

# Food for Education project

Financed by USDA

Implemented by Planet Aid/ADPP Mozambique

## Mid-term Evaluation Report

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## List of abbreviations and acronyms

<b>ADPP</b>	<i>Ajuda de Desenvolvimento de Povo para Povo</i> Development Aid from People to People
<b>CSB</b>	Corn Soya Blend
<b>DIPE</b>	<i>Direção de Programas Especiais</i> Directorate of Special Programmes (MINED)
<b>DPEC</b>	<i>Direção Provincial de Educação e Cultura</i> Provincial Directorate of Education and Culture
<b>EGRA</b>	Early Grade Reading Assessment
<b>EPC</b>	<i>Escola primária complete</i> Complete primary school, which includes Grades 1-7
<b>EPF</b>	<i>Escolas de Professores do Futuro</i> (teacher training college run by PAI/ADPP)
<b>FAO</b>	Food and Agriculture Organisation
<b>GOM</b>	Government of Mozambique
<b>HIV&amp;AIDS</b>	Human immunodeficiency virus infection/acquired immunodeficiency syndrome
<b>ISSET/OWU</b>	<i>Instituto Superior de Educação e Tecnologia</i> One World University (ISSET/OWU)
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MGD</b>	McGovern Dole (indicator)
<b>MINED</b>	Ministry of Education
<b>NFER</b>	National Foundation for Education Research
<b>PAI</b>	PLANET AID Inc.
<b>PAMRDC</b>	<i>Plano de ação multissetorial para a redução da desnutrição crónica em Moçambique</i> 2011-2014 (2020) Multisectoral Action Plan for the Reduction of Chronic Undernutrition in Mozambique
<b>PARP</b>	<i>Plano de Ação para Redução da Pobreza</i> Poverty Reduction Action Plan 2011-2014
<b>PEE</b>	<i>Plano Estratégico da Educação</i> Second Strategic Plan for the Education Sector 2012-2016
<b>PRONAE</b>	<i>Programa Nacional de Alimentação Escolar</i> National School Feeding Programme
<b>SDEJT</b>	<i>Serviço Distrital de Educação, Juventude e Tecnologia</i> District Office for Education, Youth and Technology
<b>SDSMAS</b>	<i>Serviço Distrital de Saúde Mulher e Acção Social</i> District Service for Women Health and Social Action
<b>SFC</b>	School Feeding Committee
<b>USAID</b>	United States Agency for International Development
<b>USDA FAS</b>	United States Department of Agriculture - Foreign Agricultural Service
<b>WFP</b>	World Food Programme
<b>WHO</b>	World Health Organisation
<b>WISHH</b>	World Initiative for Soy in Human Health

## Executive summary

The Food for Education project in Mozambique is an approximately four-year school-feeding project with child-health, nutrition education, water and sanitation components and a teacher-training program. It is funded by the Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA) to a total value of 21.4 million US dollars and implemented by Planet Aid (PAI) and their local partner in Mozambique, *Ajuda de Desenvolvimento de Povo para o Povo* (ADPP), in partnership with the World Initiative for Soy in Human Health programme (WISHH) of the American Soybean Association (ASA). The project functions as part of the national school feeding program currently being developed by the Government of Mozambique (GOM) with collaboration and assistance from the World Food Programme (WFP) and the Government of Brazil. The project takes a holistic, multi-faceted approach to promote the health, wellbeing and education of school-aged children. The project's goals are to improve literacy of school-age children in Mozambique and to increase the use of health and dietary practices.

A Baseline study had been conducted prior to the commencement of the project. The Mid-term evaluation was conducted between June and September 2014. In accordance with USDA policy, the objectives of the Mid-term evaluation were to:

- evaluate the project's progress so far, whether interventions are being delivered as planned, in accordance with the project targets, budget and work plan;
- assess whether the interventions are showing early signs of producing the desired results;
- document lessons learned and best practices to date, and make relevant, useful and realistic recommendations, to allow interventions to be fine tuned and corrected for the remainder of the project.

The evaluation process drew on three broad categories of data:

1. Existing data (consisting of project records and documents, training and informational materials, pupil test scores; teacher training progress indicators; school enrolment and dropout data);
2. Newly collected quantitative data (consisting of interviews and reading tests with learners who had taken part in the Baseline study, questionnaires from teachers in intervention schools and statistical modelling allowing measurement of relevant change); and
3. Newly collected qualitative data (from focus groups and interviews with key stakeholders, observation at schools, case studies, a self review by the implementation team and a stakeholder workshop).

The first section of the evaluation examines the internal validity of the project to verify if project activities are being carried out as planned and if progress is being made relative to the project's key performance indicators. Most activities have been carried out as planned; where there are delays, the reasons for these are explained and plans are in place to finish the activities. Key findings are:

- Kitchens and storerooms have been built in an impressive 97% of the 243 project schools and wood-saving stoves are being installed.

- The water team has increased the number of target schools with access to drinking water from an initial 69 to 179 schools. 26% of the target schools still requiring drinking water access, and a variety of different locally appropriate solutions are being considered, but numerous obstacles to the provision of clear water in some remote areas remain, likely requiring the provision of additional resources.
- Latrine renovation and construction in target schools has begun and will continue during the second phase of the project; the Mid-term target has been exceeded.
- School gardens are key to future sustainability; 96 have so far been established, which is 192% of the midterm target. Teachers report most are being used for education and some food production.
- A School Feeding Committee has been formed in each project school to manage the commodity and coordinate volunteer cooks.
- 65,000 pupils in all 243 project schools are now benefiting from school feeding, with almost 7 million meals provided, 57% of the target number. Initial delays in implementation resulted from the initial lack of kitchens and storerooms, delays in the provision of water, and the size and complexity of the project. Some interruption of the feeding in schools has occurred for a variety of reasons.
- 3,451 primary teachers have graduated or are in training in the teacher training colleges managed by PAI/ADPP Mozambique, which is 108% of the midterm target. Trainees demonstrated strong motivation and enthusiasm.
- Kits of educational materials have been distributed to all project schools. 12,136 awards have been given teachers and students.
- 617 after-school learning clubs have been formed, which is 255% of the target.
- Over 170,000 nutrition training materials have been distributed, substantially exceeding targets.
- The project supports the distribution of de-worming medication to all children in the target schools; an estimated 117,000 de-worming tablets distributed is 97.5% of the target.

The second section of the evaluation presents the initial impact of the project to suggest if there are early signs of desired results. Caution is recommended in the interpretation of midterm indications of change, since the project is still in the early stages.

In many cases communities and schools are taking responsibility for the process of organising school feeding and making it their own. In some cases, communities have made the decision to solicit a small contribution from each family to pay the cooks, rather than relying on volunteers.

Both teachers and pupils report that pupils' attentiveness in class has increased since the beginning of the project and they are less often hungry in class. Many informants believe school enrolments and attendance have increased; however complete data is not yet available. Analysis of pupil retention data suggests fewer pupils have dropped out of school in the project districts since school feeding began; the 2014 data, when available, will allow further analysis of this encouraging initial finding.

Many pupils and teachers report school learning clubs are having a positive impact of school work, performance and behaviour; with additional support and training the clubs could be even more

effective in improving both attendance and retention in school and the educational outcomes of pupils. Teachers were enthusiastic about support materials received and said they were using them, but better training in their use is required.

The presence of drinking water in schools is benefitting pupils, teachers and the wider community in many ways and allowing school feeding and the cultivation of school gardens. Certain schools are growing products such as manioc, which is used to diversify the school feeding.

The nutrition training is being well received; evaluation interviews provided accounts of positive impact on nutrition practices. The evaluation revealed a high level of knowledge of hygiene practices amongst pupils, in particular the importance of hand washing. It is not clear whether this knowledge is systematically applied, particularly when no water is available.

In terms of teacher training, the EPFs have already contributed 3,175 qualified teachers, whose training includes teaching literacy, nutrition education and community development, to the national teacher pool.

It is too early in the project to see impact on pupils' height and weight or literacy. Over a fifth of the grades 4 or 6 pupils tested were not able to read a single word of a 120 word text, intended for Grade 2-3 learners. Although 62% of them read most of the words in the text correctly, the majority could not read fluently.

The section ends with four case studies, two of individual pupils and two of schools, which illustrate positive change brought by the project.

The third section offers an analysis of the strategic relevance of the project with regard to effectiveness, efficiency, impact and sustainability and addresses two questions: "Are these the right things to do?" and "What can be learnt from what has been done so far?" This section considers the following areas:

- Human Resources, capacity, collaboration and ownership
- Transport
- CSB and Logistics
- Nutrition training
- Water and sanitation
- Literacy, school clubs and kits
- School gardens
- EPFs
- Budget and costs
- Sustainability and relevance to the local and national school feeding policy and programme environment
- The evaluation process and recommendations for future evaluations

In each of these areas, both good practices and aspects which require improvement are identified; recommendations are made to allow interventions to be fine-tuned for the remainder of the project.



Many of the recommendations address the need for improved communication, motivation and collaboration between the different actors. Others address the need for additional training and capacity development of staff and volunteers, and the improvement of planning and work systems. Recommendations to make the literacy sector more effective and to increase the chances of the project producing real impact on pupils' literacy outcomes include extending the scope of the project's current interventions to include actual training for teachers in project schools.

The report concludes that, although school feeding is a relatively new area for Planet Aid and its implementing partner ADPP Mozambique, using its well-tested approach of project implementation in partnership with communities has achieved very creditable results in the first phase of the Food for Education project. The Baseline report identified the risk involved in undertaking such a large-scale project in a new area and the possibility that scaling out the PAI/ADPP approach would not succeed. In the event, this Mid-term evaluation shows that the risk has paid off; although the experience has not been without problems and challenges, the first phase of the ambitious project has been remarkably successful.

The first phase of the project has seen the majority of the planned activities carried out effectively and targets met; where targets have not been met this has been for very understandable reasons. In several cases the targets have been exceeded. The project has begun to show signs of initial impact, and there is every reason to hope this will be sustained and increased. Finally it has been an opportunity to learn a large number of lessons, identifying both good practices and areas where improvements are needed, which are documented in this report. If the lessons learnt and the recommendations offered in the report are taken to account in adapting and improving the project systems and working practices, there is every reason to expect the second phase of the Food for Knowledge project will be very successful.

## Background

The Food for Education project in Mozambique is a comprehensive, approximately four-year school-feeding project with child-health, nutrition education, water and sanitation components, complemented by a major teacher-training program component. It is funded by the Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA) to a total value of 21.4 million US dollars and implemented in Mozambique by Planet Aid (PAI) and *Ajuda de Desenvolvimento de Povo para o Povo* (ADPP), Planet Aid's local partner in Mozambique, in partnership with the World Initiative for Soy in Human Health programme (WISHH) of the American Soybean Association (ASA). The project is designed to function as an integral part of the *Programa Nacional de Alimentação Escolar* (PRONAE), the national school feeding program currently being developed by the Government of Mozambique (GOM) with collaboration and assistance from the World Food Programme (WFP) and the Government of Brazil.

