Evaluation of the School Meals Programme in Malawi with financial support from the United States Department of Agriculture (USDA)

Key Findings
**Purpose**

To understand the extent to which the programme objectives have been achieved and reasons for lack of fulfilment.

Specific objectives are:

- **Accountability** – Assess and report on performance and results of the School Meals Programme (SMP) in the 13 target districts, guided by the OECD/DAC evaluation criteria of Relevance, Effectiveness, Efficiency, Impact and Sustainability.

- **Learning** – Determine reasons for results, derive good practices and pointers for learning and provide evidence-based findings to inform operational and strategic decision-making.

- **Deepening understanding** – Deepen knowledge and understanding of the underlying assumptions guiding the design and implementation of the programme and the cultural context of implementation.

**Evaluation period: October 2016 to December 2018.**

Focus on schools, school-age children, their households and key stakeholders in the target districts.
Country Context

- **50.7%** of the population is poor, with **25% extremely poor**.
- About **3.8 million people suffer from hunger**
- Vulnerable to **recurrent weather shocks**
- National school drop-out rate is **3.8% for boys and 4% for girls**: ancillary costs, pregnancy and early child marriage cited as reasons
- **70%** of children aged 5-10 **go to school hungry**. **37% of children stunted**.
- WFP Malawi has given technical support to the Govt’s basic education (primary & ECD) programme through school meal interventions since 1999.
- The **USDA (McGovern-Dole)** supported SMP implemented in 13 of the most food insecure districts, for **637,473 pupils in 783 Schools and 93 ECD**.
Subject of Evaluation: SMP History

**School Meals**
WFP supports Malawi government with school meals interventions.

1999
- Phase 1 USDA McGovern-Dole SMP in 13 Districts. US$49 million

2010-2012
- Phase II USDA McGovern-Dole SMP in 13 Districts. US$30 million
  - Endline Evaluation of SMP and PAA in 2016

2013-2016
- UNU-MERIT endline evaluation for Phase III

2016-2018
- Phase III USDA McGovern-Dole SMP in 13 Districts
  - Current programme. US$22 million

2018/2019
- School Meals

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Centralized Model (McGovern-Dole SMP)

On-Site Meals

Pre-primary and primary school children:

**Super Cereal (CSB+) porridge, 60g daily ration** (WFP standard ration is 100g).

Take Home Ration

Girls and orphaned boys (std 5-8):

**10kg maize meal**, conditional on ≥80% class attendance in lean season (January-March).
Geographical Scope

**Beneficiaries:**
- 637,473 learners
- 49% male, 51% female
- 456 primary schools; 35 ECD Centres (Chikwawa and Nsanje)

**Target districts:**
Mangochi, Nsanje, Phalombe, Chikwawa, Mulanje, Zomba, Thyolo and Chiradzulu in southern Malawi Dedza, Lilongwe, Salima, Ntcheu and Kasungu in central Malawi
Objectives and Activities of SMP

• **Objectives**
  – Increase literacy (Strategic Objective 1)
  – Increase use of health and dietary practices (Strategic Objective 2) among school-aged children.

• **Key activities: In addition to on-site meals & take home rations (THR)**
  – Provide school gardens, non-food items (energy saving stoves, cooking pots and eating utensils), bursaries
  – Training on commodity management, food storage and preparation, health and nutrition practises
  – Capacity building at all govt levels
  – Literacy and education promotion; school supplies distribution
  – Partnerships with farmer organisations to supply food to schools
  – Construction/rehabilitation of secondary schools, kitchens, storerooms and feeding shelters
## Key Results of SMP

<table>
<thead>
<tr>
<th>Increased skills and knowledge of school administrators;</th>
<th>Increased access to food (school meals)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improved quality of Literacy</strong> instruction and materials</td>
<td><strong>Improved teacher and student attendance</strong></td>
</tr>
<tr>
<td><strong>Increased government engagement</strong> and capacity to manage and implement school feeding programmes</td>
<td><strong>Improved policy and regulatory framework</strong></td>
</tr>
<tr>
<td><strong>Better access to school supplies and Materials</strong></td>
<td><strong>Increased knowledge of health, hygiene, nutrition and sanitation practices</strong></td>
</tr>
<tr>
<td>Increased skills and knowledge of teachers</td>
<td>Increased student enrolment rates</td>
</tr>
</tbody>
</table>
Methodology: Design and Approach

