locality

- Do local governments have authority/funding to adjust the school feeding programme in order to deal with differences in infrastructure, local farmers’ standing and trading habits?
- Does the menu of school feeding consider local students’ habits and tastes?

Combination of funding supports and technical supports

- Do small farmers have opportunities to learn how to optimize production and marketing of their crops?
- Do small farmers have access to financial resources/funding supports to expand agricultural production?
- Do teachers, managers, and school feeding committees have opportunities to learn about nutrition, food security, and health?
- Do cooks have opportunities to learn about the nutritional aspects of menus, sanitary matters, and culinary experiments to secure food quality?
- Are there any opportunities to work with universities, NGOs, or other governmental organizations to train stakeholders in the school feeding programme?

Transparent selection process of school feeding service providers

- Are there any standardized nutritional and hygiene requirements for the school feeding programme?
- Is the selection process of school feeding service providers transparent and open to any organizations as long as they meet the above-mentioned requirements?

Market mechanism to reduce cost and secure quality standard

- Does the market mechanism work properly in the selection process of school feeding service providers and daily execution of the school feeding programme?

Clear target segments

- Does the school feeding programme have target segments?
• Does the school feeding programme wholly cover the areas where target segments live?
• Does the school feeding programme successfully reach them?
• Does the program target the geographic regions where it is needed most?

Community Integration
• Is the programme fully integrated into the local community?

Monitoring & Reporting
• Are thorough, standardized reporting processes in place?

5. Characterization of the Existing GSFP Process
In analyzing the processes within the Ghana School Feeding Programme, we traced the activities from different perspectives to paint a complete picture of the organization of the programme as it exists today.

5.1. Money Network
The trail of money is an important component in understanding the stresses within the existing setup; the lack of sufficient liquid funds at different stakeholder levels causes discomfort, adding to existing problems in the setup. Therefore, to characterize the supply chain, we looked at ‘following the money’ and treating the flow as an independent, but inter-related supply chain. The following steps are taken by money through the system:
Currently funds are transferred from the MLGRD to the various District Assemblies, and then the DAs disburse the payments to caterers based on the number of days for which payment has been received. However, the payment is made after services are rendered so the caterer is managing the purchase of food with her own financial resources. Therefore, if the caterer does not obtain a loan or have personal savings to draw from, the caterer’s only option is to buy the food ingredients from a party that is capable of giving her produce and grains on credit, meaning traders and market queens. Even if the caterer wished to buy from farmers, the farmer would not be willing to sell to her because the farmer is not able to extend credit.
As an example, a caterer needs the following items to produce one meal (rice and beans) in a term. For the simplicity of the argument, consider that this meal has only the two main ingredients and nothing else.

<table>
<thead>
<tr>
<th>Rice</th>
<th>Beans</th>
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<tbody>
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<td>No of students in School</td>
<td>No of students in School</td>
</tr>
<tr>
<td>x No of days in a term</td>
<td>x No of days in a term</td>
</tr>
<tr>
<td>= number of meals to be prepared</td>
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<tr>
<td>x quantity of rice per meal (KG)</td>
<td>0.08</td>
</tr>
<tr>
<td>= Quantity of rice to be bought (KG)</td>
<td>2640</td>
</tr>
<tr>
<td>x average price of rice (prepared by farmer)</td>
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<tr>
<td>= Cash on hand needed</td>
<td>= Cash on hand needed</td>
</tr>
<tr>
<td></td>
<td>3168</td>
</tr>
<tr>
<td></td>
<td>1980</td>
</tr>
</tbody>
</table>

Even if the caterer were paid in advance for 20 days, the caterer would barely be able to cover the price of rice for a term; and since the farmer doesn’t have easy access to credit, the sale of product needs to result in a cash inflow for the farmer. Further, if we were to consider only the caterer’s operations, any delay in payment and/or having to buy on credit would mean that she will not be able to get the best possible prices for farm produce and grains, thus inflating the cost and decreasing the satisfaction level of the caterers. In addition, there are several other costs that are not effectively captured. The following sections will help illuminate what other costs there are and attempt to quantify them individually. The methodology used here assumes that no school feeding programme exists; we will go through a framework that may be used in thinking about costs associated with school feeding. See Figure 11.
Figure 11: Framework for Analyzing School Feeding Costs

Strategy for rolling out HGSF – A primer focusing on costs

**Farmer level interventions and costs**

- Assistance with inputs
- Financing assistance
- Best practices

**Setup costs**

- Concurrent investments in:
  - Farm produce storage
  - Transportation systems
  - Loss Prevention

- Capital investments in:
  - Kitchens at schools
  - School Level storage
  - Organization Setup (GSFP)

**Operational costs**

- Expenses that need to be incurred to ensure effective implementation of HGSF:
  - Salaries and Wages
  - Monitoring and Evaluation
  - Internal and external Audit

- Core costs associated with the activity of food preparation and delivery to students:
  - Cost of food ingredients
  - Fuel Costs
  - Water
  - Taxes
  - Salaries (caterer level)
5.2. **Start-up/Capital Costs**

In the context of HGSF, this would mean all related start-up activities including, but not limited to, construction of the kitchens, kitchen storage facilities, and equipment such as fuel-efficient stoves, cooking vessels, and cooking utensils. In addition, costs involved with setting up administrative structures would also have to be considered in the design of the programme. In earlier studies\(^7\) the costs of setting up school level infrastructure were identified as:

- Standardized kitchens
- Storage space for food and fuel at schools

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**Box 1: Case Study to understand costs associated with setup of kitchen and stove**

In January 2010, NewEnergy lead a process as an outcome of the CSO platform Energy Workshop in May 2009. The objectives were to:

a) Find sustainable solutions to the GSFP kitchen inadequacy.

b) Investigate and make recommendations on sustainable improved cookstove devices for promotion in the GSFP.

The following were the key takeaways from this study:

The need for a safe, clean, and secure kitchen environment was considered as top priority by all respondents, and even in schools where there are already some basic kitchen facilities, the cooks and matrons identified the need for specific enhancements to existing facilities. The following features represent the broad consensus of a model GSFP kitchen, suitable for a pupil population of 300-500:

- Adequate working space: floor area approximately 16 square
- Secure space for storage of materials, utensils, and fuel
- Well ventilated with chimney and large windows/honey-com walls
- Ensure high local construction materials content, with a target cost of about GHC 4,000

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\(^7\) Millennium Villages Project: School Feeding Program Cost Analysis, Rafael Flor and Cheryl Palm.
From a related study on cookstoves and warehousing\(^8\), we find that a programme objective is to provide every school with a gas stove in order to cook food. Based on our field visits there is still some distance to be traveled before reaching that goal; in the Central and Western regions none of the schools visited had cookstoves. Further, depending on the region, it might be difficult to obtain enough gas—in the Northern region the Tamale metro is the only area where one can reliably procure gas to run the kitchens. In such a scenario, possibly the Wale Wale smokeless or the Toyola stoves/kitchen models\(^9\) can be used to characterize the costs that are associated with setup at the school level. (See Box 1.)

\[\text{Setup Cost} = \left( \frac{\text{Number of Schools covered under GSFP} - \text{No of Schools that already possess kitchens}}{\text{x Cost of standardised kitchen and storage}} \right) \times \text{Cost of standardised kitchen and storage} \]

\(^8\) Berkeley GSFP, An Analysis of Warehouses, School Gardens and Energy Efficient Cookstoves, Cliff Dank, Adrian Durbin, Theresa Finn, Julia Ponce.

In summary, a method to think about the costs involved for setup at schools would be characterized by figure 12. In principle, costs associated with the construction of infrastructure are part of the government and community’s contributions to a SFP. Other SFPs (e.g., WFP, MVP, and Plan Ghana) use local government and community resources to cover infrastructure and start-up costs in new schools and are seen as a pre-condition to the beginning of a SFP in a community. Costs of unskilled and skilled community labor are usually omitted in total cost calculations. These costs, however, are significant, as explained in the referenced reports, and needs to be considered.

*Figure 12: Recurrent Costs of School Feeding Programmes*

The most common mistake that could be made in characterizing costs associated with a programme is to ignore these costs. However, they must be included in the overall costs whether they are paid for by the project or other sources (government, other donors, community, etc), and it can be assumed that the infrastructure costs need to be covered by the programme itself.
Infrastructure that is necessary for the programme should come from governments and communities’ contributions and should be a requirement before starting the program. Negotiations among stakeholders involved in the programme for the infrastructure should be the first step after evaluating the situation on the ground.

5.3. Recurrent/Operational Costs:
The recurrent costs associated with a SFP can be characterized by splitting costs into direct feeding costs and indirect support costs. Here, since we are dealing with the outsourced caterer model, we have split the costs along the lines of responsibility, dealing with them as characterized in figure 12.

First we look at the costs directly incurred by the caterer, and characterize them as the cost for food and fuel/water/staffing. Even within this bucket, there needs to be an understanding of the different nature of these costs. While the direct food costs are easily pro-rated (meaning that the addition of one student to the school results in a proportional increase in the food that needs to be produced) the other costs do not behave in this manner. This understanding is paramount to correctly assess the costs that are incurred in the supply chain, and therefore, will be treated differently. While the costing tool will be able to provide accurate outputs (given the right inputs), these other costs exhibit a behavior similar to a step function, and therefore need to be accurately assessed while launching a SFP.

\[\text{Table 5: Effect of Scale on Indirect Feeding Costs}\]

<table>
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<td></td>
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<td>GHC 0.01</td>
<td>GHC 0.01</td>
<td>GHC 0.01</td>
<td>GHC 0.01</td>
</tr>
<tr>
<td>Transportation</td>
<td>GHC 0.03</td>
<td>GHC 0.01</td>
<td>GHC 0.01</td>
<td>GHC 0.00</td>
<td>GHC 0.00</td>
</tr>
</tbody>
</table>

**Cooking Staff/Personnel:** The number of cooks needed by a caterer depends heavily on the number of students in the school. For example, in schools that have 1200-1500 students, the number of cooks required may be in the range of 6-9. An accurate estimation of cost on this front would require further specialized study. With the available data, and based on assumptions that
we have made, we were able to calculate the impact of cooks on the cost of feeding, as shown in table 5. The costing tool requires the user to provide the number of cooks and their salary as an input.

While setting up a programme, it is important to ensure that all personnel (hired by the caterer, in this case) are paid at least minimum wage in accordance with the country’s laws. On our field trips, we noticed that some cooks are being paid as little as GH¢ 30/month, which is lower than the minimum wage set by the Government of Ghana.