The project takes a holistic, multi-faceted approach to promote the health, wellbeing and education of school-aged children and combines a straightforward school-feeding program with health, water, sanitation, literacy and nutrition components. The project's goals are to improve literacy of school-age children in Mozambique and to increase the use of health and dietary practices. The project Results Framework (page 35) demonstrates the theory of change upon which the project is based: it is hoped that improving the quality of literacy instruction, by increasing the skills and knowledge of primary school teachers and giving learners improved access to school supplies and materials, should contribute to improving child literacy. Improving students' attendance, through a combination of improved school infrastructure and increased enrolment, brought about by increased access to food as a result of the school feeding programme and other interventions to increase enrolment, should further contribute to improving child literacy. The project aims to increase the use of health and dietary practices, through a combination of increased knowledge of nutrition, increased access to clean water and sanitation services and increased access to preventative health interventions, such as de-worming. The approach recognises the importance, to the achievement of the project goals, of both increased engagement of local organisations and community groups and increased capacity of government institutions. The project depends on the generation of community support for school-feeding and related activities through School-Feeding Committees.

The project consists of three components<sup>1</sup>:

### **School feeding, water supply development, school gardens, literacy support and related activities**

The project aims to improve the health, nutrition and literacy of more than 60,000 students in 243 target schools in 4 districts of Maputo Province, Mozambique (Moamba, Magude, Manhica and Matutuine), through a daily meal, the development of school gardens, the provision of a safe and adequate school water supply, and the implementation of a de-worming campaign.

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<sup>1</sup> For the purposes of internal organisation the project is structured and administered around 5 interrelated components: school feeding; water and sanitation; nutrition; literacy; and teacher training. The organisation as described here is that laid out in the original agreement between USDA and PAI.

In-service support of teachers, after-school clubs and kits of educational and recreational materials are provided in the 243 schools benefiting from school feeding, in order to promote improved literacy, enrolment and attendance, with a focus on ensuring gender parity in these areas.

### **Teacher-training conducted at eleven (11) teacher-training colleges**

A teacher-training program is training 4,000 primary school teachers and preparing them for the classroom, at eleven training colleges *Escolas de Professores do Futuro* (EPFs), situated in Maputo, Gaza, Inhambane, Sofala, Manica, Tete, Zambezia, Nampula, Niassa, Cabo Delgado provinces within Mozambique, financed and supported by Planet Aid and managed by ADPP and the Government of Mozambique (GOM), thereby contributing significantly to project sustainability. In addition to training in the core academic subjects and teaching methodology, student teachers receive training in various other theoretical and practical skills such as organizing and mobilizing communities, conducting health and nutrition campaigns and developing agriculture.

### **Nutrition education program**

The project also produces nutrition and health educational materials and information and, in partnership with Planet Aid's implementing partner, WISHH, implements a nutrition campaign in ten provinces of Mozambique, through the network of EPFs. Within this component, all students undergoing teacher training in the EPFs are trained in nutrition; primary school teachers currently teaching in selected primary schools near to the EPFs are trained as Nutrition Educators/Trainers and, in turn, they each train other primary school teachers as Nutrition Educators/Trainers in the communities in which they work. The trained Nutrition Educators/Trainers, in turn, teach school children and community members.

Prior to the commencement of the project, a Baseline study was conducted. This was designed and supervised by an external evaluator and the project M&E coordinator and conducted by a dedicated research team, with extensive input from the project staff. The Baseline study was designed to:

- a) provide a 'photograph' of the initial situation before the programme activities, giving information against which to measure the subsequent achievements;
- b) identify factors which need to be taken into account in implementing the programme (e.g. other interventions already taking place, resistance to certain approaches, etc.) ;
- c) promote ownership of and awareness of the programme.

The results of the Baseline study are available in the Baseline study report. The Mid-term evaluation examines the progress of the project so far against the Baseline measures, by assessing the project's:

- Internal validity (*is the project doing what it said it would do?*)
- Initial impact (*is it starting to make a difference?*)
- strategic relevance regarding effectiveness, efficiency, impact and sustainability (*are these the right things to do? What can be learnt from what has been done so far?*)

The indicators against which the project activities and outputs (Intermediate Results) are measured form part of the project's Evaluation Plan. Many of the indicators used are standard McGovern-Dole indicators used in other Food for Education projects supported by the FAS of the USDA. Information for each of the project indicators was collected and analysed in the Baseline study. In order for the Mid-term evaluation to allow accurate measurement of progress against each project Intermediate Result, the same indicators are used. Also the information was collected in an appropriate and comparable manner so as to allow meaningful measurement of progress against the Baseline at the Mid-term milestone. As agreed with USDA, the evaluation uses the amended version of the performance and output indicators and targets, as per the amendment submitted to USDA by PAI on 25 August 2014.

The Mid-term evaluation was conducted by Simone Doctors, an independent international consultant supported by Rosa Tinga, an independent Mozambican consultant, and by experts in statistical analysis from the National Foundation for Education Research (NFER). The organizational and logistical aspects of the evaluation were coordinated by ADPP's Paula Pedro, the project M&E coordinator, in close consultation with the external evaluators. The M&E coordinator also ensured existing project monitoring data and other project information and records were complete and made available in unanalyzed/non-tabulated form for analysis by the external evaluators.

This report, compiled by Simone Doctors, with input from Rosa Tinga and NFER, begins by presenting the objectives of the Mid-term evaluation, followed by the methods used to collect the evaluation data. The main body of the report is divided into three sections: this first of these examines the internal validity of the project and answers the question "Is the project doing what it said it would do?" The second section presents the initial impact of the project in response to the question "Is the project beginning to make a difference?" The third section offers an analysis of the strategic relevance of the project with regard to effectiveness, efficiency, impact and sustainability and addresses two questions: "Are these the right things to do?" and "What can be learnt from what has been done so far?" This section includes recommendations to allow interventions to be fine-tuned for the remainder of the project. A brief conclusion follows. Documents provided in annex include the evaluation questions, the technical appendix prepared by NFER and other documents relating to the evaluation.

## Objectives of the Mid-term evaluation

USDA FAS Monitoring and Evaluation Policy states that the purpose of an evaluation is:

*to critically and objectively review and take stock of the project's implementing experience and the implementing environment, assess whether targeted beneficiaries are receiving services as expected, assess whether the project is on track in meeting its stated goals and objectives, review the project-level results frameworks and assumptions, document initial lessons learned, and discuss necessary modifications or mid-course corrections that may be necessary to effectively and efficiently meet the stated goals and objectives (11).*

In accordance with this vision, the objectives of the Mid-term evaluation were to:

- evaluate the project's progress so far, whether interventions are being delivered as planned, in accordance with the project targets, budget and work plan;
- assess whether the interventions are showing early signs of producing the desired results;
- document lessons learned and best practices to date, and make relevant, useful and realistic recommendations, to allow interventions to be fine tuned and corrected for the remainder of the project.

This report addresses each of these objectives in turn, and reports on the project's:

- Internal validity (*is the project doing what it said it would do?*)
- Initial impact (*is it starting to make a difference?*)
- Strategic relevance regarding effectiveness, efficiency, impact and sustainability (*are these the right things to do? what can be learnt from what has been done so far?*)

The evaluation sets out to answer a series of general and specific evaluation questions. These are presented in Annex 3.

## Data collection methods

A mixed method approach using quantitative and qualitative information was used to collect information for the Mid-term evaluation, combining the following methods to allow triangulation of the information provided:

1. Review, collation and analysis of existing information:
  - 1.1 **Project documents:** project records, in the form of individual record level data in unanalyzed/non-tabulated form, project documentation, nutrition training materials, reports and other monitoring information, were provided by ADPP and WISHH to the external evaluators for analysis.
  - 1.2 **Trimestrial test scores data** from 2,135 grade 4 pupils<sup>2</sup> in the form of scores out of 20 for Portuguese and mathematics were provided by the Provincial Directorate for Education and Culture (DPEC) of Maputo for 1,635 intervention group pupils and 500 control group pupils now in Grade 4. Data from the same pupils as those analysed in the Baseline study (then in Grade 3) were used where possible. Where they were no longer available, substitutes were made using the same criteria (same class, substitute girls for girls, boys for boys).
  - 1.3 **Data from all EPFs** (PAI/ADPP-run teacher training colleges) showing progress in trainee teacher performance over the course of teacher training;

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<sup>2</sup>As far as possible, the sample contained the same subjects as were studied in the Baseline survey. See pp12-13 of Baseline report, including footnotes, for explanations of sample size and composition used at Baseline. Intervention group: 50 grade 4 pupils (25 x girls, 25 x boys) where available from each of 33 schools. Where schools are too small to have 50 grade 4 pupils, additional schools in Magde are used to make up the numbers, (22 in Magde; 10 in Manhica; 9 in Matatuine; 9 in Moamba). In no case are more than 50 pupils included from any single school. Control group: 50 grade 4 pupils (25 x girls, 25 x boys) from each of 9 schools in Boane and 1 non-intervention school in Manhica.

- 1.4 **Enrolment data** provided by the DPEC Maputo for all four intervention districts and Boane (control district) for 2011, 2012, 2013;
  - 1.5 **Dropout data** provided by the DPEC Maputo for all four intervention districts and Boane (control district) for 2011, 2012, 2013;
  - 1.6 **Data on de-worming** provided by the district health services in the intervention districts.
2. Collection and analysis of quantitative data using evaluation methodology and instruments developed or adapted by the external evaluators. The external evaluators trained a team of data gatherers, students from the *Instituto Superior de Educação e Tecnologia* One World University (ISET/OWU) to gather and record the quantitative data from a sample of students and teachers<sup>3</sup>. This training included a strong focus on the importance of rigour, coherence and validity in the data collection and recording process. Quality control was further assured by systematic double checking of all data entry and a system of spot checks and validation of the data gathering processes by a supervisor, trained by and under the supervision of the external evaluator. The external evaluators also carried out systematic checks on random samples of data collection and recording. The data collected was then analysed by the external evaluator in collaboration with a team of statisticians from the NFER.
  - 2.1 **Individual interviews/reading tests** with 1279 learners who were studied in the Baseline, now in Grades 4 and 6 (657 in intervention group and 622 in control/counterfactual group). This included part of a standardised reading test, the Early Grade Reading Assessment (EGRA) developed by USAID for use in Mozambique. Pupils were also weighed and measured. Where possible, the same pupils as participated in the Baseline study were tested<sup>4</sup>. Where they were no longer available, substitutes were made using the same criteria (same class, substitute girls for girls, boys for boys, using the 5<sup>th</sup> boy/girl on the register, then the 6<sup>th</sup> etc. from each target class). An English translation of the instrument used in pupil interviews, including the reading test, can be seen in annex 9).
  - 2.2 **Questionnaires completed by a sample of 200 teachers** working in intervention schools. This was composed of 50 teachers from each of the intervention districts (25 x female, 25 x male) balanced for level of training (N3/N4) and location (urban/peri-urban, rural, rural remote). Where possible the respondents were the same teachers as participated in the Baseline study. Where they were no longer available, substitutes were made using the same criteria (same district, same school, substitute women for women, men for men).
  - 2.3 **Statistical modelling** to account for measured background differences between target learners and the comparison group, allowing potential changes associated with the programme to be measured.
3. Collection and analysis of qualitative data by the external evaluators. Logistical support to the data collection process was provided by the project M&E coordinator and assistant. All data collection activities, such as interviews, focus groups, observations and photography, were conducted by the external experts.