- **Research design**
  - **Longitudinal**: schools from endline of Phase II (January 2013 to December 2016) as baseline
  - **Cross-sectional**: household data & EGRA

- **Research approach**
  - **Quantitative**: household interviews || EGRA || school checklist
  - **Qualitative**: FGDs || KII || document review

**Quasi-experimental design approach possible in some areas**

<table>
<thead>
<tr>
<th><strong>Beneficiary:</strong></th>
<th><strong>Non-beneficiary:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Schools</td>
<td>- Schools</td>
</tr>
<tr>
<td>- Learners</td>
<td>- Learners</td>
</tr>
<tr>
<td>- Households</td>
<td>- Households</td>
</tr>
<tr>
<td>- Communities</td>
<td>- Communities</td>
</tr>
</tbody>
</table>
Sampling strategy

**Stage 1: Schools**
Baseline WFP school list used. Re-selection in event of attrition.

**Stage 2: Learners**
Children drawn at random from all Standards for household interviews and/or to undertake EGRA

**Stage 3a: Households**
Children drawn at random, approx. 10 per school, over all Standards. Enumerators taken to their homesteads to conduct household interview

**Stage 3b: EGRA**
Children from Std. 2 & 4 drawn at random from 2 schools per district to take EGRA.

**Final sample:**
- **191 schools** (128 SMP; 63 non-SMP), **124 in a panel** with baseline schools (92 SMP; 32 non-SMP)
- **1398 household interviews** (922 beneficiaries; 476 control)
- **996 EGRAs** (512 beneficiaries; 480 control)
# Quantitative Data Collected

<table>
<thead>
<tr>
<th>Districts</th>
<th>Schools</th>
<th>Learners (EGRA)</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Targeted</td>
<td>Non-targeted</td>
<td>Targeted</td>
</tr>
<tr>
<td>Mangochi</td>
<td>10</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>Chiradzulu</td>
<td>10</td>
<td>6</td>
<td>80</td>
</tr>
<tr>
<td>Mulanje</td>
<td>14</td>
<td>11</td>
<td>81</td>
</tr>
<tr>
<td>Phalombe</td>
<td>21</td>
<td>9</td>
<td>79</td>
</tr>
<tr>
<td>Chikwawa</td>
<td>31</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td>Kasungu</td>
<td>31</td>
<td>14</td>
<td>80</td>
</tr>
<tr>
<td>Salima</td>
<td>11</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>128</strong></td>
<td><strong>63</strong></td>
<td><strong>516</strong></td>
</tr>
</tbody>
</table>

**Note**

<table>
<thead>
<tr>
<th>Girls/Female head</th>
<th>11 ECDs</th>
<th>6 ECDs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

| Boys              | -       | -      | 217    | 209     | -       | -       |

| Standard 2        | -       | -      | 260    | 240     | -       | -       |

| Standard 4        | -       | -      | 256    | 240     | -       | -       |
## Qualitative Data Collected

<table>
<thead>
<tr>
<th>FGDs</th>
<th>Total</th>
<th>Male %</th>
<th>Female %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chikwawa</td>
<td>7</td>
<td>13</td>
<td>87</td>
</tr>
<tr>
<td>Mulanje</td>
<td>15</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>Phalombe</td>
<td>14</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Chiradzulu</td>
<td>4</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td>Mangochi</td>
<td>4</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td>Salima</td>
<td>13</td>
<td>23</td>
<td>77</td>
</tr>
<tr>
<td>Kasungu</td>
<td>5</td>
<td>37</td>
<td>63</td>
</tr>
</tbody>
</table>

**FGDs:** 62: Beneficiary schools 34 || Non-beneficiary schools 28

**KII:** 80 from WFP (CO, RB, NY), Ministries, local govt, World Vision, Save the Children, AECD, CRECCOM, farmers organizations, School Feeding Committees
# Early Grade Reading Assessment (EGRA)