_Fuel & Water:_ A similar step-function behavior can be observed here as well. From our field research, we found that there is a wide disparity in the manner of obtaining firewood as fuel and water for cooking. In some communities, there is no cost associated with fuel as the community helps in bringing firewood. Similarly for water, there are regions where water is freely available, and no cost is incurred in providing water for cooking. However, in regions where such natural resources are not available or where communities do not provide, there is a definite cost associated with fuel and water. The costing tool is meant to include these costs, given an accurate estimation of prices and transportation. Efficiencies of scale also play a big role in bringing down the per child cost of feeding, shown in table 5.

_Costs associated with food:_ This component is by far the key contributor to cost in the programme, and is part of the basket of responsibilities belonging to the caterer. In our field study and analysis, we find that the food ingredients compose the majority of a caterer’s costs. The costing tool now provides a way to analyze and understand costs of different menus and ingredients, and to understand how cost varies across different regions (provided the right quality of inputs are available). What is unique about the cost of food is that it is the only cost that can be approximated linearly without distorting the true nature and proportion of the cost.

We also found that when the funds for buying food prove to be insufficient, the reaction from the caterers is to simply reduce the quantity of food given to each student; this hurts the school feeding programme more directly in the short term and in the long term, and therefore needs to be given requisite focus. With the outsourced caterer model that is followed by Ghana, we feel that the sheer nature of the caterers’ incentives (saving money increases profit) means that it will
need significant monitoring and evaluation by the SFP secretariat. This issue will be addressed in later sections.

5.4. Costing Example

The cost of nine menus received from the GSFP secretariat was calculated using three different price sources. The first source was the market of Makola in Accra at the end of May 2011. The second source consists of the prices that caterers gave in the interviews in eight of the ten regions in the country; all of these interviews were carried out in May 2011. The third source of prices used in the comparison is the average of the official prices of the Ministry of Agriculture from January to August 2009. This costing exercise was done with the following information for the school and caterer:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students enrolled and served</td>
<td>500</td>
</tr>
<tr>
<td>Meals served per day per student</td>
<td>1</td>
</tr>
<tr>
<td>Price paid per meal</td>
<td>GHS 0.40</td>
</tr>
<tr>
<td>Tax applied to price paid to caterers</td>
<td>5%</td>
</tr>
<tr>
<td>Days served in a month</td>
<td>22</td>
</tr>
<tr>
<td>Months in a term</td>
<td>3</td>
</tr>
<tr>
<td>Terms in a year</td>
<td>3</td>
</tr>
<tr>
<td>Monthly salary of each cook</td>
<td>GHS 30.00</td>
</tr>
<tr>
<td>Number of cooks employed</td>
<td>3</td>
</tr>
<tr>
<td>Average served days between payments</td>
<td>22</td>
</tr>
<tr>
<td>Effective annual interest rate</td>
<td>30%</td>
</tr>
</tbody>
</table>

The result of this costing exercise (see table 6) indicates that the cost of ingredients is higher than 40 pesewas for all menus using any of the price sources, with no change in results even if we were to use prices from 2009. ¹⁰ This would mean that delivering these menus is unviable from a caterer’s perspective. However, the demand for catering contracts is high and the caterers we interviewed complained about the payments but never mentioned an intention to end the contract. The volume of food ingredients per menu was arrived at from a document¹¹ that was provided to us by the GSFP Secretariat. The units of measure given in that document were converted into more usable units (kilograms, liters) based on conversion information that we had, plus

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¹⁰ Ministry of Agriculture, Production and Cost Estimates.
¹¹ Costing document for 500-600 pupils, GSFP Secretariat.
additional intelligence that we were able to gather from our visit to the market in Accra referenced above.

Some possible explanations for this contradiction are:

1. The different adaptations in each region that replace some unavailable ingredients for some more readily available ones, decreasing the cost per meal.
2. The caterers are serving less quantity per student than what is planned by the Secretariat.
3. The caterers are using more of the cheaper ingredients and less of the more expensive ones in order to reduce the average cost per meal.

Table 6: Costing Exercise for GSFP Menus

<table>
<thead>
<tr>
<th></th>
<th>Beans, gari &amp; fried plantain and oranges</th>
<th>Banku, fish &amp; pepper sauce</th>
<th>Jollof &amp; sausage/vegetables</th>
<th>Banku, okro &amp; garden egg stew/fish and tripe</th>
<th>Waakye, fish and gari</th>
<th>Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices from Accra market (Makola)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of ingredients</td>
<td>GHS 0.87</td>
<td>GHS 0.51</td>
<td>GHS 0.63</td>
<td>GHS 0.51</td>
<td>GHS 0.61</td>
<td>GHS 0.63</td>
</tr>
<tr>
<td>Cost of ingredients/total operating cts</td>
<td>95.50%</td>
<td>92.50%</td>
<td>93.90%</td>
<td>92.60%</td>
<td>93.70%</td>
<td>93.71%</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>GHS 0.91</td>
<td>GHS 0.55</td>
<td>GHS 0.68</td>
<td>GHS 0.55</td>
<td>GHS 0.65</td>
<td>GHS 0.67</td>
</tr>
<tr>
<td>Total costs with financing</td>
<td>GHS 0.96</td>
<td>GHS 0.59</td>
<td>GHS 0.72</td>
<td>GHS 0.60</td>
<td>GHS 0.69</td>
<td>GHS 0.71</td>
</tr>
<tr>
<td>National prices (field research)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of ingredients</td>
<td>GHS 0.83</td>
<td>GHS 0.52</td>
<td>GHS 0.68</td>
<td>GHS 0.52</td>
<td>GHS 0.59</td>
<td>GHS 0.63</td>
</tr>
<tr>
<td>Cost of ingredients/total operating cts</td>
<td>95.30%</td>
<td>92.70%</td>
<td>94.40%</td>
<td>92.70%</td>
<td>93.50%</td>
<td>93.73%</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>GHS 0.88</td>
<td>GHS 0.56</td>
<td>GHS 0.72</td>
<td>GHS 0.56</td>
<td>GHS 0.63</td>
<td>GHS 0.67</td>
</tr>
<tr>
<td>Total costs with financing</td>
<td>GHS 0.92</td>
<td>GHS 0.61</td>
<td>GHS 0.77</td>
<td>GHS 0.61</td>
<td>GHS 0.67</td>
<td>GHS 0.72</td>
</tr>
<tr>
<td>National prices 2009 (M o Agric)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of ingredients</td>
<td>GHS 0.58</td>
<td>GHS 0.54</td>
<td>GHS 0.58</td>
<td>GHS 0.45</td>
<td>GHS 0.51</td>
<td>GHS 0.53</td>
</tr>
<tr>
<td>Cost of ingredients/total operating cts</td>
<td>93.40%</td>
<td>93.00%</td>
<td>93.50%</td>
<td>91.60%</td>
<td>92.50%</td>
<td>92.36%</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>GHS 0.62</td>
<td>GHS 0.59</td>
<td>GHS 0.63</td>
<td>GHS 0.49</td>
<td>GHS 0.55</td>
<td>GHS 0.58</td>
</tr>
<tr>
<td>Total costs with financing</td>
<td>GHS 0.66</td>
<td>GHS 0.62</td>
<td>GHS 0.66</td>
<td>GHS 0.52</td>
<td>GHS 0.58</td>
<td>GHS 0.61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Groundnut soup and omu tuo</th>
<th>Egg stew with rice and vegetables</th>
<th>Kontomire stew with yam and plantain</th>
<th>Garden egg stew with yam and plantain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices from Accra market (Makola)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of ingredients</td>
<td>GHS 0.56</td>
<td>GHS 0.67</td>
<td>GHS 0.52</td>
<td>GHS 0.53</td>
</tr>
<tr>
<td>Cost of ingredients/total operating cts</td>
<td>93.15%</td>
<td>94.23%</td>
<td>92.68%</td>
<td>92.79%</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>GHS 0.60</td>
<td>GHS 0.71</td>
<td>GHS 0.56</td>
<td>GHS 0.57</td>
</tr>
<tr>
<td>Total costs with financing</td>
<td>GHS 0.64</td>
<td>GHS 0.75</td>
<td>GHS 0.60</td>
<td>GHS 0.61</td>
</tr>
<tr>
<td>National prices (field research)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of ingredients</td>
<td>GHS 0.58</td>
<td>GHS 0.71</td>
<td>GHS 0.50</td>
<td>GHS 0.52</td>
</tr>
<tr>
<td>Cost of ingredients/total operating cts</td>
<td>93.40%</td>
<td>94.55%</td>
<td>92.41%</td>
<td>92.75%</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>GHS 0.62</td>
<td>GHS 0.75</td>
<td>GHS 0.54</td>
<td>GHS 0.56</td>
</tr>
<tr>
<td>Total costs with financing</td>
<td>GHS 0.66</td>
<td>GHS 0.79</td>
<td>GHS 0.58</td>
<td>GHS 0.61</td>
</tr>
<tr>
<td>National prices 2009 (M o Agric)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of ingredients</td>
<td>GHS 0.54</td>
<td>GHS 0.60</td>
<td>GHS 0.41</td>
<td>GHS 0.42</td>
</tr>
<tr>
<td>Cost of ingredients/total operating cts</td>
<td>92.99%</td>
<td>93.66%</td>
<td>91.02%</td>
<td>91.08%</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>GHS 0.58</td>
<td>GHS 0.64</td>
<td>GHS 0.46</td>
<td>GHS 0.46</td>
</tr>
<tr>
<td>Total costs with financing</td>
<td>GHS 0.62</td>
<td>GHS 0.68</td>
<td>GHS 0.49</td>
<td>GHS 0.49</td>
</tr>
</tbody>
</table>
It is important to highlight that these three possible explanations are just hypotheses that should be studied in depth in the future. The fact that not one of them can be immediately discarded shows the following gaps in the current system:

1. There is no control of the price effects on the cost per meal due to the regional adaptations.
2. The control of the quantity served is more subjective than quantitative. There is currently no periodic supervision that compares the contracted amounts per meal and the amounts delivered by the caterer.

5.5. Indirect Costs
These costs, while seemingly unimportant, could possibly be one of the most critical elements to the success of a SFP. In our characterization, we divided these costs into three buckets:

- Support Infrastructure
- Monitoring and Evaluation
- Audit Function
While the first is fairly straightforward to implement in terms of setting up national and regional coordinating councils, the second and third elements of indirect costs relate to players and roles that, in essence, could make or break the programme. It is these two costs that we will focus on, from the perspective of a value-chain of information (table 7).