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<sup>3</sup> Although the ISET/OWU is managed by ADPP Mozambique, the students had no previous involvement in the project but were trained by the external evaluators in data gathering and entry. Their performance in and understanding of this activity was assessed by a report and oral presentation on the process as part of their assessed coursework.

<sup>4</sup> As far as possible, the sample contains the same subjects as were studied in the Baseline survey. See pp12-13 of Baseline report, including footnotes, for explanations of sample size and composition used in Baseline.

- 3.1 **Focus groups** with key stakeholder groups: learners, teachers, parents, food preparers, school-feeding committee members, student teachers, teacher trainers, project “professionals” (officers) (see annex 6 for list of focus group participants)
- 3.2 **Semi-structured interviews** with key stakeholders: school heads, government representatives (MINED, DPEC, district SDEJT education directors/officers), district health officers, EPF heads, project managers or team representatives, representatives of USDA, representatives of PAI, other partners/civil society (see annex 6 for list of interviewees)
- 3.3 **Visits and observation** of a sample of schools, using a standardised observation framework and photographic recording of infrastructure (see annex 5 for list and characteristics of schools visited);
- 3.4 **Observation** of food preparation and distribution processes, using a standardised observation framework (see annex 7) and photographic recording;
- 3.5 **Observation** of teaching by a sample of target teachers using a standardised observation framework (see annex 8);
- 3.6 **Observation** of nutrition training;
- 3.7 **Case studies** which showcase examples of positive change, identified in consultation with professionals or during field work;
- 3.8 **Results of an internal self review** by the project implementation team, facilitated by the external evaluators;
- 3.9 **Results of a stakeholder review workshop** to validate findings and suggest mid-course corrections or changes in strategy, results frameworks, and critical assumptions.

## 1. Internal validity (“is the project doing what it said it would do?”)

The first objective of the evaluation is to assess the project’s internal validity and answer the question “Is the project doing what it said it would do?” in order to verify whether activities are being carried out as planned and progress against targets. Performance is reviewed against the project’s twenty-three key performance indicators, in relation to the project’s activities and associated work plan and targets (see Annex 1)<sup>5</sup>. This section presents and discusses progress against each of these. The order in which they are presented is designed to enhance clarity and readability.

### Building/rehabilitation of kitchens and storerooms

**Number of kitchens at target schools constructed or rehabilitated: 237 as of September 2014. Mid-term target<sup>6</sup>: 242. Target 98% achieved.**

**Building/rehabilitation of warehouses and storerooms: 237 as of September 2014. Mid-term target: 242. Target 98% achieved.**

**Number of firewood saving stoves at target schools constructed or rehabilitated: 117 as of September 2014. Mid-term target: 242. Target 48% achieved.**

**Number of sets of bowls and utensils distributed at target schools: 53,387 as of September 2014. Mid-term target: 100,000. Target 53% achieved.**

The building of kitchens and storerooms and the provision of kitchen storage tanks and bowls and utensils are all prerequisites of the school feeding activity. Construction of kitchens and storerooms was given priority over construction of wood-saving stoves, since it is possible to prepare the food using other means, such as an open fire. Analysis of the project records and discussion with the building team show kitchens and storerooms have now been constructed in 237 of the project schools. At the time of writing, of the 5 project schools without kitchens and storerooms, these are currently being constructed in three further schools; one has not begun and one has stopped<sup>7</sup>. Now that virtually all target schools have kitchens and storerooms, firewood saving stoves are being constructed in those schools which do not currently have them and the building sector team say they plan all the project schools will have a firewood saving stove by the end of 2014.

The storerooms as initially designed lacked ventilation and it was necessary to modify them, adding ventilation ducts to allow the circulation of air around the commodity. The building sector team say the plan is that all storerooms will have ventilation ducts by the end of 2014.

<sup>5</sup> As agreed with USDA, the evaluation uses the amended version of the project indicators, as per the amendment submitted to USDA by PAI on 25 August 2014.

<sup>6</sup> For the purposes of this evaluation, Mid-term targets are calculated as the cumulated targets for 2012, 2013 and 2014, as set out in the amended performance indicators (see annex 1).

<sup>7</sup> Three schools have recently been added to the project; the team are currently studying the infrastructure needs of these schools and the resources available to provide this.



The numbers of bowls and utensils distributed (52,967 student sets; 420 school sets), was lower than originally planned since, where schools operate in two shifts, the bowls and spoons can be used twice in one day. Several of the schools visited by the evaluation team did not have sufficient bowls and spoons for all children, so that these had to be washed and reused during the feeding. We were told that the numbers distributed had been calculated on the basis of enrolment figures for each school provided by the SDEJT. The logistics team say they intend to deliver more bowls and utensils during the December-January break.

The project team, working in collaboration with community members and local artisans, has managed to create the infrastructure to allow feeding in virtually all the project schools. The considerable constraints of operating in the environment of rural Mozambique, combined with limited material and human resources, presented significant challenges. A series of factors delayed progress initially and led to delays in achieving the projected targets. These include:

- Difficult access to many school due to inaccessibility and poor roads;
- Lack of suitable vehicles to transport building supplies and personnel (the project uses hired vehicles and drivers, which are not always available or suitable);
- Lack of water for building in many schools;
- Meteorological factors including torrential rain during January-April of both 2013 and 2014, rendered several roads and bridges impassable ;
- Lack of skilled masons in or near the target communities;
- Insufficient qualified human resources for purchasing, distribution and management of building supplies;
- Insufficient qualified human resources to supervise building work.

The evaluators visited a sample of project schools and inspected the infrastructure built by the project, using a standardised observation tool (see Annex 7). They also observed the infrastructure being used for the preparation and distribution of school feeding and made a photographic record. In all the schools visited, the infrastructure appeared to be soundly constructed, salubrious and fit for purpose.

The achievements of the small building sector team in providing the necessary infrastructure in 97% of the 243 project schools is remarkable in this context.



Kitchen and storeroom, EPC Mahel, Magude



Kitchen and storeroom, EPC Bela Vista, Matutuine



Storeroom, EPC  
Tinonganine, Matutuine



Wood saving stove at EPC Bela Vista, Matutuine



Wood saving stove in use at EPC Maguaza,

### Building/rehabilitation of wells and water stations/systems

**Number of clean water systems at target schools constructed or rehabilitated: 213 as of September 2014. Number of schools with clean water: 179<sup>8</sup> as of September 2014. Mid-term target: 242. Target 74% achieved.**

**Number of kitchen water storage tanks distributed at target schools: 195 as of September 2014. Mid-term target: 242. Target 81% achieved.**

The availability of water in the project schools is a prerequisite to the construction of the necessary infrastructure, to the preparation and distribution of food and the development and maintenance of school gardens. The work of the water team is thus an important determinant of the overall success of the project. The water team is designed to have a water sector coordinator based in the project headquarters in Manhica, with four water technicians, one based in each of the project districts. Project records show the water team has intervened in 162 schools (111 of these interventions took place in schools which today have access to drinking water).

Analysis of project records and discussion of these with the water coordinator show that before the project, 69 of the target schools had operational water sources; as of September 2014, 179 schools had access to drinking water. The remaining 64 schools (26%) still do not have access to drinking water. For 35 of these schools, plans to bring water have been made after analysing the possibilities in conjunction with the school management and the local community. In a significant number of schools, it does not currently appear to be possible to install a drinking water source using a borehole or well since the water table is saline and therefore not fit for drinking. For several of these schools the plan includes installing rainwater harvesting systems, for at least the period of the year when rainwater is available, while other options are explored. However 29 schools do not have buildings suitable for rainwater harvesting, which requires roofs and gutters; the education authorities are examining the possibility of building classrooms in these schools, so that rainwater harvesting systems can be installed.

To ensure the sustainability of the water installations, community based water committees are being created or existing committees reinforced.

<sup>8</sup> There are a total of 213 water systems in 179 schools (some schools combine rain harvesting with other types of water system).

Analysis of the water team's records shows that interventions of the water team to date, including visiting schools to research and plan future interventions, include:

- complete repair of broken water pumps;
- partial repair of malfunctioning water pumps;
- routine maintenance;
- 16 schools assisted in connecting to the local piped water supply;
- provision of systems to pump river water;
- distribution of 80 5,000 Litre tanks in schools for rainwater harvesting; a further 54 are in the districts awaiting distribution and installation in schools;
- installation of small rainwater harvesting systems (88 rainwater harvesting systems planned, of which 41 have already been built, and 30 were under construction in September 2014);
- distribution of 274 taps;
- 6 new boreholes planned;
- 4 new wells planned;
- 7 water dam systems planned;
- 4 schools with or to receive motorised water pumps;
- 1 school to receive an electric water pump;
- 40 schools to receive water treatment systems (filters);
- 129 community water committees formed or reinforced to ensure routine care and maintenance of water sources.

In addition, each school is to receive a 1,000 Litre kitchen tank to hold water for the preparation of the meals. 1,000 Litre tanks have been distributed to 195 of the project schools. A further 49 such tanks have been sent to the districts and are awaiting installation in the remaining schools.

The evaluation revealed that although the water team is currently working hard to achieve the project goals of having a source of drinking water and a 1,000 Litre kitchen tank in each school, a number of factors have resulted in delays, including insufficient qualified technicians. The original water sector coordinator had to be replaced, leading to delays in beginning the work of the water sector. The current coordinator, who was recruited in June 2013, is a competent, experienced and committed water coordinator, who has taken charge of and accelerated the process. However, due to the death in May 2014 of the water technician who was working in Magude district, and difficulties in recruiting a qualified substitute, the sector coordinator is currently undertaking much of the routine work in Magude, whilst simultaneously performing his other functions. This has led to delays in the reporting process, for example. Other factors which have caused delays include:

- Difficult access to many schools due to inaccessibility and poor roads;
- Lack of suitable vehicles to transport equipment, supplies and personnel (the project uses hired vehicles and drivers, which are not always available or suitable);
- The poor quality of the installation and maintenance of existing pumps and other water sources;
- The limited availability of a piped water network;
- The limited availability of clean, drinkable subterranean water.

The evaluation revealed the challenges inherent in bringing water to remote schools in arid areas where clean water is simply unavailable and the need for creativity in overcoming these with the limited human and material resources available. In this context, by providing or restoring water supplies to many schools where these did not previously exist, the water team is doing a very creditable job. However it seems clear that additional resources will be necessary in order to achieve the objective of providing clean water to all schools.



Water installation at EPC 25 de Junho, Moamba



Water pump at EPC Tinonganine, Matutuine



Protected water tank at EPC Tinonganine, Matutuine



Rehabilitated water source at EPC Gumbene, Magude

### Building/rehabilitation of latrines

**Number of latrines at target schools constructed or rehabilitated: 124 as of September 2014. Mid-term target: 100. Target 124% achieved.**

By the end of the project, 900 latrines are to be constructed or rehabilitated. The bulk of this activity has been assigned to the second half of the project time-frame in order to allow the water team to give priority to the provision of clean water to schools during the initial stages. After consultation with the water team, schools make a plan to construct latrines and are allocated funds to buy the necessary materials. The amount made available is based on the number of pupils in a school, rather than on the distance the materials need to be transported, which was said by several informants to disadvantage remote schools, who may have to pay as much again in transport as the value of the materials. There is a concern that remote schools are not able to construct latrines with the funds available to them, particularly because remote schools tend to be attended by children from the poorest families with least disposable income, who are not therefore able to supplement these funds (see recommendations, p61).