<table>
<thead>
<tr>
<th>EGRA Subtask</th>
<th>Stimuli</th>
<th>Score range</th>
<th>Length of subtask</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter name knowledge</td>
<td>0-100 letters</td>
<td>0-100</td>
<td>1 minute</td>
</tr>
<tr>
<td>Initial letter sound identification</td>
<td>0-10 letters</td>
<td>0-10</td>
<td>1 minute</td>
</tr>
<tr>
<td>Familiar-word reading</td>
<td>0-50 letters</td>
<td>0-50</td>
<td>1 minute</td>
</tr>
<tr>
<td>Unfamiliar-word reading</td>
<td>0-50 words</td>
<td>0-50</td>
<td>1 minute</td>
</tr>
<tr>
<td>Oral reading fluency</td>
<td>0-70 words</td>
<td>0-70</td>
<td>1 minute</td>
</tr>
<tr>
<td>Reading comprehension</td>
<td>5 questions</td>
<td>0-5</td>
<td>Untimed</td>
</tr>
<tr>
<td>Listening comprehension</td>
<td>5 questions</td>
<td>0-5</td>
<td>Untimed</td>
</tr>
<tr>
<td>Reading above MOEST benchmark</td>
<td>20 correct words/min</td>
<td>0/1</td>
<td>-</td>
</tr>
</tbody>
</table>

**25 schools** (14 SMP || 11 non-SMP) across 7 Districts
Data Analysis

• **Descriptive statistics** - means and mean comparisons

• **Rigorous impact evaluation techniques** (Quasi-experimental)
  – Difference-in-Differences (DID) for attendance, attentiveness, dropout rates, skills and knowledge
  – Ordinary/ instrumental variable regressions for short-term hunger at household level
  – Matching method (CEM) for literacy

• **Cost- efficiency analysis** (i.e. CTR and alpha ratio): comparing SMP with HGSM

• Qualitative data analysis: **thematic assessment of the narratives**

• Where possible, **the analysis used a gender lens**.
Limitations

- **Reduced school sample for longitudinal analysis:**
  - Transition SMP -> HGSM reduced sample available for longitudinal analysis.

- **Contemporaneous interventions:**
  - Spill-over effects as non-beneficiary schools are within the same districts.
  - Other programmes (e.g. social cash transfer) are controlled for in causal analysis where possible.

- **Cross-sectional samples:**
  - Household data and EGRA scores are cross-sectional. This means analysis cannot fully account for unobserved factors.
Key Findings
Relevance and Appropriateness

- **High relevance** to context and beneficiary needs
  - On-site daily meals and THRs relevant to chronically poor and vulnerable beneficiaries in food insecure districts
  - Consumption of breakfast before school is not common in this context
    - Among non-beneficiary households, 77% reported not providing daily breakfast to children.
  - Beneficiaries report that THRs benefit households through:
    - Increased school participation among girls & orphaned boys; reduced transactional sex, early marriage, teenage pregnancy among girls
  - On-site meals do not discriminate against children from marginalized groups
  - SMP *well aligned with the policies and priorities of the government*, WFP, UN, USDA and other actors providing school meals
Relevance and Appropriateness

- Appropriateness undermined by:
  - Complaints of the bitter taste of on-site meals, though this does not diminish consumption.

- Early feeding time
  - Minimizes disruption to learning at the expense of perceived safety of volunteer cooks (female majority) who travel before dawn
  - PM hunger is a risk among vulnerable older pupils where SMP is daily meal
  - Stakeholders concurred feeding time study necessary to inform policy
    - Government study in progress
Relevance and Appropriateness

- **GEEW activities appropriately mainstreamed and THRs are gender sensitive by design though without guiding gender & protection strategy/action plan.**

- **Gender analysis can be improved by:**
  - Integrating GEEW and protection indicators into monitoring processes.
  - E.g. female leadership of SFCs, child marriage, food preparation time, volunteer safety, bullying/GBV

- **Regular gender and protection assessments**

- **Encouraging gender balance in meal preparation** – now dominated by women
  - Community sensitisation on importance of gender equality in domestic roles

- **Encouraging greater use of existing toll-free confidential hotlines** and suggestion boxes || use of non-confidential CFMs – e.g. face-to-face – is high
Impact on Literacy (SO1)

Targeted schools vs. non-targeted schools

- **Standard 2**: Positive impacts: Girls scored higher than boys in initial letter sound identification, listening and reading comprehension.