The role of monitoring and evaluation and external and internal audits are for reporting and compliance – the programme needs to ensure that all players within the value chain are carrying out their roles correctly. For example, for the caterers there needs to be regular monitoring to ensure that the food quantity and quality is maintained. The caterers themselves need to be trained to properly keep purchase and consumption records, which need to be audited by both internal government resources and external independent resources. In characterizing the costs
that would be associated with these activities, we find literature that suggests 7% of the feeding costs should be considered while budgeting for a school feeding programme.

Table 7: Actual v. Recommended Costs

<table>
<thead>
<tr>
<th>Costs</th>
<th>Actual 2011</th>
<th>%age</th>
<th>WFP literature</th>
<th>%age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Cost</td>
<td>GHC 1,847,651.00</td>
<td>2%</td>
<td>GHC 1,847,651.00</td>
<td>2%</td>
</tr>
<tr>
<td>Feeding Costs</td>
<td>GHC 81,120,000.00</td>
<td>96%</td>
<td>GHC 81,120,000.00</td>
<td>90%</td>
</tr>
<tr>
<td>Investment (mostly national)</td>
<td>GHC 1,219,710.00</td>
<td>1%</td>
<td>GHC 1,219,710.00</td>
<td>1%</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>GHC 94,800.00</td>
<td>0%</td>
<td>GHC 5,678,400.00</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>GHC 84,282,161.00</strong></td>
<td>100%</td>
<td><strong>GHC 89,865,761.00</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

In table 7, we have estimated ‘ideal’ expenses based on literature\(^{12}\) for monitoring, evaluation and administrative costs. The sustainable model will discuss a solution that will accommodate part of this increased budget (GHC1,022,400), and be used to increase monitoring and ensuring that both quality and quantity is maintained throughout the programme. From our field research, we find that there is potential for better system implementation, and will present a few recommendations as part of the sustainable model.

5.6. Farmer Level Interventions and Costs

In the process of setting up a school feeding programme, it is important to first evaluate the main objectives of the programme. In the case of Ghana, the three immediate objectives are to:

- Reduce hunger and malnutrition
- Increase school enrollment and retention
- Boost domestic food production

While what we have discussed so far addresses the first two objectives, there are certain other considerations that need to be made in order to achieve the third objective. In certain countries, there is existing infrastructure that can be used to provide the linkage between farmers and the school feeding programme. For example, India’s Food Corporation existed and was functioning years before nationwide mid-day meals were introduced. However, in most other countries, such

\(^{12}\) New Benchmarks for Costs and Cost-efficiency for Food Provision in Schools in Food Insecure Areas, Aulo Gelli, Andrea Cavallero, Licia Minervini, Mariana Mirabile, Luca Molinas and Marc Regnault de la Mothe.
infrastructure may not exist. This aspect may not necessarily be under the purview of the SFP, but is still an extremely important pre-condition to the success of the SFP achieving its targets. The advantages of school feeding programmes to the agricultural community are commonly understood by the diagram in figure 14. The theory is by creating a fixed, constant demand that farmers can depend on, agricultural output is pushed to a level above sustenance farming, leading to a spiraling virtuous cycle.

*Figure 14: The Food Cycle and the Missing Piece*

From our field research and literature review, however, we feel that in setting up HGSF, the programme needs to assume that this supply chain is broken, and therefore, will require investment to set up the linkage between farmers and SFP. This can be achieved in several different ways, based on the existing systems that are already working in Ghana, and internationally; the sustainable model will discuss in detail what we feel is a viable working option and make use of the good programmes that are existing within the Ghana ecosystem (Buffer stock company, Block farming – Project Savannah).
6. The Costing Tool and Data

For collecting quantitative data, our group divided into four groups for field research. Each group was sent to two to three regions (Greater Accra, Volta, Ashanti, Brong Ahafo, Central, Western, Northern, Upper West), covering over 20 districts. From interviews with local farmers, caterers, market women, and traders, it was possible to gather information about products (price, volumes, destinations, etc.) and business behavior, especially the relation between caterers and farmers.

An example of the date collected is shown below in table 8.

Table 8: Example of Interview Guide (Farmers)

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of crops</th>
<th>Harvest Months</th>
<th>Amount sold (annual)</th>
<th>Unit</th>
<th>Sold to?</th>
<th>Price Unit</th>
<th>Who Pays for Transport?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maize</td>
<td>Feb-Jun</td>
<td>625 kg</td>
<td>Market Queen/other farms</td>
<td>2 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Soybean</td>
<td>Mar-Mai/Aug-Dez</td>
<td>450 kg</td>
<td>Market Queen/other farms</td>
<td>2 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Yam</td>
<td>Sep</td>
<td>160 kg</td>
<td>Market Queen/other farms</td>
<td>1 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pepper</td>
<td>Feb-Mai</td>
<td>1 Bucket</td>
<td>Market Queen/other farms</td>
<td>3 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tomato</td>
<td>NA</td>
<td>- kg</td>
<td>GSFP / community</td>
<td>1 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Okro</td>
<td>NA</td>
<td>- kg</td>
<td>GSFP / community</td>
<td>1 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Cassava</td>
<td>Takes 18 months</td>
<td>30000 kg</td>
<td>Traders (Accra)</td>
<td>0 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Palm oil</td>
<td>Jan-April</td>
<td>4 barrel</td>
<td>Traders (Accra)</td>
<td>2 $/l</td>
<td>Buyer</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Cocoa</td>
<td>NA</td>
<td>- kg</td>
<td>Export</td>
<td>3 $/kg</td>
<td>Buyer</td>
<td></td>
</tr>
</tbody>
</table>

Although a large number of data was collected, our team faced a major challenge during the process – Ghanaians, in general practice, do not follow a unified measurement system. The problem is aggravated in poor communities far from the capital. The interviewees, both farmers and caterers, found it very hard to convert their crops and purchases to standardized measures (such as GH¢/kilo or GH¢/liter). Even the local measures are not the same among the regions and cannot be converted to the same basis for comparison. Some of the most common measures we found were buckets, olonka (bowls), baskets, tin can, cartons, crates, trucks, acres, or simply units of the products (such as tubers of yam).
In some cases, we were able to estimate the weights and prices in comparable measures as shown in table 9 above. From 693 entries originating from the fieldwork, 338 contained more reliable data and were compiled in a database (see table 10 below). An analysis of these numbers gave us some insight about market behavior (relation between caterers and farmers) and could be used to feed part of the first draft of the school feeding costing tool. **A disclaimer about the data: these numbers were not collected through a scientific method and should not be used for any decision making.**

### Table 9: Commodities: Olonkas to Kilograms

<table>
<thead>
<tr>
<th>Commodity</th>
<th>kg/olonka (flat to cup)</th>
<th>kg/olonka (heaped up)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cowpea</td>
<td>2.2291</td>
<td>2.5094</td>
</tr>
<tr>
<td>Gari</td>
<td>1.7174</td>
<td>1.9782</td>
</tr>
<tr>
<td>Groundnut</td>
<td>1.9803</td>
<td>2.2426</td>
</tr>
<tr>
<td>Maize</td>
<td>2.3043</td>
<td>2.5344</td>
</tr>
<tr>
<td>Millet</td>
<td>2.355</td>
<td>2.6504</td>
</tr>
<tr>
<td>Onion</td>
<td>1.6037</td>
<td>3.1123</td>
</tr>
<tr>
<td>Pepper</td>
<td>0.6193</td>
<td>0.8642</td>
</tr>
<tr>
<td>Sorghum</td>
<td>2.3666</td>
<td>2.6878</td>
</tr>
<tr>
<td>Soybean</td>
<td>2.2377</td>
<td>2.5039</td>
</tr>
<tr>
<td>Tom Brown</td>
<td>1.4406</td>
<td>1.708</td>
</tr>
</tbody>
</table>

The costing tool was designed to be a conceptual model. The model can only be run with precision by using official information from the Ministry of Agriculture. Data provided should be in a standardized measure that allows the linkage between model (concept) and market (reality). Menus should also follow the same measures, so the average cost per meal can be estimated from the point of view of the caterers.
7. A Sustainable Model to Link Farmers and Caterers

Farmers are supposed to be a core part of the GSFP; however their participation in the program is still limited. The design of the GSFP successfully addresses the creation of demand and its proper serving, but neglects the creation of supply by farmers and their linkage to the program. There are no established procurement models or procedures for caterers that facilitate the purchase from farmers. GSFP provides only a guideline for food procurement, which is “80% of foods must be procured from locally-grown (Home-Grown) commodities produced by local farmers.” However the program does not address the challenges that caterers and farmers face in effectively linking.

In this section, the challenges faced by farmers and caterers are presented and analyzed through value chain frameworks, and the participation of stakeholders (DICs, SICs, and others) in the program is evaluated. This discussion serves as input to the design of a new model to link farmers to caterers in the program in the next section.

7.1. Overall Challenges in Linking Farmers and Caterers

The mismatch of incentives of farmers and caterers prevents their integration in the program value chain. Added to that, the lack of farmers’ organization prevents caterers from reaching them effectively.

- Mismatch of cash flow: Farmers need to sell their crops as soon as they harvest due to lack of storage facilities and for the immediate cash, and caterers do not have the cash in hand to buy and store their produce. This mismatch of cash flow makes it difficult for caterers to trade with farmers.

- Lack of trust between farmers and caterers: Farmers are not willing to sell foodstuff to caterers on credit. Inconsistent disbursement of funds from the government worsens their perception about the possibilities of payment.

- Difficulty of caterers in accessing farmers: Practically, purchasing food grown locally by smallholder farmers would require caterers to travel from farm to farm to find and negotiate commodities available for sale. Neither time nor resources are adequate for such purchasing methods for caterers.
7.1.1. Farmers

Farmers face huge challenges in Ghana’s environment, mainly due to 1) lack of financial resources to obtain inputs and equipment and to obtain storage capacity and 2) lack of capacity (knowledge, skills) to efficiently produce, store, and sell foodstuff. These are the high level issues that indirectly prevent them from negotiating with caterers. In order to better understand these issues and their consequences, a framework for the farmers’ value chain was defined, encompassing five main steps: 1) Obtain inputs; 2) Plant and Maintain; 3) Harvest; 4) Store; 5) Sell (see figure 15 below).

Figure 15: Value Chain - Farmers

The main challenges in linking farmers with caterers in GSFP relate to the “Store” and “Sell” activities of the value chain. The inherent seasonality of production added to the need for cash (to pay debt, and prepare for the next planting) and lack of storage facilities give farmers no option but to sell all their production at the time of harvest for low prices. There is also a lack of trust from farmers in selling and giving away all foodstuffs for caterers and relying on future payments. Therefore, some of the farmers we interviewed sell at most 20% of production to
caterers, and the rest to the market. Also, the challenges faced by farmers to produce foodstuff often prevent them from providing the local supply required by the GSFP. This is especially true in the northern regions where land is plentiful, but the low crop yields result in inadequate output.