Analysis of the water team's records shows that for the first phase of latrine building (up to the end of the current school year) 148 schools have so far received funds to build or rehabilitate a total of 431 latrines (269 to be built; 162 to be rehabilitated). As of September 2014, 124 of these had been built or rehabilitated; a further 307 were under construction.

During the school visits, the evaluators inspected a sample of latrines built or rehabilitated by the project, using a standardised observation tool (see Annex 7). In all the schools visited, the latrines



appeared to be soundly constructed, salubrious and fit for purpose, with separate latrines for girls and boys. However, they did not systematically have water nearby for hand washing. In some cases, this was because there was no water available in the school; in others, water was available in the school but none was available close to the latrines. Although in these cases, we were often told by teachers and other informants that pupils went to wash their hands, it was not possible to ascertain whether children in these schools were actually washing their hands systematically after using the toilet (see recommendations, p61).



Latrines at EPC Tinonganine, built at the same time as the school, in 2002 support from the Finish development agency.



Latrines at EPC Maguaza, Moamba, newly constructed by the project.



Latrine in EPC Tchelane, Manhica, newly constructed by the project

## Establishing school gardens

**Number of school gardens established: 96 as of September 2014. Mid-term target: 50. Target 192% achieved.**

The establishment of school gardens is an important link in the chain and a key to future sustainability. School garden offer the potential for pupils to learn about agriculture and nutrition. If established on a sufficiently large scale, they can also contribute to school feeding and, in particular, diversification of the menu. They thus have the potential to constitute a fruitful link with the national school feeding programme (PRONAE).

Materials such as garden tools and seeds have been distributed to 154 of the project schools in all. According to the project records, 96 of the project schools currently have active school gardens. Analysis of the teachers' questionnaires confirms this figure (see figure 1 below). Where gardens exist, teachers responses claimed that in most cases these were used and maintained, were used for educational activities and were used to produce food for pupils (see figures 2, 3 and 4 below). Several of the schools visited during the evaluation fieldwork had gardens at various levels of productivity. Two schools visited reported producing enough food to occasionally supplement the school feeding (manioc in one; salad in another). However informants were clear in expressing the view that, as far as the pupils' participation was concerned, school gardens should be viewed as a pedagogical activity: it is not appropriate for school children to be regularly undertaking gardening work during school time. It is clear that, in order to achieve the level of production necessary to regularly supplement school feeding and introduce a degree of diversification, two conditions need

to be met. Schools need to have a regular supply of water, preferably close enough to the garden to water crops regularly. In order to produce crops able to supplement school feeding, and to avoid unacceptable burden of the garden work falling on the teachers and/or pupils, a school garden requires one or more adult workers available to maintain them throughout the year, including during school holidays (see recommendations, p63-64).



The school garden at EPC Bela Vista, Matutuine



Moringa seedlings produced by pupils at EPC 25 de Junho, Moamba



Manioc produced at EPC Maguaza is used occasionally to diversify the school feeding



Pupils watering the school garden at EPC Palmeira, Manhica

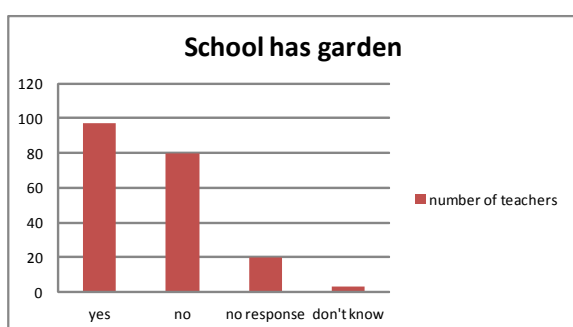


Figure 1: teachers who said their school had a garden

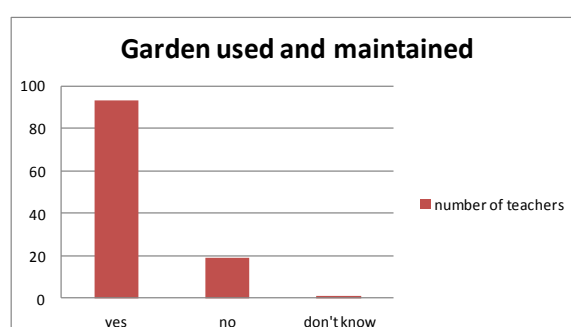


Figure 2: teachers who said school garden used and maintained

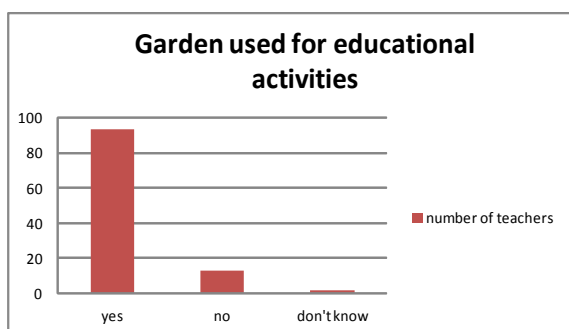


Figure 3: teachers said garden used for educational activities

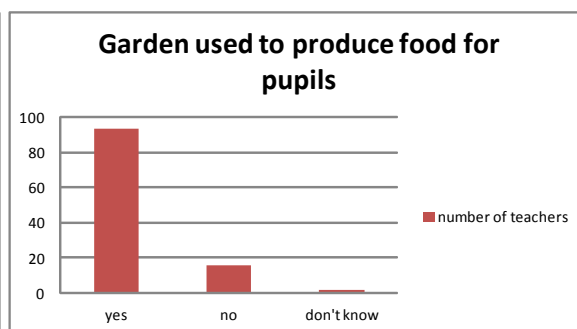


Figure 4: teachers said garden used to produce food for pupils

### Training in commodity management

**Number of school feeding committees formed or strengthened: 243. Mid-term target: 242. Target 100% achieved.**

**Number of school feeding committee seminars held: 21 as of September 2014. Mid-term target: 8. Target 263% achieved.**

**Number of school feeding committee manuals distributed: 848 as of September 2014. Mid-term target: 500. Target 170% achieved.**

Project records show that a School Feeding Committee (SFC) has been formed in each project school. The committees, who are responsible for the school feeding process, including managing the commodity and identifying and coordinating the volunteer cooks, should consist of two teachers, two parents and two pupils. Project records show that two representatives from each school, one teacher and one parent, have taken part in a training seminar since the onset of the project and that school feeding manuals have been distributed to all project schools.

During the evaluation visits, in each school we interviewed the teachers responsible for managing the storerooms and the commodity and inspected the storerooms. The storerooms appear to be well managed and the stock records kept up to date. One worry is that this function is taking teachers away from the classroom, during a teaching day which is already short. Although we heard reports of incidences where sacks of the commodity had gone missing, we did not encounter concrete evidence of this.





The teacher responsible for managing the commodity in the storeroom at EPC Tinonganine, Matutuine



Stock record, scales and sacks of CSB in the storeroom of EPC Mahel, Magude

### Providing school meals

**Number of daily meals provided to school-age children as a result of USDA assistance: 6,940,157 as of September 2014. Mid-term target: 12,250,883. Target 57% achieved as of September 2014.**

**Number of metric tonnes provided for school meals: 699.77<sup>9</sup> as of September 2014. Mid-term target: 1,365. Target 51% achieved as of July 2014.**

According to the project records, and explanations provided by the project team, as of June 2014 64,999 pupils in all 243 project schools were benefiting from school feeding, almost 5,000 more than originally planned. The schools began feeding progressively between 6 June 2013 and 9 April 2014. As of September 2014, almost 7 million meals had been provided to school children. Although this represents a success for the logistics and other projects teams, the number of meals distributed was significantly below target.

The initial onset of feeding was delayed by:

- The need to have the infrastructure in place before feeding began. It had originally been intended to begin feeding earlier and build the kitchens and storerooms progressively. However

<sup>9</sup> This figure includes 5.76 metric tonnes distributed as “take-home rations” in September 2014 (see page 58).



the MINED preferred that all storerooms and kitchens should be in place and operational before feeding began;

- Delays in establishing water supplies in all schools for the reasons explained on page 19 above;
- The complexity and scale of the project and the limited Human Resources available to implement it, at least initially.

Since the onset of feeding, feeding has been interrupted or irregular in a number of schools for a number of reasons, including the following:

- Infestation or deterioration of the CSB in the school storerooms;
- Schools running out of the commodity, due to glitches in the logistical system and in communication within the project team;
- Cooks not turning up to prepare the food;
- Lack of water in the schools;
- Lack of firewood in the school.

Of the four schools visited during the evaluation visits, in which we expected to observe feeding, this did not take place in two, due in one case to the school having run out of the commodity and in the second case to a complete lack of water available in the school, following the pump breaking down.

Where we were able to observe the preparation and distribution of the food, this appeared to function efficiently and be well organised; in some cases “Tip-Tap” hand washing points had been constructed using jerry cans, enabling all children to wash their hands before eating using minimal quantities of water. The children appeared to eat the porridge with enthusiasm.



Children queuing to receive their porridge at EPC Maguaza



Children at EPC Maguaza washing their hands before eating using the “Tip-Tap”



Children eating their porridge in the shade of the trees at EPC Maguaza, Moamba



Porridge being served at EPC Tcheland, Manhica



Children eating their porridge at EPC Tchelane, Manhica

During interviews conducted in July 2014 (after all schools had begun feeding) a sample of pupils, were asked whether they had received food at school on the day of the interview and then if they had received food the previous day. Of 406 pupils who responded to the question, 221 (54%) said they had received food that day; 185 (46%) said they had not (see figure 5 below). 225 (55%) said they had received food the previous day; 45% said they had not (see figure 6 below). Of 388 pupils

who responded, 84% said they liked the taste of the food or the food tasted good (see figure 7 below).

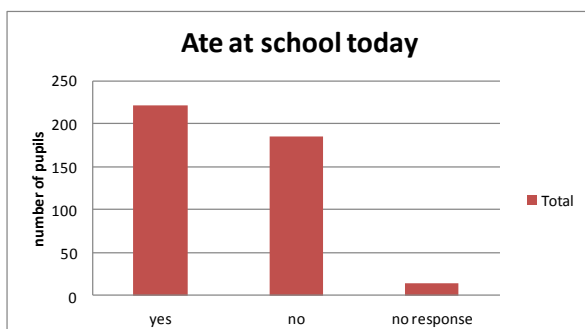


Figure 5: Pupils who claim to have received food at school “today”.