- **Minimal impact in Standard 2**: Diluted by less experienced teachers, overcrowded and ill-equipped classrooms, limited ECDs, uneven implementation of partner activities.
Impact on student attendance, dropout, attentiveness

• SMP reduced absenteeism by 5 percentage points (about 116% of baseline 4.3% average), with a stronger impact on boys, contrary to previous studies.
  • Impacts for girls may be attenuated by bullying/GBV and early marriage
• Dropout rates reduced by 2.9 percentage points (marginally significant). Similar trends across gender.
• No significant effect on attentiveness. But limited longitudinal survey data from non-targeted schools.
• Qualitative surveys: positive impacts on attendance, psychosocial health of orphans and children with disabilities, as schooling removes them from an abusive home environment.
Impact on short term hunger (S01), dietary practices (SO2)

- Significant **reductions in short-term hunger (S01), improvements in dietary diversity among learners and households (SO2)**.
  - Lower hunger, better coping strategies, more meals consumed than non-beneficiaries. Gains mostly observed in male-headed households.
  - Increased MAD in male-headed households, decrease in female-headed households.
  - Residual effects of THRs in October 2018 (received January-March 2018).
Impact of SMP on skills and knowledge of teachers

- No impact on the number of teachers and administrators using new techniques or tools.

- May explain the minimal impact on literacy in standard 2

- Literacy promotion activities began much later in 2018.

- Qualitative interviews: teachers reported short duration and low number of literacy training sessions.
Unintended impacts

• Qualitative interviews report **high enrolment rates & migration to SMP schools**

• Quantitative data show **SMP had no impact on enrolment rates or classroom congestion**.
  – **Student – teacher ratio reduced over evaluation period**
  – Standard 2: SMP schools 92:1 || Non-SMP 96:1
  – Below government 2020 target of 67:1

• **Underage enrolment high in targeted schools**
  – SMP schools Standard 2 2.7% || Non-SMP schools Standard 2 1.7%
  – About 70% of underage learners are girls
Unintended impacts

• **No meal substitution at home for children receiving school meals.** More likely to consume lunch and/or dinner than non-targeted children.

• **Meal preparation work constitutes about 33% of total working time for employed women** creating livelihood opportunity costs for the majority female cooks

• **Firewood demand may fuel deforestation**: planting of woodlots undermined by poor management, theft, and consumption by livestock.
# Effectiveness: Achievement of Targets

**SO1 targets**

<table>
<thead>
<tr>
<th>Targets met</th>
<th>Unmet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct and indirect beneficiary numbers exceeded targets</td>
<td>Pipeline delays meant provision of the SMP did not meet targets</td>
</tr>
<tr>
<td>Student attendance, enrolment output targets and Standard 2 literacy rates have been achieved</td>
<td>But only 23% of literacy promotion materials have been distributed</td>
</tr>
<tr>
<td>Training of school administrators, teachers (techniques) and community members (commodity management)</td>
<td>School construction below target, along with bursary provision. (ongoing)</td>
</tr>
<tr>
<td>Number of school administrators is practising new techniques</td>
<td>Number of teachers practising new techniques.</td>
</tr>
<tr>
<td>Reduction of household hunger coping strategies exceeded targets</td>
<td>Teachers reported insufficient training time (no causal impact on teaching skills)</td>
</tr>
<tr>
<td></td>
<td>Number of meals consumed (but positive impacts in causal analysis)</td>
</tr>
</tbody>
</table>
Effectiveness: Achievement of Targets

SO2 targets

- **Targets were broadly met**, notably health, nutrition, food management training and MAD (with causal impact in male headed households).

- **All targeted schools have kitchens**, but not all have established gardens.

- Most schools feature **functioning latrine & improved water source**

- Foundational results:
  - Achievement of partnerships, local organisation support is strong.
  - At time of evaluation, education policies were still in development

- Gender disaggregated data is ubiquitously unavailable in monitoring reports along with hygiene and water supply information
Effectiveness: Cross Cutting Indicators

Gender Equality

- Gender parity in beneficiary numbers, school enrolment, literacy rates
- Absenteeism, drop-out rates higher among girls
- Attainment of MAD lower among girls
- Women control THR in >50% of households
- >50% of school feeding committees led by women
- Meal preparation burden falls on women; creates income opportunity costs
Effectiveness: Cross Cutting Indicators

**Protection**

Community sensitisation against GBV

Use of confidential CFMs is low (hotlines and suggestion boxes); strong reliance on face-to-face approach which hinders sensitive conversations.