There is no national program with reach into all the regions to address the financing issues of farmers. Farming involves significant cash commitments (especially for inputs and equipment), and for a long period of time (up to nine months for the major season). In a few districts, initiatives that try to address this problem were identified: some provide inputs to farmers; some used the quarterly fund to buy equipment (tractors, plows, etc.) and lend them to farmers; some places have programs to provide farmers with equipment for free. Nonetheless, all these initiatives still have very limited reach, and are not present in the most needy areas, such as the Northern region.

The lack of capacity to produce, in terms of knowledge and skills, is also critical in Ghana. We can observe this even in regional terms, with southern regions having yields up to ten times higher than the northern regions. Many farmers do not know how to handle the chemicals and fertilizers and do not know the best techniques in growing crops. A few initiatives were observed addressing this issue, but again, none at a National level.

In order to create scale that facilitates several of their activities, from sharing equipment to negotiating sales, farmers have been organizing into farmer-based organizations (FBOs). In a single district, there may be over 30 FBOs with an average 50 farmers per FBO. These organizations are clustered by proximity, and the District Agricultural desk is responsible for overseeing the farmers. This kind of organization can help solve many of the challenges discussed here, such as creating creditworthiness, sharing equipment costs and store facilities, sharing knowledge for plantation and storage, and increasing negotiation power for selling crops.

7.1.2. Caterers
The GSFP adopts a decentralized procurement system, in which school caterers are hired by the DIC and tasked with procuring, storing, cooking, and delivering food to the schools. The quality of food prepared by caterers is then monitored and evaluated by the SIC. Procurement decisions depend on the costs and on the cash available, and for transportation caterers may use their own
trucks or taxis. The way and the extent to which caterers store food vary from district to district, but most have access to storage facilities (small household storage, school storage, or private storage). They cook and prepare food for students either in their homes or at school facilities. Cash transfers are made from the District Assemblies to caterers under the supervision of the DIC, based on GH¢0.40 per child per day. The caterers’ profit is derived from savings made after food has been procured, prepared, and distributed.

In order to better understand the caterer’s challenges, a framework based on the caterer’s value chain was defined, encompassing 4 main steps: 1) Procure food, 2) Store, 3) Cook, and 4) Feed for school (see figure 16 below).

**Figure 16: Value Chain - Caterers**

The main challenges that caterers have are food price volatility and the inability to mitigate it due to GSFP late payment cycles. Comparing the harvest and lean seasons, prices can go up as much as 400%. As payments are received after the meals are served, most of the caterers do not have the resources to buy in bulk and guarantee a better and stable price, protecting them from fluctuations. In some cases caterers are forced to buy on credit from the markets, as they do not
have the financial resources to pay in advance, and thus are under worse negotiating conditions. The inconsistency of payments, claimed by caterers and farmers in several districts also impact their cash position, and can weaken their negotiation position.

To overcome price issues and to make ends meet, some caterers may reduce the amount of food served, or change menus. A few caterers mentioned that they were allowed to change the food menu by speaking to the District Assemblies, thus the menu can be adjusted according to food availability. For example, they can use garri when the supply of yam is insufficient. When fresh vegetables such as tomatoes are expensive in the lean season, they tend to use canned tomato paste instead. Caterers also pointed that payments often do not reflect the exact number of pupils since enrollment often increases during the school term, which could possibly lead to either less food served per child or higher costs faced by the caterers.

The procurement of food from local farmers could help caterers overcome the volatility issue. In all the regions we visited, we found that the caterers are willing to procure their food from local farmers. By buying from farmers, caterers could benefit from prices 40-50% lower than the market, and would be able to reduce price fluctuations. Nonetheless, the reality is that almost all the food is still bought from markets.

The lack of financial resources to buy in bulk is the main factor for keeping caterers away from buying their crops from farmers. As we already discussed, farmers need to sell their crop as soon as they harvest for immediate cash and due to the lack of storage facilities, and caterers do not have the cash in hand to buy and store their production. Agreement on a different payment scheme is difficult to obtain as well. Cash transfers from DICs to caterers are reportedly inconsistent (according to interviews, delays in payments can go up to 12 weeks), and farmers cannot bear the risk of a longer financing period.

The inconvenience of procuring from many small farmers also hinders the caterers’ local procurement. It is a challenge to efficiently reach a number of small farmers and negotiate with them—in practice, purchasing food grown locally by smallholder farmers would require caterers to travel farm to farm. Neither time nor resources are adequate for such purchasing methods for caterers. On top of this, many caterers do not have contact information for the local farmers.
7.1.3. Other Stakeholders (DICs, SICs)

With regard to DICs and SICs, the main challenges preventing a sustainable linkage between local farmers and the GSFP are connecting caterers and farmers, building trust among them, and ensuring community and farmer awareness and ownership. As the committee overseeing the implementation and management of all components of the GSFP, the DIC has a vital role to play in linking the small farmer to the caterer, but currently few concrete actions for that purpose were observed in the field.

The organization of small farmers into larger groups is critical to ensure that they play their role in the value chain effectively, and the District Director of Agriculture is key for that purpose, as he or she is the first contact for the farmers at the district level. Programmes for organizing farmers already exist: Farmer-based organizations (FBOs) exist in most of the districts, and the government’s intervention with the block farming concept under the Youth in Agriculture policy is to further enhance the organization of farmers. We therefore see the District Director of Agriculture as a critical facilitator in linking agriculture to the school feeding programme.

The local assembly involvement also must not be underrated, since it is the structure capable of bringing trust to negotiations between farmers and caterers. Should an agreement be reached, there is no better witness than the assembly itself, since the assembly represents the government at the district level. To buttress this point further, the assembly is also the paying agent at the local level, and would be able to assure both parties in the agreement of receiving whatever is due them, especially the farmers who may have to part with their products and wait to be paid at a later date.

Within the DIC, there exists the challenge of the workload of the members constituting the committee. The District Directors of Agriculture, Health, and many other members of the DIC are all full-time employees of the district assembly and involved in several work schedules. This may hamper the effectiveness of the DIC, especially the Director of Agriculture in the organization of farmers to effectively participate in the GSFP. It was clear during our field visits that when other Desk Officers from Agriculture, Health, etc. were co-opted to be members of the committee, there was much more initiative from them in linking farmers to caterers.
Members of the SIC are also similarly constituted to ensure community ownership, but in some schools much is left to be desired of them. It is very important to equip members of the SIC with the requisite knowledge of the programme and the skills needed to effectively carry out their duties. For instance, educating members, especially farmers, about the programme and its numerous benefits to the society as a whole will make the community embrace the programme as their own. It was interesting to learn from an SIC that members of the community came together to contribute to help a caterer cook to feed the children when the moneys expected from the government was delayed. Indeed this is a good sign of community ownership. Unfortunately, the situation is much different in most of the districts visited.

The absence of well-documented criteria on the quality and quantity of food to be served to children is also a big threat to the sustainability of the programme. Most SICs from the schools we visited have dedicated members who check on the food served to the pupils on a daily basis, however it remains unclear how the quality of the food is ascertained and how much is the standard quantity that must be given to the children.

Both DICs and SICs are faced with the challenge of budgetary and logistical constraints that indirectly post some threat to the sustainability of the programme. It was interesting to note that these committees do not run on any budget from the National Secretariat, and the lack of funds sometimes hampers their effectiveness especially in the area of monitoring, since monitoring entails regular visit to the schools. Aside from all the challenges faced by these committees in linking farmers to caterers for a sustainable SFP, both DICs and SICs remain an integral part of any successful model due to the numerous services they provide for the programme. However, much more remains to be done to equip them to play a more effective role in the supply chain of the GSFP.

7.2. Design of a Sustainable Model to Link Farmers and Caterers
The sustainable model to link farmers and caterers presented in this section is based on our fieldwork interviewing stakeholders including NGOs, DICs, SICs, caterers, farmers, and especially the work by ECASARD in Ga West, Dangme West, and Ga East. This model includes changes in design and implementation at the national and local levels, and requires new roles and
attributions for several stakeholders. These changes are critical to support the linkage between the farmers and the caterers, and strengthen community participation—a critical factor found in successful school feeding beneficiaries in the GSFP and MVP.

7.2.1. The Pillars for a New Model

In the design of a new model, some pillars were identified as critical guidelines that should be followed for maximum effectiveness:

- **Organizing farmers**: It is unlikely that unorganized farmers will be able to participate in GSFP, due to their lack of resources to access buying markets, and the challenges that buyers face to access unconsolidated sellers. Therefore, creating strong farmer organizations is critical. As observed, the District Ministry of Agriculture is in a unique position to play the facilitator.

- **Creating a structure to bring farmers and caterers to a discussion**: The creation of a known structure, such as a roundtable meeting to be held every month, can help farmers and caterers to meet and share ideas.

- **Building trust between caterers and farmers**: The lack of trust can be addressed by having some reliable and recognized organization overseeing the process. The district assembly would be suited for this purpose, as both farmers and caterers respect and rely on it.

- **Defining ground rules for negotiation and disputes resolution**: Farmers and caterers should both be able to benefit from the scheme, and the definition of some ground rules can help them settle agreements, as both would be able to anchor their claims and not request unrealistic negotiation conditions.

7.2.2. The Description of the Model: The GSFP Roundtable

The proposed model is based on the creation of a district roundtable, a meeting scheduled to happen monthly (or as needed), starting before the school year and lasting throughout, to be attended by farmers’ representatives, caterers’ representatives, a district assembly representative, a district Ministry of Agriculture representative, and a community representative (with other participants as necessary) to negotiate on foodstuff exchanges. Farmers would come up with the amount produced, caterers with the amount demanded, and prices and deliveries would be negotiated. Figure 17 below describes the framework.
The roundtables, which would begin at least six months prior to the start of the school year, should culminate with the signing of a Master Contract between farmers and caterers that would include the following information:

- **Quantity of foodstuff deliveries**
- **Timing of deliveries and the pricing with any future price revisions explicitly stated** (e.g., prices will be reviewed every term)
- **Transportation and storage costs**
- **Payment timing** (e.g., within one week of government money transfers to the caterers)
- **Penalties for non-deliveries or non-payments**
- **Quality level of foodstuff deliveries**

To reach such an agreement, the farmers and caterers should come prepared to the discussion.
Farmers and Ministry of Agriculture

- A representative should be chosen to negotiate on behalf of the group.
- The quantities to be supplied by all participating farmers in the district for the school year should be consolidated by the Ministry of Agriculture and presented to the caterers with details on the quantity per school term.