Figure 6: Pupils who claim they received food at school “yesterday”

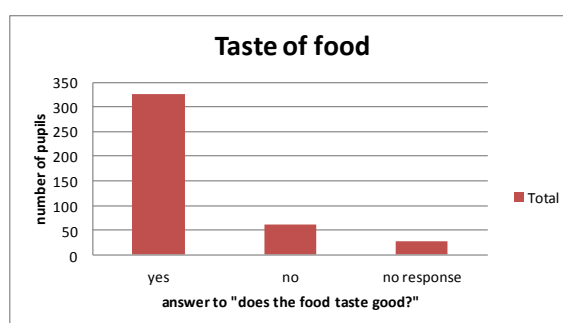


Figure 7: Pupils' opinion of the taste of the food

## Training teachers

**Number of primary teachers in training as a result of USDA assistance: 3,451<sup>10</sup>. Mid-term target: 3,200. Target 108% achieved.**

Of the 11 EPFs, three (Cabo Delgado, Chimoio and Maputo,) are currently working within a three year training programme, whereas the other eight follow a one year programme. The numbers in training from 2012 to 2014 include all students who studied at one of the EPFs during that period; students who enrolled in 2012 for a three year course are counted only once.

838 trained teachers graduated from the EPFs in 2012; 972 graduated in 2013. There are currently 1,437 students in training who are eligible to graduate in 2014. If 95% (1,365) of those pass the final exam (this is set by the government teacher training schools and is independent of ADPP) and graduate, as ADPP hopes, between 2012 and 2014 the EPFs will have contributed 3,175 qualified teachers to the national teacher pool.

The evaluation revealed that the EPFs are training teachers to meet the needs of the Mozambican education system. The training focuses on preparing students for the realities of being a teacher in a remote primary school with limited access to pedagogic resources and fostering problem solving and creativity to overcome these challenges. During the training, students spend time visiting and living in remote rural communities so they are aware of the challenges which await them after graduation;

<sup>10</sup> See explanation of this figure in the text below.



the training is designed to instil in trainees a strong motivation and commitment to education and to the development of their school and community. The trainees we spoke to expressed a strong degree of motivation and enthusiasm about their future profession, whilst appearing realistic about the material challenges ahead. During the school visits we encountered one such teacher, in a small, remote rural school. The only teacher for a multi-grade school, he was an EPF graduate and demonstrated such qualities of creativity, enthusiasm and commitment to community development (see also case study p 53). The teacher training provided by the EPFs is discussed further on pages 40-41 and 64-65.



Trainee teachers in a nutrition class at the EPF Maputo



EPF graduate teacher Claudio Sheldon in EPC Gumbene, Magude

### Distribution of school supplies and materials

**Number of educational materials' kits distributed to schools: 2,269 as of September 2014. Mid-term target: 1,600<sup>11</sup>. Target 142% achieved.**

**Number of awards given to teachers and students: 12,136 as of September 2014. Mid-term target: 12,000. Target 101 % achieved.**

ADPP's records show that all 243 schools have received "kits" containing three different types of materials. These are: school materials for use by pupils (exercise books, pens, pencils, erasers, compasses, mathematical instruments, coloured pencils, etc.), teaching and learning materials for use by teachers and in after-school clubs (text books, reading books, syllabic charts, reference books, dictionaries, charts of the human body, Rubik's cube puzzles, etc.) and sports equipment (handballs, volley balls, volley ball nets, foot balls, elastic/skipping ropes, whistles, chronometers, etc). The quantities of each received was determined by the numbers of pupils in each school.

<sup>11</sup> The monitoring records originally provided to the evaluators showed simply that the three types of kits had been distributed to all 243 schools. The project monitoring system was subsequently changed to be aligned with the formulation of the target and performance indicators (see annex 1) and the evaluators were informed of this change. The figure of 2,269 reported above is based on the explanation provided to the evaluators by project staff. In the opinion of the evaluators, the notion of exactly what constitutes a "kit" and what it contains needs to be clarified if the monitoring system is to function in a meaningful way.

During the evaluation visits, we saw different items from the materials and some of these materials being used, in particular the sports equipment. Some teachers have received training in the use of the equipment. Several respondents suggested more training would be welcome (see recommendations p 63).



Items from the kits stored in the storeroom in EPC Gumbene, Magude

In order to motivate pupils, the project schools regularly award pupils for their achievement or behaviour. The teachers, with support from the “professionals”, define the areas or subjects for which awards will be made and the criteria to be used. First, second and third prizes are awarded: these include school bags, water bottles, sets of basic class materials, project T shirts or a school uniform, provided by the project. There are also competitions between schools, organised by the SDEJT, in conjunction with the project, where the first prize consists of children’s bicycles for the winning school.

Prizes are also awarded to teachers and volunteers. Teachers who are outstanding in their support to the project activities within their schools are awarded new *batas* (the white dust coat uniforms worn by primary school teachers in Mozambique), project T shirts or bathing towels. Volunteer cooks can win prizes such as *capulanas* (the traditional wraps worn by women in Mozambique), radios and project T shirts.



Prizes for pupils at the project office in Manhica waiting to be sorted and distributed



The teacher at EPC Gambene, Magude, wearing the *bata* he recently won

### Extra-curricular activities

**Number of after-school learning clubs formed: 617 as of September 2014. Mid-term target: 242. Target 255% achieved.**

The Mozambican Ministry of Education has long advocated after-school clubs or extracurricular clubs to help pupils to improve their school work, particularly those who are struggling to progress in class. Promotion and support of learning clubs, arts and crafts clubs and sports clubs is one of the project's activities and one of the responsibilities of the project "professionals" in part, through the provision of school supplies and material. According to project records and discussions with project staff, including verification by the evaluators of a random sample of lists of club members in project schools, as of September 2014, 617 after-school clubs or extracurricular clubs had been formed in the project schools; 570 of these were active.

Of teachers who completed questionnaires, 82% of those who answered the question said there was one or more after-school clubs in their school (see figure 8 below). The existence of clubs does not mean that all pupils belong to or attend them. During interviews conducted as part of the Mid-term evaluation, a sample of pupils from project schools was asked whether they belonged to one or more clubs. Of 379 who responded to the question, 155 (41%) said they did not belong to any; 157 (41%) said they belonged to one; 39 (10%) to 2; the remaining pupils said they belonged to 3, 4 or more than 4 clubs (see figure 9 below). The benefits brought by after-school clubs are discussed on pages 46-47; recommendations appear on p 63.

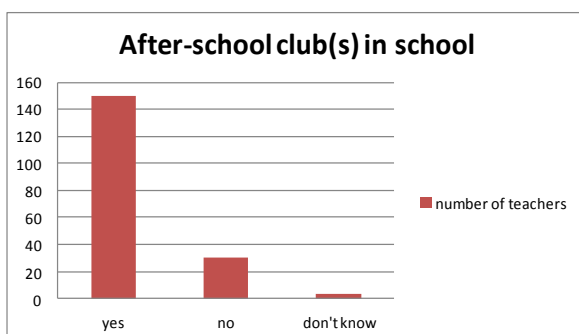


Figure 8: Teachers' reporting of "one or more clubs in school"



Figure 9: Pupils' self-reported membership of clubs

### Training government officials

**Number of seminars and meetings conducted at local, regional and national level: 36 as of September 2014. Mid-term target: 25. Target 144% achieved.**

**Number of government officials trained in managing the administration of school feeding programme: 0. Mid-term target: 200. Target 0% achieved.**

**Number of government officials trained in nutrition: 311 as of September 2014. Mid-term target: 200. Target 156 % achieved.**

Analysis of project records and discussions with project staff reveal that since the beginning of the project a total of 36 meetings have been held with school directors, provincial government officials of health, education and public works and with the four District Education Directors of the project districts to discuss plans for project implementation. These meetings did not involve training. During the evaluation field work and interviews with many of these government officials it was clear to the evaluators that they were well informed about the project and that active, collaborative partnerships exist between the project team and government officials, who communicate and work together on a regular basis.

207 individuals have received training in the administration of school feeding (113 in February and March 2014; 49 in August 2014 and 45 in September 2014). The principal beneficiaries of these training sessions are the teachers who are responsible for the managing school feeding within their schools. However parents and local community leaders are invited to participate. Government officials (other than teachers) have not yet received training in the administration of school feeding. It is planned to train them in 2015.

Regarding the number of government officials trained in nutrition, some uncertainty exists. It appears from the nutrition training records and discussions with project staff that, as of September 2014, a total of 311 government officials from local government institutions of the education, health and agriculture sectors, in the four project districts of Maputo province, had received nutrition training in small groups. It is planned to offer further training to the same individuals in the second phase of the project. These figures require further verification (see page 60 below).

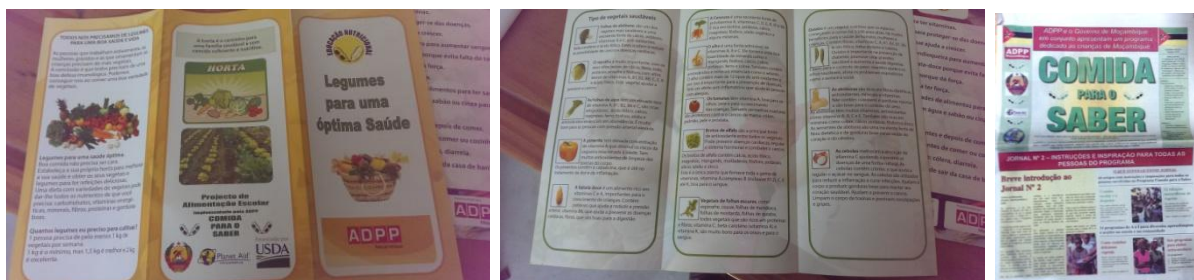
### Training in good health and nutrition practices

**Number of nutrition training materials disseminated: 171,019 as of September 2014. Mid-term target: 100,000. Target 171 % achieved.**

**Number of health and hygiene education trainings conducted at target schools: 686 as of September 2014. Mid-term target: 293. Target 234 % achieved.**

Analysis of project records and discussions with project staff reveal that as of September 2014 over 170,000 nutrition training materials have been distributed, including 11,000 to each of the EPFs and to each of the four project districts. These materials include brochures, posters and a dedicated Food for Knowledge newspaper.





Examples of nutrition materials produced and distributed by the project: leaflet on eating vegetables and Food for Knowledge newspaper

686 health and hygiene training sessions have been delivered in target schools and the surrounding communities by the project “professionals,” who previously received trainer training from the WISHH nutrition education team.

Training in nutrition is taking place at various levels of the project. All the project “professionals” have received nutrition trainer training, as have the designated trainers in the eleven EPFs. Following significant delays in beginning nutrition training, while waiting for the training materials to be approved by the Ministry of Education, nutrition training is now taking place in the eleven EPFs for trainee teachers. As reported in the section on “Training government officials” above, nutrition training has also been held for government officials.

The evaluators observed the first part of a nutrition training session for trainee teachers at the EPF Maputo, conducted by the trainer responsible for nutrition education. This was conducted in an engaging, learner-centred manner, which required the participants to reflect on and discuss the content in groups, rather than to receive information passively. The group work was followed by a plenary session where definitions of different concepts were compared and discussed until a satisfactory definition was achieved. Trainees appeared engaged and interested in the session. Due to logistical constraints and incompatibilities between the evaluation calendar and the school training calendar, it was not possible to observe nutrition training within schools.

Nine different nutrition training modules have been developed by WISHH in conjunction with the nutrient training team and translated into Portuguese. These are detailed in table 1 below. Some of these modules were made available to the evaluators by the project nutrition coordinator. A brief review of these indicates these are well-structured, clear and fairly “user-friendly”, with simple exercises for trainees to complete. We were informed that in certain cases, the materials as originally prepared had been found to be too challenging for the target group and are therefore being revised and simplified.