Security risks while travelling to SMP sites reported

3% of female learners afraid of GBV while walking to school

**Partnerships**

Strong partnerships with the MoEST, other ministries and agencies (UNICEF, UNFPA)

WFP and government work closely at district, national levels

Financial value of public-private investments increased

SMP supported local governance groups like PTAs
## Effectiveness

### Internal factors affecting outputs and outcomes

| Early feeding time increases learning time but introduces security risks for cooks | Untimely delivery of the commodities || <65% on-time |
| --- | --- |
| **Capacity building** has been provided though it has been deemed *inadequate and patchy* | **Uneven implementation** of partner-managed complementary activities |
| Funding constraints prevented the provision of the planned 100g meal size | Community participation facilitates local implementation of SMP |
| • feeding committees, contributions of labour and inputs (food, bricks), mentorship for girls | **Strong partnerships with the MoEST** |
| Weak monitoring capacity in school & community structures – *provide learner registers, staff turnover* | |
| Inadequate resources at district level (DSMC, SHN) place burden on WFP field monitors | |
Effectiveness

External factors affecting outcomes and outputs.

- Gender norms/barriers
  - Early marriage, sexual initiation rituals, bullying, GBV, poor access to sanitary products decrease school participation

- School conditions
  - lack of secondary schools, poor quality of school infrastructure and teaching materials diminish the quality of education.

Overall assessment of Effectiveness: Medium/Average
Efficiency

- HGSM more cost-efficient than centralized SMP.
  - In 2018, the total cost for delivering USD1.00 to beneficiaries was USD2.08 for the HGSM as compared to USD3.13 for the McGovern-Dole SMP.
  - Under the SMP, greater share of financial resources go to admin and distribution than to beneficiaries.
  - Transportation costs are the largest cost driver for the SMP.
    - Economies of scale from consolidated commodity transportation should be harnessed.
    - Local/regional commodity purchase can reduce shipping costs.
  - Operational efficiency diminished by untimely delivery of commodities due to the rainy season and an initial pipeline break.

Overall assessment of efficiency: Low
Sustainability

• Extensive political & policy commitment to school feeding, capacity support from WFP and high community engagement,

• National financial readiness is low: donor funding is essential & sudden cessation of funding would have severe consequences for feeding in the short to medium term.

• To improve sustainability:
  – Create a phased hand-over roadmap from international to national funding for a contextually suitable SMP – account for agricultural diversity and linkages with resilience and climate-smart agriculture
  – Find and secure fiscal space for the SMP – ring fenced budget line at MoEST or local council level; ringfence tax revenue. Internally, reduce inefficiencies
  – Strengthen communities’ sense of ownership should via sensitization
  – Establish public-private partnerships to create resource flow

**Overall assessment for sustainability: Low**
## Key Messages

### Positives of SMP

<table>
<thead>
<tr>
<th>Positives of SMP</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive impacts on literacy in Standard 4</td>
<td>Minimal impacts on literacy in Standard 2</td>
</tr>
<tr>
<td>Decreases absenteeism, possibly drop out rates</td>
<td>No impact on teacher skill or knowledge</td>
</tr>
<tr>
<td>Reduces short term hunger, improves dietary diversity (especially among male headed households)</td>
<td>Cost-efficiency of centralized SMP is lower than HGSM</td>
</tr>
<tr>
<td>THRs increase meal consumption among children- impacts beyond lean season</td>
<td>Poor sustainability; government financial readiness is low</td>
</tr>
<tr>
<td></td>
<td>Gendered burden of meal preparation creates income opportunity cost</td>
</tr>
</tbody>
</table>
Recommendations

Strategic

1. Improve access to Early Childhood Development Centres (ECD), school infrastructure and allocation of teachers to lower grades. **High priority**

2. Consult & review with teachers the duration, timing and quantity of in-service/continuous teacher training sessions in the literacy promotion activity of the SMP. **High priority**

3. Formalise a sustainable handover strategy to strengthen community ownership along with a contextually relevant climate-smart national SMP **High priority**.

4. Improve financial readiness and sustainability by increasing fiscal space for the SMP, priority in fiscal planning and strengthening public-private partnerships. **High priority**.

5. Review the consequences of the early feeding time. **Medium priority**.
Recommendations

Operational

1. Scale up the duration and coverage of partner-managed complementary activities and improve their timing to maximise synergies, increase efficiency and effectiveness. **High priority.**

2. Improve efficiency through the timely delivery of commodities and reduction of transportation costs. **Medium priority.**

3. Strengthen gender mainstreaming, analysis and protection mechanisms by formulating a strategy/action plan, addressing gendered cultural norms, GBV and improving feedback mechanisms. **Medium priority.**

4. Strengthen M&E by streamlining indicators, incorporating gender and protection and building capacities at local level. **Medium priority.**
THANK YOU