Caterers

- A representative should be chosen to negotiate on behalf of the group.
- The quantities to be demanded from farmers in the school year should be consolidated by the group based on the number of children to be fed, and include details on ingredients desired per school term.

District Assembly

A member of the District Assembly should act as a mediator to the negotiation, preventing impasses, providing inputs to draw the discussion to an agreement.

7.2.3. Implementation

The adoption of this new model can only be effective if the right environment is in place. Here we present the critical needs for implementation of the model.

- **Communication about the model and its benefits to key stakeholders**: A communication program should be rolled out to create awareness for the new model, targeting farmers and caterers. The modus operandi and roles of all involved should be addressed, but the benefits of the program to farmers and to caterers should be emphasized. Communication should also be made with processors, financial institutions, and input dealers, so they can have active participation in the value chain.

- **Enforcing adoption of the new model by caterers**: For caterers, the requirement of participation in the roundtables should be included in the GSFP manual. Caterers would have to come to the roundtable to negotiate with farmers before being allowed to buy from the markets. Punitive measures could also be defined for caterers who do not show up.

- **Obtaining support from stakeholders responsible for critical roles in the model**: The participation of the District Assembly and Ministry of Agriculture is critical to make the model work. Therefore, special attention should be paid to obtaining the buy-in from these bodies and engaging them in working with their local structures to make the roundtable a success.
• **Providing the requirements identified**: Other requirements to the model should be addressed before the model is rolled out, in order to show the government’s commitment and to avoid problems with implementation.
  
  o Quantities of ingredients should be provided in the menus, so that caterers can better calculate their needs.
  
  o Government and DICs should provide notice when funds are disbursed (e.g., via SMS), so farmers can track the timeliness of payments.
  
  o The government should have a calendar to disburse funds (e.g., on a fixed date of each month of school).

7.2.4. **Key Performance Indicator**

In order to monitor the success of the model, we suggest that the key performance indicator be the percentage of food (of the total feeding cost) bought by the caterers from the farmers, evaluated on a yearly basis in parallel with the roundtable negotiation process. The current target of 80% of school feeding sourced from local farmers could remain the goal, and a district’s success would be evaluated on their progress towards that goal.
8. Design & Implementation Changes to Support a Sustainable Model

Based on our fieldwork interviewing stakeholders including NGOs, DICs, SICs, caterers, and farmers\(^{13}\) and our review of existing literature, the sustainable model for linking local agricultural production to the GSFP includes changes in design and implementation at the national and local levels. These changes serve to strengthen communication and community participation, improve record keeping for data analysis, support the linkage between the farmers and caterers, and improve the payment system. The changes also necessitate the addition of a key GSFP staff member—the District Coordinator—who will add much needed capacity for effectively implementing the GSFP across all beneficiary schools.

8.1. Strengthening Communication and Participation

School Implementing Committee

It is important that the members of the SIC have a sense of ownership over the implementation of school feeding as they represent the beneficiaries of the programme. Based on fieldwork, it is clear that the not all members of the community are aware of the procurement and agricultural development goals of the GSFP or the need for community participation, and we posit that if the community is more engaged, then the overall goals of the GSFP will more likely be achieved.\(^{14}\)

While community ownership is emphasized in the GSFP Operation Manual (2008), the program design does not create ownership because decision-making happens at the NS and DA levels. To foster community involvement, several changes to the roles and responsibilities of the SIC are recommended. The District Assembly has one critical responsibility stated in the District Operations Manual (2009) that can be ceded to the SIC:

- Interview and appoint Caterers and ensure that appointed caterers/matrons are:
  - Capable of cooking food on large-scale basis under hygienic conditions.
  - Able to demonstrate basic understanding of the nutritional needs of children.

If the SIC appoints the caterer, then it is more likely that the caterer will come from the school’s community and know the farmers in the area, and thus be more incentivized to perform well at his/her task, source more food locally, and drum up support for the supply of kitchen inputs and structures.

\(^{13}\) See Appendix D for summary of data collected.
We recommend the following SIC responsibilities be expanded upon:

- Facilitate community involvement, mobilization and support for the implementation of the programme, *and especially for the construction of a simple all weather kitchen, store, canteen with seats and table as required by the school.*
- Liaise with the DIC in collaboration with District Nutrition Officer to develop a locally and seasonally driven menu to provide nutritionally adequate meals, *taking into account the production of farmers in the community.*
- Collaborate with CSOs to sensitize communities to take ownership of the programme, *and conduct termly community meetings.*

We recommend the following SIC responsibilities be added:

- Organize and conduct monthly meetings of the SIC to ensure the smooth operation of the feeding programme.
- Act as liaisons between the community and the DIC.
- Select roster for cooks to be hired by caterer, and enforce the minimum wage law for the cooks (currently 55 GHS/month).
- Review the caterer’s purchasing records on a monthly basis.

These changes support increased community involvement and facilitate open communication between the community stakeholders. For the menu chart, the school’s stakeholders are in the best position to determine what local agriculture and in what amounts can be incorporated into the programme, and it will be dependent on the District Nutritionist to adjust the submitted menus to comply with nutrition requirements.

Communication of responsibilities can be further improved beyond the basic list. Using the example of construction works, in the Operations Manual, the procurement level assigned to the kitchen, store, etc. is the DIC (see figure 18), while the SIC roles and responsibilities table includes kitchen facilities with the responsible party listed as “DIC and Community”. (See table 11.) The lack of specificity—is it the DIC or the SIC?—leads to inaction by all parties. In this case, the procurement level and responsibility should be set to the SIC if it is desired that the community provide these inputs for the GSFP. Tables of responsibilities divided not only by
committee but by specific members within a committee will help with having the correct parties involved in particular tasks and provide accountability.\textsuperscript{15}

**Figure 18: GSFP Operations Manual, Procurement Levels**

### 8.6.1 Procurement Levels

- **Ministry of Local Government Rural Development and Environment**
  - Works

- **Ghana School Feeding Programme Secretariat (GSFP)**
  - Goods: Vehicles, furniture, stationary, supplies
  - Services: Consultants, Experts
  - Works: Maintenance/repairs, expansion etc.

- **District Implementation Committees (DICs)**
  - Works: Kitchen/pantry, store, water facilities
  - Goods: utensils, equipment

- **School Implementation Committees (SICs)**
  - Services: Cleaners, cooks, helpers
  - Goods: Foodstuffs, fuel, detergents

**Table 11: GSFP Operations Manual, SIC Roles and Responsibilities**

<table>
<thead>
<tr>
<th>Management Task</th>
<th>Responsible/ Accountable</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bank Account opening for the transfer of funds from the District to the school for the purpose of school feeding.</td>
<td>SIC Chairman (signatures to be specified: suggested as chairman and two others) (Chairman as defined in Section 8.3)</td>
<td>Upon confirmation that the school has been added to the programme and before the MMCA start disbursement of funds to the school.</td>
</tr>
<tr>
<td>2. Construction of Kitchen and Kitchen setup</td>
<td>DIC and Community</td>
<td>Before or upon confirmation that the school has been added to the programme.</td>
</tr>
<tr>
<td>3. Provision of kitchen facilities, utensils and equipment</td>
<td>DIC and Community</td>
<td>Upon confirmation that the school has been added to the programme.</td>
</tr>
<tr>
<td>4. Provision of eating or feeding place/environment</td>
<td>DIC and Community</td>
<td>Upon confirmation that the school has been added to the programme.</td>
</tr>
<tr>
<td>5. Provision of feeding and eating facilities</td>
<td>DIC and Community</td>
<td>Upon confirmation that the school has been added to the programme.</td>
</tr>
<tr>
<td>6. Food purchases; source, quality and quantity</td>
<td>SIC Purchasing Committee</td>
<td>Weekly monitoring of food purchases &amp; daily monitoring of food quality and quantity.</td>
</tr>
<tr>
<td>7. Health of kitchen staff</td>
<td>SIC Coordinator (a member, possibly Headteacher)</td>
<td>Weekly health check up of kitchen staff and periodic monitoring during the term.</td>
</tr>
<tr>
<td>8. Adherence to feeding menu</td>
<td>SIC Coordinator (a member, possibly Headteacher)</td>
<td>Weekly monitoring of the food cooked and consistency with the menu.</td>
</tr>
<tr>
<td>9. Hand washing facilities</td>
<td>SIC Purchasing Committee</td>
<td>Upon confirmation that the school has been added to the programme.</td>
</tr>
<tr>
<td>10. Feeding consistency</td>
<td>SIC Coordinator (a member, possibly Headteacher)</td>
<td>Weekly monitoring.</td>
</tr>
<tr>
<td>11. General record keeping</td>
<td>SIC Chairman</td>
<td>Weekly.</td>
</tr>
</tbody>
</table>

Annual District Plans (ADPs) for GSFP are currently only for direct feeding costs,\textsuperscript{16} and the costs of construction for school feeding needs should be considered at the national level. From our fieldwork, we found that many schools had some sort of rooftop for the kitchen, and all but

\textsuperscript{15} See Appendix A for example table.
one school lacked a canteen, which causes the feeding to disrupt the classroom and affect teaching. This was a common complaint from the SICs. If the National Secretariat could provide a portion of the material costs for the canteen on condition of matching by the community, then it may spur the community to action. Organizing the community for the remaining costs and for labor would rest with the SIC. The estimated cost of materials for an open-walled canteen with tables and chairs is approximately 3000 GHC.\(^7\)

Also, it is important that the SIC expand in number to reflect the increase in responsibility and engage more members of the community. We recommend the following SIC composition: \(^8\)

- The PTA Representative of the beneficiary school (Chairperson)
- Headteacher of the school (Secretary)
- One Representative of the School Management Committee
- One Traditional Ruler from the community
- An Assembly Member
- The Boy and Girl Prefects of the school
- Village Agricultural Representative
- Village Health Representative
- Village Education Representative
- Women’s Group Representative
- Opinion leader (x2) from the PTA
- GSFP District Coordinator

**District Implementing Committee**

In some districts, a functional DIC does not exist, or the DIC meeting is scheduled as needed. In order to establish the DIC as a contributing part of the GSFP, it is important that regular meetings be set so that the major stakeholders are kept abreast of the GSFP progress in the district in relation to the schools, students, farmers, and caterers, and that the individual members

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\(^7\) Kitchen Improvement Programme for the Ghana School Feeding Programme - Pilot Project for Twelve Schools in Northern and Upper East Regions – NewEnergy, January 2010

of the DIC are fulfilling their respective responsibilities.\textsuperscript{19} The following responsibility should be added to the DIC list:

- Organize and conduct monthly meetings of the DIC to ensure the smooth operation of the feeding programme.