The exact number of individuals having received nutrition education requires further verification (see page 60 below).



Module A: Basic Nutrition Principles
Module B: Food Groups and Guidelines
Module C: Sanitation
Module D: Servings/Balanced Diet
Module E: Cooking for Nutrition
Module F: Dental Health
Appendix 1: Facilitation & Training Concepts
Appendix 2: Community Messages
Appendix 3: Kitchen Hygiene, Food Storage/Handling (for cooks)

Table 1: List of nutrition training modules developed by WISHH

### Distributions of de-worming medication, vitamins and minerals

**Number of de-worming tablets distributed to students: *estimated 117,000*. Mid-term target: 120,000. Target estimated 97.5 % achieved.**

The project supports the SDSMAS (District services for health, women and social action) in the project districts in distributing de-worming medication to all children in the target schools, through a financial contribution to the cost of petrol needed for these visits. An interview with the district health services in Manhiça revealed that, although children should be de-wormed twice a year, according to the Ministry of Health's plan, in reality it is only possible to carry out the visits once a year, due to insufficient resources and delays in releasing the necessary funds. We were told that for 2014, since the first de-worming campaign had taken place in May, the second would probably not be possible because the campaigns must take place at 6 monthly intervals and schools close in November. The evaluators did not visit the SDSMAS in the other project districts due to time constraints. However they asked the "professionals" to request data on the 2014 de-worming campaign, showing the numbers of children treated. This information has been provided by two districts; the other two have not yet provided it despite repeated requests. The figures from Moamba show that 18,522 people were reached, 99% of the target population of 18,721 (it does not specify they were schoolchildren, although this is presumably the case).

During interviews conducted in July 2014 as part of the Mid-term evaluation, a sample of pupils from project schools was asked whether they had received de-worming tablets during the current school year. Of the 424 who responded, 380 (90%) said they had; 44 (10%) said they had not (see figure 10 below). At Baseline, the percentage was 91%.

The information available suggests a high proportion (between 90% and 99%) of school children are reached once a year. If 90% of the 65,000 children now included in the project received de-worming in 2013 and then in 2014, this would be a total of 117,000 tablets distributed, which would be 97.5% of the target. However this remains an estimation and is not based on actual recorded data.

There is no plan to distribute vitamins or minerals to project children, apart from those present in the CSB. The use of the standard indicator is therefore misleading; if possible, for the purposes of the present project, this should be reformulated to read “Distribution of de-worming medication.”

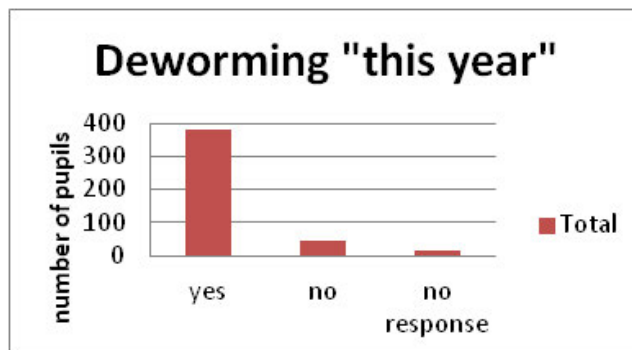


Figure 10: Pupils' self-reported receipt of de-worming. Source: interviews with pupils

## 2. Initial impact (“Is the project starting to make a difference?”)

The second objective of the Mid-term evaluation is to assess whether the project is showing early signs of producing the desired results. It reviews and analyses the different data sets for evidence of change against the project’s results or outcome indicators, as set out in the project’s Results Framework (see figure 11 below). It also reviews and analyses the data against a number of indicators which are not part of the project’s formal results framework but have been included as a special study, as they have the potential to provide vital links to the analysis of impact. These indicators are marked with an asterisk. A version of the Results Framework which shows how these indicators fit into the “bigger picture” can be seen in annex 2.

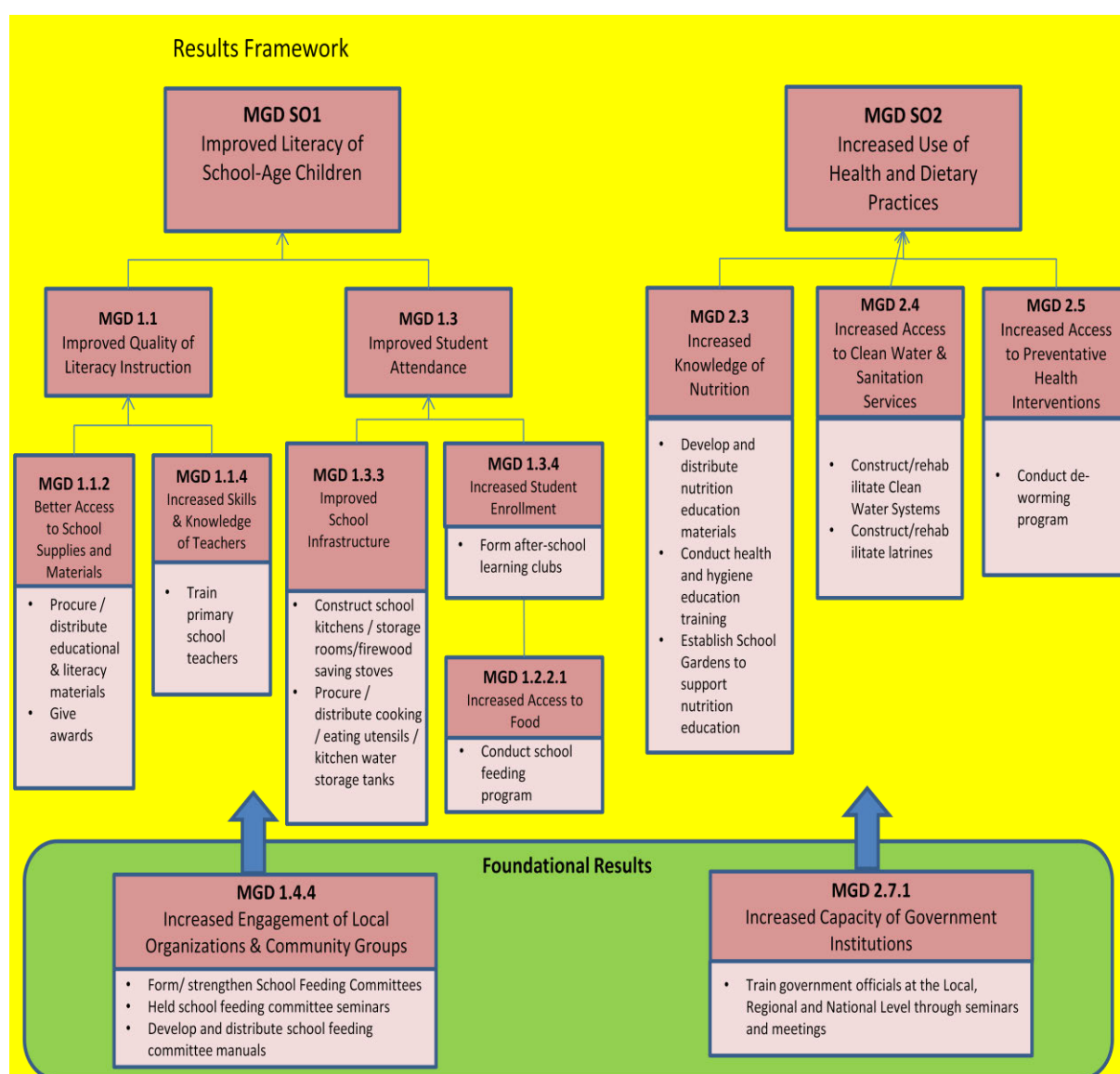


Figure 11: Results Framework of the Food For Education Project in Mozambique

It is important to exercise caution in seeking to demonstrate impact for a number of reasons:

- Impact is the substantive long-term change brought about as a result of an intervention, rather than a short-term “feel good” effect immediately after an intervention which will not necessarily lead to sustainable change;
- At the time of the Mid-term evaluation (June – September 2014) the project was still in its relatively early stages. The contract with USDA was signed in September 2012 and the first funds became available at the end of December 2012. From October to December 2012, teacher training was taking place in the EPFs. Other project activities began in January 2013, including recruiting and hiring project staff and the other “start-up” activities necessary for a new project of this size;
- Once staff and plans were in place, there was a major effort to create the conditions to allow school feeding such as construction and water provision (the MINED required the basic infrastructure to be in place before school feeding could begin);
- School feeding, which began gradually from June 2013, was not taking place in all schools until April 2014. This fact, combined with the school calendar and the interruptions which have occurred in some schools, means that some schools have only been feeding for a relatively short time<sup>12</sup>. As of May 2014, the number of days “effective feeding” varied from 9 to 173.

For all these reasons, it is important to be prudent when making claims about impact at this stage. During the evaluation field work, many interview and focus group participants told us that the project was making a great difference and described changes they believed were happening. It is important to triangulate this information with other sources of evidence; this section sets out to do so for each of the results indicators; where appropriate, these are grouped and considered together.

### **Improved literacy of school-age children (MGD SO1)**

The evaluation examined two sources of information about the literacy levels of samples of pupils from project schools:

- trimesterial test scores for Portuguese and mathematics from a sample of 2,135 pupils (1,635 from schools in the intervention districts, hereafter called the “intervention group” and 500 from schools in the district of Boane, hereafter called the “control group”) provided by the DPEC
- scores of 1,279 pupils (657 from schools in the intervention districts, the “intervention group” and 500 from schools in the district of Namaacha, the “control group”) in independent literacy tests conducted for the purposes of the evaluation.

The independent literacy tests produced a more detailed picture of the reading skills of the children tested. In interpreting these results, it should be born in mind that the test used (the EGRA) was developed for pupils in grades 2 to 3; the pupils tested were in grades 4 or 6 (an

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• <sup>12</sup> The school calendar, in addition to several public holidays, has 16 non-teaching weeks, including a two-week break in August, and a break of over two months from November through to January.

English translation of the instrument used in pupil interviews, including the reading test, can be seen in annex 9).

When asked to read a list of 30 words (see annex 9), 19% of the intervention group pupils could read between 0-4 words (11% could not read a single word); 60% were able to read between 25-30 words, with the remaining 21% in between. Girls performed a little better than boys on this task (see figure 12 below).

When asked to read a text of 120 words, 24% of pupils were only able to read between 0-19 of the words correctly (21% of pupils were not able to read a single word); 62% were able to read between 100-120 of the words correctly (see figure 13 below). In order to test the fluency of this reading, the number of words read correctly within one minute was recorded. 53% of pupils read fewer than 40 words in a minute (this includes the 21% who were not able to read a single word); 40% read between 40 – 79 words in a minute; only 7% were able to read between 80-120 words in a minute. Girls performed a little better than boys on both these tasks (see figure 14 below).

In response to four comprehension questions based on the text, 32% of pupils could not answer a single question correctly; 29% answered all four questions correctly; the rest were in between. Girls performed a little better than boys on this task (see figure 15 below).

Overall, these results show that over a fifth of the pupils tested were not able to read a single word of a 120 word text, intended for Grade 2-3 learners. Although 62% of them read most of the words in the text correctly, the majority could not read fluently. The majority of learners could not answer more than two out of four comprehension questions correctly, suggesting they did not understand all of what they had read.

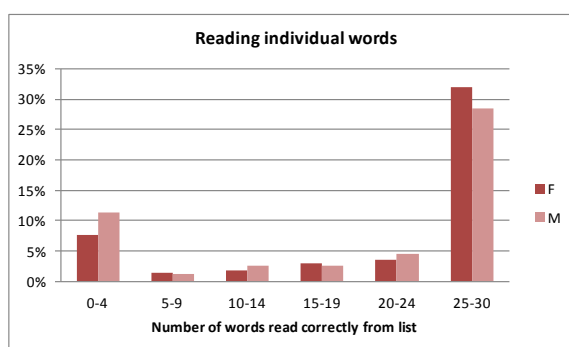


Figure 12: Girls' and boys' ability to read individual words

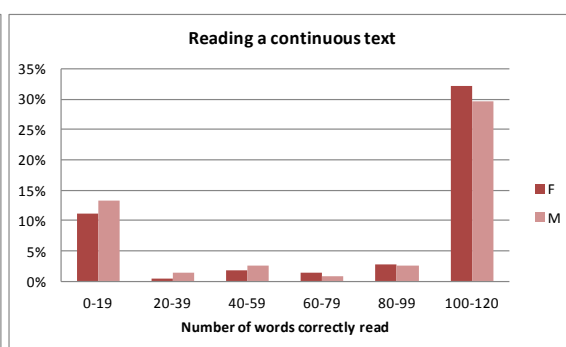


Figure 13: Girls' and boys' ability to read a continuous text

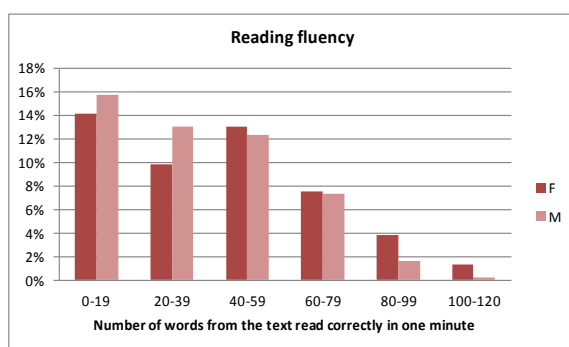


Figure 14: Girls' and boys' fluency reading a continuous text

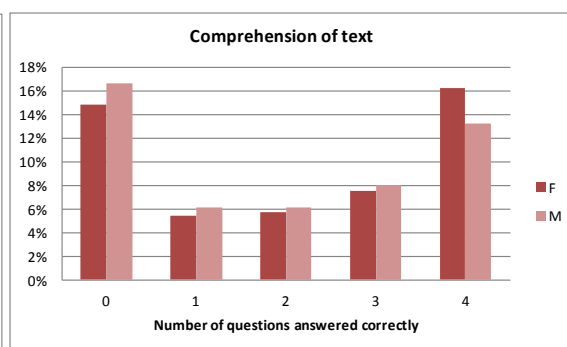


Figure 15: Girls' and boys' comprehension of the text read

A team of statisticians compared the score of pupils from the intervention and control groups within the two data sets. Their analysis and findings, presented in the technical appendix (annex 4), are summarised below.

When Mathematics and Portuguese test scores of pupils benefiting from the intervention were compared with those of pupils from the control group within the DPEC data set:

- Overall, pupils from intervention schools made more progress in Mathematics compared to similar pupils from control schools.
- However, older pupils from intervention schools made less progress in Mathematics compared to similar pupils from control schools.
- In relation to the Portuguese test, there wasn't a significant overall association with the intervention.
- However, a negative association was found whilst comparing pupils with similar Portuguese score at Baseline, suggesting intervention pupils with higher Portuguese score at Baseline made less progress at Mid-term than control pupils.

In relation to pupils' literacy scores from the independently-gathered dataset, different types of statistical analysis were inconclusive, suggesting no significant association between the intervention and literacy score.

It is not surprising that at this relatively early stage in the project, there seems to have been no significant impact on literacy outcomes. Although, due to the staggered onset of the intervention, the statistical analysis took account of "dosage", the amount of feeding pupils in each school had received, many intervention schools had only benefited from a few days' of feeding at the time of the data collection (April 2014 for the DPEC data; July 2014 for the independently collected data). The logic of the theory of change underlying the project (which can be reductively summarised as: reducing short-term hunger leads to improved attention in the classroom, which leads to improved learning, which leads to improved educational outcomes) does not refer to a short-term change but to a progressive one, and one would not expect improved educational outcomes to be achieved within such in a short time frame. There is a further issue, which is whether it is realistic to hope that the project will be able to impact on pupils' educational outcomes, as it is currently designed,

without direct interventions to improve the quality of teaching. This is discussed in more detail on pages 62-63.

### Improved quality of literacy instruction (MGD 1.1)

It is hoped that in the final evaluation it will be possible to measure “the number of teachers in target schools who demonstrate the use of new and quality teaching techniques and tools”. At the time of the Mid-term evaluation, schools had only recently received the kits of teaching and learning materials. A relatively small number of teachers had received training in the use of these. Although the Mid-term evaluation included a small number of observations of teaching within the schools visited using a standardised evaluation sheet (see annex 8), there was no sign of teachers using the new materials in their teaching.

The materials distributed were well received: 91% of teachers surveyed described them as either “good” or “excellent” (see figure 16 below) and teachers claimed to be using them: 90% of teachers surveyed said they were using the kits (see figure 17 below) and 71% claim to have used them in teaching “yesterday or today” (see figure 18 below). However, the training available to them in how to use these materials in the classroom is currently being provided by the project literacy coordinator and one of the district leaders, two young professionals who, although they both have pedagogical training and some teaching experience, are likely not to be considered as credible “trainers” by teachers in service. It may be unrealistic to hope that the current approach will lead to improved quality of literacy instruction (see discussion page 62).

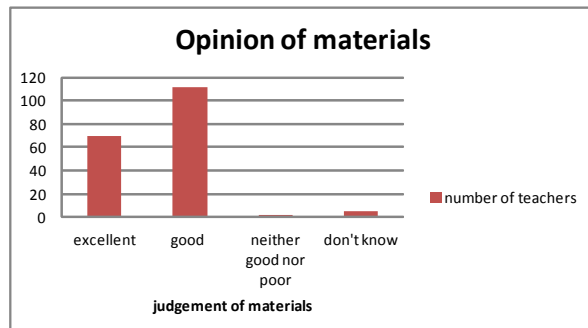


Figure 16: Teachers' opinion of teaching and learning materials in kits

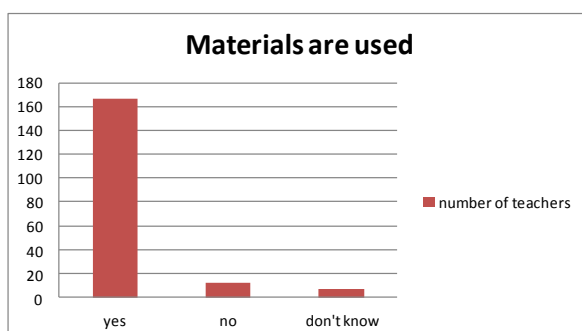


Figure 17: Teachers perception of use of teaching and learning materials in kits

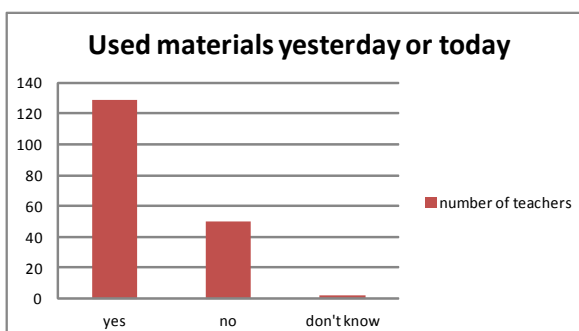


Figure 18: Teachers' use of teaching and learning materials in kits “yesterday or today”

### **Better access to school supplies and materials (MGD 1.1.2)**

As explained above, thanks to the project, all of the project schools have now received the supplies and materials as planned, which teachers value and are beginning to use. The final target of “[all project] schools receiving school supplies and materials as a result of USDA assistance” has been reached. This link in the chain of the results framework is therefore in place and can now be built on to achieve the next level of results: improved quality of literacy instruction. One of the consequences of this Mid-term evaluation should be the definition of strategies to achieve this (see discussion pages 62-63).

### **Increased skills and knowledge of teachers (MGD 1.1.4)**

There are two results/outcome indicators against which progress towards this result is to be measured: “Number of teachers anticipated to graduate as a result of USDA assistance” and “Number of teachers using new or improved teaching techniques in the classroom”. Both are concerned with the teachers being trained in the 11 EPFs (ADPP-run teacher training colleges) in Mozambique.

In relation to the first, the project is ahead of the target: the final target of 1,550 has already been surpassed at the current Mid-term point. As explained above (p27) if 95% (1,365) of the current eligible trainees pass the final exam, between 2012 and 2014 the EPFs will have contributed 3,175 qualified teachers to the national teacher pool. It seems this target could be revised upwards without difficulty.

In relation to the second indicator, the evaluation revealed that there is not currently systematic information available regarding the classroom teaching of EPF students during their practicum (teaching practice). Steps have been put in place to collect this information in a systematic manner in time for the final evaluation. Plans have been agreed to support a group of EPF trainers to design an observation framework which can be used to gather systematic data on the new and improved teaching techniques used by trainee teachers.

The evaluation sought to probe the capacity of the EPF training to improve literacy levels amongst trainee teachers. Data collected from the eleven EPFs for the purposes of this evaluation showed that from March 2014 to June 2014 the percentage of students evaluated by their trainers as being “good” in reading, writing and handwriting combined rose from 42% to 57%; the percentage evaluated as being “weak” or “very weak” fell from 18% to 10% (see figure 19 below). It is suggested that information on the “added value” of EPF training, in terms of trainees’ own literacy and other teacher training outcomes, should be collected in a more systematic manner in time for the final evaluation. Pre-tests and post-tests of all EPF trainees before commencing their training and just prior to sitting their final examinations would allow evaluation of the EPF training in a variety of areas.



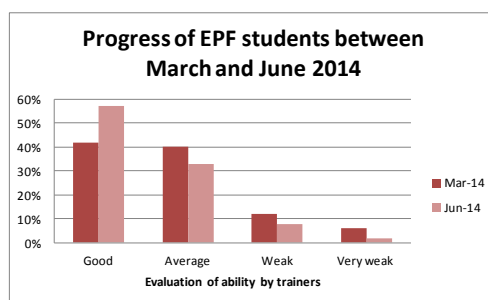


Figure 19: trainers' evaluation of EPF students in reading, writing and handwriting

### **\*Improved attentiveness (MGD 1.2) and \*Reduced short-term hunger (MGD 1.2.1)**

During school visits and interviews, many informants spontaneously informed us that pupils' attention had improved and they appeared less hungry in class since the feeding began. In general, this information converges with that collected during interviews with pupils and from questionnaires completed by teachers.