8.2. \textbf{Improving Record Keeping for Data Analysis}

A few provisions at the national level have the potential to improve data collection throughout the programme. The following additions to the roles and responsibilities of the National Secretariat are recommended:

- Provide specific measurements for the ingredients used in the school menus so that the menus are meeting nutritional requirements.
- Provide a template for the record keeping of caterers’ purchases for the programme.

The benefits in providing specific measurements for the ingredients used in the menus are three-fold: it allows the caterer to plan purchases more accurately, it allows the monitoring and evaluation to be held to an objective nutritional standard versus being qualitatively assessed,\textsuperscript{20} and it allows the programme to more accurately determine the direct feeding costs for the children. While measurements are provided in the menu templates found in Appendix 1 of the GSFP Operations Manual (2008), these menus do not accurately reflect the lunches being provided to the students. The ingredients and nutritional content should be updated completely and the menus made more readily usable by the caterers.

Providing a record-keeping template for the caterers also allows them to plan purchases more accurately, gives the SICs a way to track utilization of the funds, and serves to provide robust data points for the programme to evaluate costs against number of children fed.\textsuperscript{21} Training in measuring and record keeping will be required for the caterer at the district level. An example of a purchasing record can be found in Appendix B.

\textsuperscript{19} Linking Domestic Food Production to the GSFP: A Pilot Study of Selected GSFP Schools in the Savelugu-Nanton, Garu-Tempane and Sissala West Districts


The need for specific measurements in the menu cascades down to the district level, and the following responsibility for the DIC, and specifically the District Nutrition Officer, is recommended for addition to the District Operations Manual:

- Create school menus (for every term if seasonality is a factor) that specify the weight of each ingredient, meet nutritional requirements, and include feedback from the SIC on local agricultural production.

8.3. **Supporting the Linkage between Farmers and Caterers**

The proposed model for linking the local farmers to the GSFP requires provisions at the District Assembly level so that the structure is in place for MoU negotiations and the farmers are able to produce the necessary crops. The following additional responsibilities are recommended for the DA:

- Organize a Caterers Association for the district to facilitate negotiations with FBOs.
- The District Director for MoFA is responsible for the following:
  - Strengthen existing FBOs, and where there are no FBOs, organize farmers.
  - Educate farmers with farming techniques, on negotiating with the Caterers Association, obtaining financing, and creating storage for their crops.
  - Provide farming inputs and credit access for the farmers.\(^\text{22}\)
- Payment to Caterers and Farmers should be strictly by cheque.

The addition of farmers to the payment responsibilities is to strengthen the linkage between farmers and caterers—providing farmers with quicker payment by removing the intermediary step of the caterer paying the farmer and giving the farmers more reason to trust the MoU. We emphasize that the ability of the District Director for MoFA to perform his or her duties is of paramount importance to the success of linking the local farmers to GSFP. Their responsibilities to the farmers cannot be overstated.

\(^\text{22}\) These are indicators already found in the GSFP Operating Manual (2008), but are not called out specifically in the District Operation Manual.
8.4. Improving the Payment System

Payment frequency was the most frequently stated complaint from our fieldwork. This is a known and well-documented issue that is beyond the control of the GSFP National Secretariat, but it should be emphasized that stable, predictable funding for the programme would lower costs for the caterers and farmers, and alleviate friction between the two parties.

A lever that is accessible to the NS is how often the enrollment is updated for determining the amount paid to the District Assemblies. Currently, the enrollment figures are updated annually in February, but with some enrollment percentage increases in the double digits at beneficiary schools, it is critical to the quality and quantity of the food that enrollment be updated more frequently. This affects the financial planning at the national level, and it is recommended that an expected average enrollment growth percentage (based on schools in past years) be added to the total feeding budget to cover the additional students. An addition to the NS and DA responsibilities could be the following:

- Update the enrollment of beneficiary schools at the end of every term (3x per year).

Another way to improve the payment system is for the DICs to analyze the entire process—from receipt of the funds to payment to the caterers—as a mandate from the NS. If payment speed via cheque to the caterers and farmers is found to be a significant portion of the process time, then mobile payments (such as MTN Ghana’s Mobile Money service) may serve to shorten the process and allow caterers and farmer to better utilize their income. A record-keeping system would have to be devised for the mobile money payments.

8.5. Addition of District Coordinator Role

To ensure that the DICs and SICs are functioning optimally, it is important that a dedicated GSFP staff member be allocated to each district. This staff member, or District Coordinator (DC), would facilitate the implementation of the programme, playing the role of resident expert for the district. The list of responsibilities include:

- Monitor the beneficiary schools
- Provide guidance to the SIC and DIC
- Liaise between the district and the Regional Coordinator
- Oversee the roundtable process between farmers and caterers
• Work with the MoFA on achieving small farmer goals
• Help the SICs prioritize needs for the school and farmers
• Review with the SIC and caterer monthly expenditures on food against enrollment figures
• Coordinate GSFP assignments done in collaboration with other Ministries and check for overlap

He or she would be a full member of the SIC and DIC. A common issue found throughout the regions was the lack of resources to perform the functions required for the GSFP, and the need for a DC is supported by previous research conducted in 2006. The DC would eliminate the need for Regional Monitors and a District Desk Officer, and the new composition of the DIC would be the following:

- The District Chief Executive (Chairperson)
- The District Director of Education
- The District Director of Health
- The District Director of Agriculture
- One Traditional Ruler from the District
- Two Representatives of the Social Services Sub-committee
- One Opinion Leader from the District
- District Coordinator (Secretary)

Figure 19: Organogram with District Coordinator

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### 8.6. Summary of New Roles & Responsibilities to Support a Sustainable Model

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility/Change</th>
<th>Opportunities</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIC</td>
<td>Interview and appoint Caterers</td>
<td>Greater community ownership • Caterer likely to know local farmers</td>
<td>May be difficult to avoid favoritism</td>
</tr>
<tr>
<td></td>
<td>Facilitate community involvement, mobilization and support… <em>especially for the construction of a simple all weather kitchen, store, canteen with seats and table</em></td>
<td>Greater community ownership • Greater ease to provide school feeding</td>
<td>Assuming that community has resources to provide</td>
</tr>
<tr>
<td></td>
<td>Liaise with the DIC…to develop a locally and seasonally driven menu to provide nutritionally adequate meals, <em>taking into account the production of farmers in the community</em></td>
<td>Greater community ownership • Greater linkage to local farmers</td>
<td>Local farmer production may not be diverse enough</td>
</tr>
<tr>
<td></td>
<td>Collaborate with CSOs to sensitize communities to take ownership of the programme, <em>and conduct termly community meetings</em></td>
<td>Greater community awareness</td>
<td>Community may not see benefit in attending meetings</td>
</tr>
<tr>
<td></td>
<td>Organize and conduct monthly meetings of the SIC to ensure the smooth operation of the feeding programme</td>
<td>Greater accountability and communication</td>
<td>Members may not see benefit in attending meetings</td>
</tr>
<tr>
<td></td>
<td>Act as liaisons between the community and the DIC</td>
<td>Greater community awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select roster for cooks to be hired by caterer, and enforce the minimum wage law for the cooks</td>
<td>Greater community ownership and support • Benefit the cooks</td>
<td>May be difficult to avoid favoritism</td>
</tr>
<tr>
<td></td>
<td>Review the caterer’s purchasing records on a monthly basis</td>
<td>Greater community ownership • Greater caterer accountability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change: increasing the membership of the SIC</td>
<td>Greater community participation</td>
<td>May make coordination difficult</td>
</tr>
<tr>
<td>DIC</td>
<td>Organize and conduct monthly meetings of the DIC to ensure the smooth operation of the feeding programme</td>
<td>Greater accountability and communication</td>
<td>Members may not see benefit in attending meetings</td>
</tr>
<tr>
<td></td>
<td>Create school menus (for every term if seasonality is a factor) that specify the weight of each ingredient, meet nutritional requirements, and include feedback from the SIC on local agricultural production</td>
<td>Greater accountability for caterers • Better data for NS • Greater linkage to local farmers</td>
<td>Measurements may be difficult to meet in implementation</td>
</tr>
<tr>
<td>DA</td>
<td>Organize a Caterers Association for the district to facilitate negotiations with FBOs</td>
<td>Greater linkage with local farmers • Sharing of knowledge</td>
<td>Achieving consensus on negotiations</td>
</tr>
<tr>
<td></td>
<td>The District Director for MoFA is responsible for the following:  • Strengthen existing FBOs, and where</td>
<td>Greater linkage with local farmers • Greater production</td>
<td>May be difficult to incentivize MoFA Director</td>
</tr>
</tbody>
</table>

The District Director for MoFA is responsible for the following:

- Strengthen existing FBOs, and where
<table>
<thead>
<tr>
<th>there are no FBOs, organize farmers. by local farmers</th>
<th>• Educate farmers with farming techniques, on negotiating with the Caterers Association, obtaining financing, and creating storage for their crops • Provide farming inputs and credit access for the farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update the enrollment of beneficiary schools at the end of every term More accurate payment for caterer Avoid sacrifice of quality/quantity of food</td>
<td></td>
</tr>
<tr>
<td>NS Provide specific measurements for the ingredients used in the school menus so that the menus are meeting nutritional requirements Greater accountability for caterers Better data for NS</td>
<td></td>
</tr>
<tr>
<td>NS Provide a template for the record keeping of caterers’ purchases for the programme Greater accountability for caterers Better data for NS</td>
<td></td>
</tr>
<tr>
<td>NS Update the enrollment of beneficiary schools at the end of every term More accurate payment for caterer Avoid sacrifice of quality/quantity of food</td>
<td></td>
</tr>
<tr>
<td>More paperwork</td>
<td></td>
</tr>
<tr>
<td>DC Monitor the beneficiary schools Greater monitoring capacity</td>
<td></td>
</tr>
<tr>
<td>DC Provide guidance to the SIC and DIC Better communication Serve as impetus</td>
<td></td>
</tr>
<tr>
<td>DC Liaise between the district and the RC Better communication</td>
<td></td>
</tr>
<tr>
<td>DC Oversee the roundtable process between farmers and caterers Greater linkage to local farmers Better communication</td>
<td></td>
</tr>
<tr>
<td>DC Work with the MoFA on achieving small farmer goals Serve as impetus</td>
<td></td>
</tr>
<tr>
<td>DC Help the SICs prioritize needs for the school and farmers More effective implementation</td>
<td></td>
</tr>
<tr>
<td>DC Review with the SIC and caterer monthly expenditures on food against enrollment figures Greater accountability Better data</td>
<td></td>
</tr>
<tr>
<td>DC Coordinate GSFP assignments done with other Ministries and check for overlap More effective use of resources</td>
<td></td>
</tr>
</tbody>
</table>
9. Monitoring and Evaluation

Currently the monitoring topics of menu implementation, expenditure, foodstuffs, food preparation, feeding, sanitation & hygiene, school level information are designed to be done at every level: NS, RC, MMDA, SIC.24 One main complaint by the DICs is that there is no budget to do the monitoring. If a district coordinator is hired, than he or she can coordinate the monitoring at the district and school level, and provide final reports to the RC.

In a report from 2007, the overall low assessment of GSFP monitoring can be attributed to one factor: capacity.25 Capacity is needed to perform the monitoring, to report and aggregate the results, to address issues, and to do all of these things in a timely manner. It is equally important that training be thoroughly executed with the addition of district coordinators. The GSFP has an appropriate monitoring framework in place; it is now a matter of execution. While this will be an increase in annual costs for the programme, it is a necessary cost that will ensure the effective implementation of the programme and its good governance.

9.1. Effects on the Budget

There are two proposed changes that would affect the GSFP budget: adding District Coordinators to the staff and providing half the materials for the construction of a canteen. Table 12 below summarizes the budget for 2011 as of April 19, 2011.

<table>
<thead>
<tr>
<th>GSFP Budget, April 19, 2011 (GHC)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>1,847,651 2.2%</td>
</tr>
<tr>
<td>Feeding</td>
<td>81,120,000 96.2%</td>
</tr>
<tr>
<td>Investment</td>
<td>1,219,710 1.4%</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>94,800 0.11%</td>
</tr>
<tr>
<td></td>
<td>84,282,161 100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GSFP Budget with Changes (GHC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
</tr>
<tr>
<td>Feeding</td>
</tr>
<tr>
<td>Investment (+Canteen)</td>
</tr>
<tr>
<td>Monitoring and Evaluation (+DCs)</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

With presence in all 170 districts and 28 Regional Monitors, 142 District Coordinators would need to be added at a cost of 7200 GHC per year, assuming that the current Regional Monitors would move into this new position. Since the District Coordinators would directly impact monitoring and evaluation capacity, this additional cost has been added to the M&E category. For the canteen materials, we estimate that the GSFP would provide 1500 GHC per school, with the assumption that 96.9% of the 1741 schools served by GSFP lack canteens. This percentage is based off what was seen in the field and represents an investment made by the GSFP.

With these two additional costs, the total costs for GSFP increases by 3.4%, but the impact to monitoring and evaluation increases by a factor of 5, and class time saved could be upwards of 30 min per student. As a benchmark, WFP’s feeding cost consists of 90% of the total budget, so at 93% for GSFP, there is possibly more room for other spending that will help with the overall effectiveness of the programme. While it is good to feed as many students as possible, it is important to consider the how well the programme is being implemented and monitored. If only DCs are added to the programme, the cost represents a 0.36% increase in the total budget.
10. Funding for GSFP

With significant financial and operational resources being committed to the Ghana School Feeding Program, it is critical to understand the funding requirements of the program and keep securing its funding resource. In this section, we discuss the GSFP funding requirements and funding sources based on the following literature:

- GSFP 2011 Annual Operating Plan
- Home Grown School Feeding Technical Assistance Plan – February 2011
- Financial & Monitoring Assessment of the Ghana School Feeding Program - June 2007

10.1. Current Funding Requirements

According to the GSFP 2011 Annual Operating Plan, the annual fund requirement is approximately GH¢69M as shown in the table below. We assume that this required amount is based on the GSFP’s targets of covering 2,710 schools and 1,040,000 pupils in 2011, which are also stated in the AOP. Assuming that the program continues to operate in its current form, it requires the same amount of funding every year from now on. (Note: In different sections, we use the most updated 2011 budget figure of GH¢84M, but here we use the following figures from 2011 AOP for discussion purposes.)

*Table 13: GSFP Budgetary Requirements in 2011*

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>SOURCE OF FUNDING</th>
<th>Ghana Cedis</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personnel Emolument</td>
<td></td>
<td>479,059.26</td>
<td>0.69%</td>
</tr>
<tr>
<td>2. Administration</td>
<td></td>
<td>108,689.00</td>
<td>0.16%</td>
</tr>
<tr>
<td>3. Service:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Other Service activities</td>
<td></td>
<td>595,010.40</td>
<td>0.86%</td>
</tr>
<tr>
<td>b. Feeding Cost -GOG, RNE, WFP -</td>
<td></td>
<td>67,203,515.50</td>
<td>97.24%</td>
</tr>
<tr>
<td>4. Investment/Capital Expenditure</td>
<td></td>
<td>723,136.84</td>
<td>1.05%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>69,109,411.00</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

*Source: GSFP 2011 Annual Operating Plan*

10.2. Current Funding Sources

From 2007-2010 the Dutch government committed to financially supporting 50% of food
purchases for the program up to €40M. However, at the end of 2010, the Dutch government had not yet invested approximately half of the €40M because of delays in implementation. It is also highly possible that the Dutch government will not renew its commitment. Although the following GSFP funding plan in 2011 includes GH¢11.7M funding from the Dutch government, it is critical for the GSFP to find alternative funding sources without expecting the Dutch government to maintain or expand the program.

Table 14: GSFP Sources of Funding in 2011

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Government of Ghana</td>
<td>50,000,000.00</td>
<td>72.35%</td>
</tr>
<tr>
<td>2. Dutch government</td>
<td>11,668,611.00</td>
<td>18.88%</td>
</tr>
<tr>
<td>3. World Food Programme (5.24million @1.42)</td>
<td>7,440,800.00</td>
<td>10.77%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>69,109,411.00</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: GSFP 2011 Annual Operating Plan*

10.3. Future Funding Sources

Without doubt, the government of Ghana has been and will be the primary funding source of the GSFP, and it is vital to secure long-term government funding for the program while seeking other potential funding sources. Strong commitment from the government is especially important in instances where other partners, such as the Dutch government or the World Food Programme (WFP), is phasing out of, or handing over, operations in the country. This has been demonstrated in cases like Botswana, Brazil, El Salvador, Jamaica, and Namibia, where strong government commitment has been the decisive factor in whether the programmes continue after other partners have phased out of the country. Some cases show that, even faced with a serious lack of resources, strong government commitment may enable creative solutions. This was the case in El Salvador, where political support and collaboration from senior staff led to using non-traditional funds to continue the programme after the WFP’s exit.

In the following, we discuss three other potential funding sources. The first two opportunities will be discussed briefly, as each is highly dependent on outside decision makers. The last suggestion, the gist of which was suggested by a past Berkeley Haas IBD team but has not been implemented, is a strategic decision that the GSFP can make and that can directly impact the
funding of the program.

**Case study: El Salvador**

A national law passed in 2000 determined that the proceeds of the privatization of the national telecommunication company be allocated to a trust fund. The interests gained would benefit social programmes such as school feeding. To date, the trust fund has generated about US$32 million. In 2008, earnings from the trust fund represented 30 percent of the government expenditures for the programme.

**NGO Support**

The GSFP has seemingly done a strong job of mobilizing support for the school feeding program from the NGO community. Although direct financial support from this sector is unlikely, the GSFP should be able to mobilize operational support from NGOs. This support, if appropriately structured, could enable the GSFP to transfer costs by outsourcing some of the work currently being done within the GSFP Secretariat office. However, in order to appropriately structure these arrangements it is important that the NGO is both committed and competent in the area where it is working.

**Private/Foreign Government Donations**

As with the grant from the Netherlands, there are other private donors and governments that the GSFP can approach regarding funding for the school feeding programme. In terms of private donors, the GSFP stakeholders underscore great potential in private sector funding for the program, however, this potential has hitherto not been pursued. It is worthwhile seeking out private partners who are interested in supporting the GSFP as a means of advertising of corporate social responsibility activities. Of course, it is important to choose partners who not only have financial capacity but also share the same strategic goals and priorities of the programme.

**School Children Payments for Meals**

Although the current structure of the school feeding programme provides children with meals for free, it is important to consider scenarios in which children pay for a portion of their lunches. With food costs representing the largest component of the total programme costs, any ability to offset these expenses could have a material impact on the long-term sustainability of the programme.
A major goal of the GSFP is poverty reduction throughout the country by creating a ready market for small farmers, thus increasing local agricultural production and improving incomes. If this goal is achieved, over time these communities will enjoy increases in income that may enable parents to partially subsidize school lunches. However, the possible trade-off is that there will be the risk of alienating the poorest children whose parents cannot afford the fee. This risk needs to be mitigated, for example by establishing at the level of each community a quota of “poorest pupils” exempted from contributing, or externally funded “scholarships” to pay for the school feeding fees of those who cannot afford them. This is important because the increase in school enrollment is parallel goal of GSFP.

The Millennium Villages Project is an example validating that this cost sharing system works. In the MVP, the participating communities and MVP share the cost of the programme almost equally. MVP bears the cost of the staples and some relatively costly but nutritious ingredients such as fish and beans, while the communities provide water, fuel, wood, and some ingredients for cooking. Based on a common understanding, each community adopts its own strategy for mobilizing funds to meet the recurrent cost. In most cases, parents agree to contribute GH¢0.50 per week per child.
11. Policy

11.1. Integration with National Policy
As clearly stated in the WFP’s “Learning from Experience: Good Practices from 45 years of School Feeding”, the quality and sustainability of school feeding is dependent on the understanding of and commitment to the programme at the decision-making levels of the government, as well as its embedding in national policy frameworks. Integration with the national policy increases both sustainability and quality of the school feeding programme, as other anecdotes from other countries indicate: in India the programme is supported by a Supreme Court Ruling; in Brazil it is included in the National Constitution; Honduras recently passed a national congressional bill on school feeding.\(^26\)

Moreover, the school feeding programme needs to be backed by a legislative national policy to prevent abuse or its being used as a political tool. For instance, the programme is undergoing re-targeting at the moment because it is perceived that some less privileged schools are not being reached due to a lack of funds, while schools in communities with higher standards of living are being reached. Also, a national policy will increase awareness as well as encourage community ownership of the programme because it is expected that views of the citizenry will be sought in drafting the policy, and discussions would have been held with major stakeholders like parents, teachers, health workers, and other opinion leaders in society. The policy document will spell out the evaluation criteria and so can be used in assessing the progress and impact of the programme. These will all help in the effectiveness and sustainability of the programme.

11.2. National Policy: Education and/or Agriculture
The next question is how the school feeding programme should be incorporated into national policy. In order to achieve the GSFP’s local procurement target of 80%, the GSFP should be considered not only as an educational policy issue, but also as an agricultural policy and food security issue. In regions where small farmers lack access to funding, equipment, and knowledge to scale up their farming, technical support for farmers is essential in achieving the procurement target. Thus, the national policy for GSFP is expected to incorporate both perspectives and establish roles of each stakeholder at the national level, such as the Ministry of Food and

\(^{26}\) Learning from Experience: Good Practices from 45 years of School Feeding, World Food Programme.

Key issues to be addressed in the national policy are as follows:

- The agency to implement the GSFP
- Resource allocation
- Support for agricultural expansion
- Details for execution and standards for evaluation

11.3. Case Study: Brazil

In Brazil, the school feeding programme is highly integrated into national policy through the National Constitution, laws, and a national initiative. The National Constitution of 1998 states that all school-age children in the country are entitled to receive one meal at school. Two laws under the Ministry of Education and one national resolution also support the school feeding programme. Based on these laws, the agency responsible for implementation of the programme, the National Fund for Educational Development (FNDE), was founded in 2001 and the FNDE’s resource allocation and the major operational details of the programme were set up. Brazil is enacting a law to establish that at least 30 percent of the food used by the school feeding programme should be procured locally. Moreover, the school feeding programme is part of “Zero Hunger”, the biggest initiative by the Brazilian government to combat hunger in the history of the country.
12. Institutional Collaboration

A successful school feeding programme should be designed with the active involvement of key collaborating government institutions. In Ghana, key players on the national level include the Ministry of Education (MoE), Ministry of Food and Agriculture (MoFA), Ministry of Health (MoH), with the Ministry of Local Government and Rural Development (MLGRD) hosting the National Secretariat. On a local level, players include Metropolitan, Municipal, and District Assemblies as the core implementing body. Collaboration ensures that a range of necessary complementary services can be provided to the programme. A recent study has shown weaknesses resulting from weak ties between the GSFP and the decentralized Ministries. The services that suffered include:

- Basic infrastructure (kitchens, equipment, water tanks, clean water, latrines, hand washing, classrooms, and furniture)
- Health services (lack of cook training, water sanitation training, body mass index checks, no health-focused inspections)
- Agricultural services (farmers’ access to credit, farming inputs, storage)
- Educational services

A SEND-Ghana commissioned 2008 study recommended the following to improve collaboration:

1. Educate all stakeholders, especially community members, and officials of collaborative decentralized directorates.
   - Civil society organizations could also be encouraged to assist in the sensitization of communities regarding the programme. Avenues such as community radio, FM stations, and TV could be used to increase stakeholder awareness of the plans, objectives, strategies, and requirements.

2. Strengthen the collaboration between the GSFP and other agencies.
   - Place a GSFP liaison officer at each agency.
   - Create school feeding desks at the agencies with responsibility for all aspects of the programme.
   - Hold a regular multi-stakeholder forum on the GSFP.

3. Involve local stakeholders when formulating the programme.
• Formulation of the annual plan should start at the DIC levels with the active participation of all SICs. The various DIC plans should then be consolidated at the national level.

4. Re-define the role of the MoFA.
• The MoFA should be tasked with the responsibility of making food available for the programme.
• The MoFA should target farmers in the various districts for extension services, inputs, and other support necessary to expand food production. Farmers involved in the programme can easily be identified and improvement in their welfare tracked to assess the benefit of the programme.

5. Use monitoring teams comprising of representation from each of the decentralized directorates and agencies.
• The different stakeholders in the team will ensure that all areas of the program including health and agriculture are covered in the monitoring.
13. Conclusion and Next Steps

The following is recommended to the GSFP as the process of re-designing the programme starts in September:

1. The programme possesses a number of strengths due to the nature of the outsourced caterer model that is being employed, however it can be more difficult to achieve some of the programme’s goals, such as keeping the cost of the meal low and stimulating local agriculture production. Therefore, the programme will need to invest in concerted efforts to implement the framework to link the farmers and caterers that is outlined in the report.

2. Further data collection and work on the menus would be the next logical step in research; the focus would have to be on standardizing the menus that are being used all over the country, and then analyze whether the nutritional targets set by the programme are being achieved. We also recommend that detailed data be collected on prices and that regular updating of the price table occurs in the costing tool provided. Once this is done, the programme should be able to understand the true cost of standard meals; this information may then inform the redesigning of the programme.

3. Regarding cost, we recommend that the programme explore utilizing Ghana’s buffer stock company as first point of purchase for the caterers. The buffer stock company could possibly benefit farmers by providing a means of storage for their crops.

4. Sensitization for the DICs and SICs should be increased so that these committee members do not view their roles as being an add-on, or an additional responsibility; they need to believe that the GSFP is part and parcel of their roles. The GSFP duties need to be integrated tightly within the roles and responsibilities of the existing players at the district and the school level.

5. The GSFP should reconsider their current staffing model. While it is important that as little money as possible be spent on administration and overhead, it is equally important that the GSFP be staffed at a level that ensures its effective implementation and sustainability. Reducing staffing costs in the short-term could have significant negative results in the long run.

The Government of Ghana, the GSFP National Secretariat, and partner organizations involved with the design and execution of the GSFP should be commended for their dedication to improving the health and education of children and the income of local farmers in Ghana— to
implement and administer a programme as large and as fast growing as this one is impressive but not without its challenges. As the program continues to scale, it is important that the strategies and policies of the programme evolve. We believe that the Ghana School Feeding Programme has a number of strengths and with its re-design it has the potential to be a model for many African nations.
14. Appendix

14.1. Appendix A

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Parents</th>
<th>Teachers</th>
<th>MOE</th>
<th>MOH</th>
<th>MOA</th>
<th>Local Gov</th>
<th>SFC</th>
<th>MVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolment of children in the school meals program</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keeping data on children's participation in SMP</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitating networking among partners including organizing SFP meetings</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Funding the SFP</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Costing and Menu planning</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building of kitchens, stores, latrines and other infrastructure</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training of partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Training and certification of cooks</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procuring of food stuffs from market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery of food stuffs to school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Storage of food stuffs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sourcing of fuel wood</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health screening/de-worming of children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 14.2. Appendix B

**GSFP Caterer Purchasing Record**

<table>
<thead>
<tr>
<th>Date of Purchase</th>
<th>Ingredient</th>
<th>Purchase Price</th>
<th>Amount Purchased (g or kg)</th>
<th>Purchased from</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
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Total Amount Spent for Period

Verified by

District Coordinator

Print Name

SIC Chairperson

Print Name

Caterer

Print Name
### High-Level Monitoring Scorecard

<table>
<thead>
<tr>
<th>Overall Assessment</th>
<th>CRS</th>
<th>WFP</th>
<th>GSFP</th>
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<tr>
<td>Capacity</td>
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<tr>
<td>Monitors and Vehicles per School</td>
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<tr>
<td>GES Engagement</td>
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<tr>
<td>Community Involvement</td>
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<thead>
<tr>
<th>Policies &amp; Procedures</th>
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<tr>
<td>Awareness</td>
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<td>Training</td>
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<td>Frequency</td>
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<tr>
<th>Data</th>
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<tr>
<td>Collection from Schools</td>
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<tr>
<td>Collection from Monitors</td>
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<tr>
<td>Local Tracking &amp; Reporting</td>
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<tr>
<td>Aggregated Tracking &amp; Reporting</td>
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<table>
<thead>
<tr>
<th>Accountability</th>
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<tbody>
<tr>
<td>Food Storage</td>
<td>High</td>
<td>Med-High</td>
<td>Medium</td>
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<tr>
<td>Sanitation</td>
<td>High</td>
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<td>Med-High</td>
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<tr>
<td>Cooking &amp; Meal Distribution</td>
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<td>High</td>
<td>Med-High</td>
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<tr>
<td>Food Mismanagement</td>
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<tr>
<td>Linkage to Local Food Production</td>
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<thead>
<tr>
<th>Issues Resolution</th>
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<tr>
<td>Timeliness</td>
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<td>Med-High</td>
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<tr>
<td>Prevention of Scarcity</td>
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### Appendix D - Summary of Qualitative Interviews

For collecting qualitative and quantitative data, our group was divided into four groups for field research. Each group was sent to two regions (Greater Accra, Volta, Ashanti, Brong Ahafo, Central, Western, Northern, Upper West), covering a total of over 20 districts. From interviews with 109 local farmers, 71 caterers, 27 DICs, and 21 SICs, we gathered information about the stakeholders’ perspective on the GSFP, their current behavior, and their thoughts for future improvement, in addition to quantitative data. Below is a brief summary of the answers to our qualitative questions.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Stakeholders</th>
<th>Summary</th>
</tr>
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<tbody>
<tr>
<td>Knowledge about GSFP</td>
<td>Farmers</td>
<td>▪ 79% of farmers answered they knew about the GSFP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Many of them knew as parents, not as sellers to caterers</td>
</tr>
<tr>
<td>Sales to GSFP caterers</td>
<td>Farmers</td>
<td>▪ Only 10% of farmers directly sell to the GSFP caterers</td>
</tr>
<tr>
<td>Access to financing</td>
<td>Farmers</td>
<td>▪ 46% of farmers have access to bank loans or financial support (in-kind provision) from District Assemblies</td>
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<tr>
<td></td>
<td></td>
<td>▪ Loans from NGOs, MiDI, etc are available for some of them</td>
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<td></td>
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<td>▪ Many of them have access, but do not use it due to high interests</td>
</tr>
<tr>
<td>Requests to government</td>
<td>Farmers</td>
<td>▪ 72% raised their needs of governmental supports for agricultural inputs and finance as their most important request to the government</td>
</tr>
<tr>
<td>Storage capacity</td>
<td>Caterers</td>
<td>▪ 35% of caterers have storage at their own home</td>
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<tr>
<td></td>
<td></td>
<td>▪ 65% of caterers have storage at schools</td>
</tr>
<tr>
<td>Food preparation site</td>
<td>Caterers</td>
<td>▪ 32% of caterers prepare food in their kitchen</td>
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<tr>
<td></td>
<td></td>
<td>▪ 68% of caterers prepare food in schools</td>
</tr>
<tr>
<td>Payments from the government</td>
<td>Caterers</td>
<td>▪ 79% of caterers raised the issue of delays in payments from the government</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>DIC</td>
<td>▪ 11% of DIC pointed out the lack of monitoring and evaluation capacities</td>
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