Both teachers and pupils were asked about the attentiveness of pupils in the classroom. The same question was put to the same informants during the Baseline study. Attention problems as reported by both teachers and pupils decreased significantly. Fewer pupils have difficulties paying attention in class at Mid-term than at the Baseline. Likewise, when asked whether their pupils had attention problems in class, teachers were significantly more likely to answer "never" at Mid-term than at Baseline (see technical appendix in annex 4 for more details).

Comparison of figures 20 and 21 (below) shows a striking difference in the teachers' and the pupils' perceptions of the situation. Although both groups report a decrease in attention problems over time, the pupils' vision of their capacity for paying attention in class is more optimistic than that of the teachers!

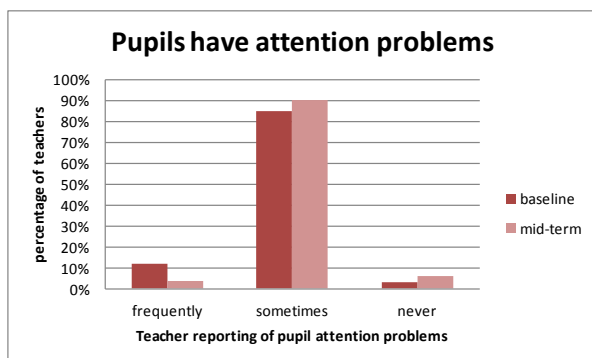


Figure 20: Comparison of teacher reporting of pupils' attention problems at Baseline and Mid-term

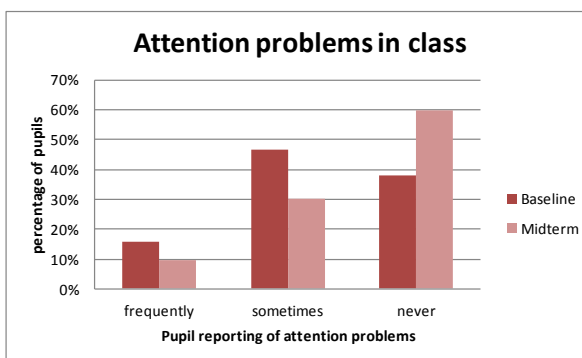


Figure 21: Comparison of pupil reporting of attention problems at Baseline and Mid-term

Teachers reported that pupils appear hungry in class significantly less at Mid-term than at Baseline (see figure 22 below). More pupils said they regularly felt hungry in class at Mid-term than at Baseline (see figure 23 below). However pupils reported being hungry "now" (at the time of the interview) significantly less at Mid-term than at Baseline (see figure 24 below). It is possible that since the introduction of school feeding, the expectation of receiving food was making pupils feel

hungrier. For various reasons, it does not appear useful to speculate about the reasons for this apparent contradiction: the information available is limited; in many cases the interviews took place soon after the onset of school feeding and feeding was not yet occurring daily or had been interrupted in some schools. See the technical appendix (in annex 4) for more detailed analysis of this information.

Despite the rather contradictory nature of these findings, the evidence suggests pupils' hunger patterns, or at least their awareness of hunger have changed since the onset of feeding. It would be useful to explore the question of pupils' hunger in more detail in the final evaluation. This might cast more light on the connection between hunger, attention and learning postulated in the theory of change underlying the project rationale (reducing short-term hunger leads to improved attention in the classroom, which leads to improved learning, which leads to improved educational outcomes).

At this stage, the Mid-term results regarding hunger suggest tentative support for the processes assumed in the theory of change, but more robust analysis is needed. There is, however, clear evidence of increased pupil attentiveness at Mid-term, compared with the Baseline situation and this from two distinct sources: pupils and teachers. This appears to constitute an important step up the ladder described by the theory of change, despite the fact that the step below it requires more verification. Further, this encouraging result suggests that the next step, of "improved learning", may also be attainable.

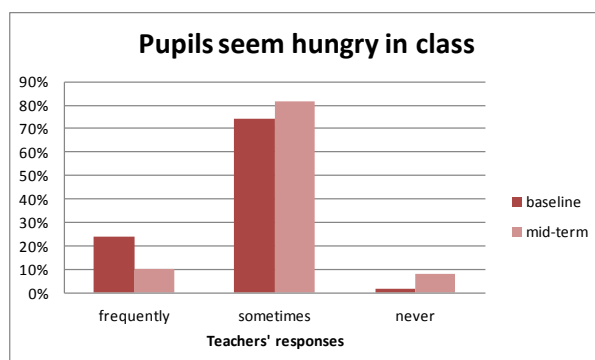


Figure 22: Comparison of teacher reporting of pupils appearing hungry in class at Baseline and Mid-term

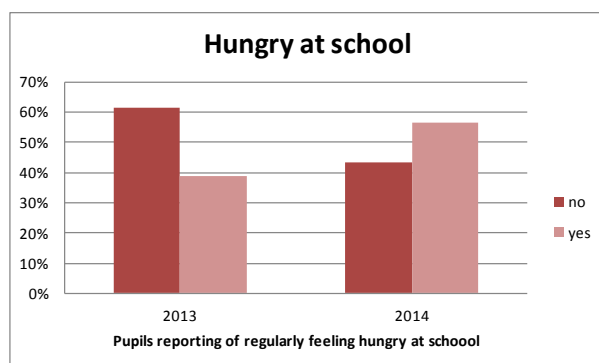


Figure 23: Comparison of pupil reporting of regularly feeling hungry at school at Baseline and Mid-term

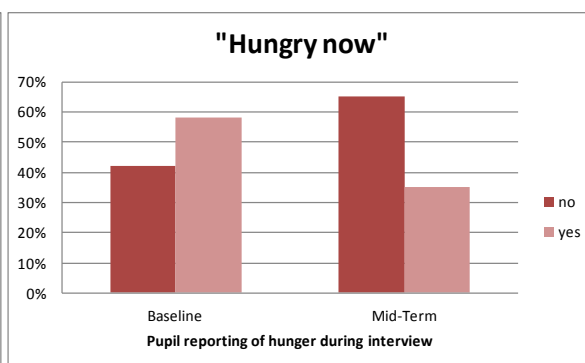


Figure 24: Comparison of pupil reporting of feeling hungry at the time of interview at Baseline and Mid-term

### Increased access to food (MGD 1.2.2.1)

The section “Providing school meals” above reports that 65,000 pupils now have access to food at school. Although there are currently some gaps in provision, this is a significant achievement, and means the foundation on which the rest of the hoped-for outcomes depend is now in place.



School feeding at EPC Tchelane, Manhica

### Improved student attendance (MGD 1.3), \*Reduced health related absences (MGD 1.3.2) and Increased student enrolment (MGD 1.3.4)

These indicators are considered together due to the overlap in the information available. During visits to schools and district education offices, we were repeatedly and spontaneously informed that since the onset of school feeding attendance and retention had improved and that pupils had become more punctual. Analysis of different types of numerical information should allow these observations to be verified against systematically collected data.

Unfortunately, complete school level attendance data is not currently available. Participating schools are asked by the project to provide daily attendance data, in order to record the number of pupils receiving school feeding. However not all schools are currently doing so. Some teachers are reluctant to fill in a second sheet which they see as duplicating the class attendance register<sup>13</sup>. Furthermore, where attendance sheets have been filled in by teachers and transmitted to the project office by the “professional” responsible for the school, a substantial part of this information has not yet been recorded and collated electronically<sup>14</sup>. Following the Baseline study, it was recommended that the “professionals” should make a weekly or bi-weekly head count of pupils in the schools for which they are responsible. This practice was not systematically adopted, in part due to the temporary gap in M&E coordination caused by the unexpected and untimely illness then

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<sup>13</sup> This appears to be due to the perception by teachers that they should be receiving some incentive to do this. This situation is discussed in more detail on pages 55-56 and 62-63 below.

<sup>14</sup> The delay in this process is due to: the initial lack of a project data base and lack of human resources to perform the task. Both issues have now been addressed: a new data base was being installed and trialled during our September field visit and the M&E assistant is currently entering the backlog of information.

death of the previous M&E coordinator. It has been revived at the request of the new M&E coordinator, but systematic head count data over time is not yet available for every school.

At this Mid-term point, so relatively soon after the onset of feeding in all schools, it is not possible to address the question of health-related absences in the Mid-term evaluation; the number of days' effective feeding in most schools is not sufficient to have had an impact on pupils' health. It is hoped this will be possible in the final evaluation. It will be important to have access to systematic attendance data.

Although it has not been possible to consult systematic attendance data, data regarding pupil enrolment and retention for the past three years (2011, 2012 and 2013) was obtained from the DPEC and analysed<sup>15</sup>. This information was made available in Excel spreadsheets for the four project districts and one other distinct of Maputo province, Boane, which had been used as the control district in the analysis of pupils' trimestrial results. It should be borne in mind that school feeding began in the first schools in June 2013 and was not occurring in all project schools until April 2014. Therefore it is highly unlikely to have had any impact on enrolment in 2013, which occurs for the most part at the beginning of the school year in January and February. However these figures show that there was no systematic trend towards increased enrolments, either over time or in a particular district, before the onset of the project (see figures 25, 26, 27 and 28 below). Enrolments in the second cycle (grades 3, 4 and 5) have been increasing steadily over the past three years in all the districts except Matutuine, where they have remained constant. It is hoped analysis of the enrolment figures for 2014, which will be available at the end of the current year, and for 2015 when they are available, may give some indication of whether enrolment has increased in the project districts since the onset of school feeding.

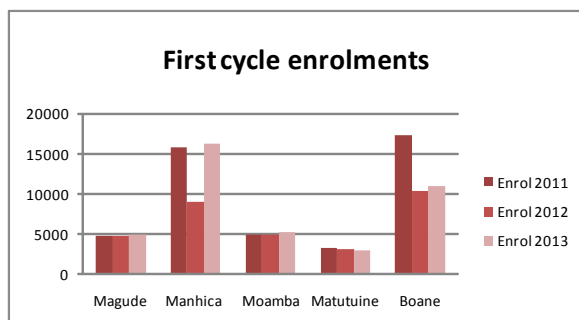


Figure 25: 2011-2013 First cycle (grade 1 and 2) enrolments by district

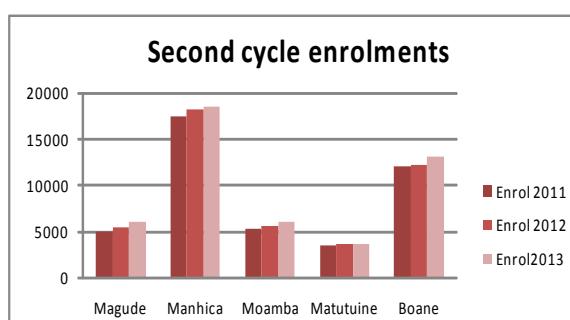


Figure 26: 2011-2013 Second cycle (grades 3-5) enrolments by district

<sup>15</sup> The evaluators are grateful for the helpful and cooperative support from the Department of Pedagogic Management of the DPEC of Maputo in making this information available. The analysis presented here was based on the spreadsheets as provided.

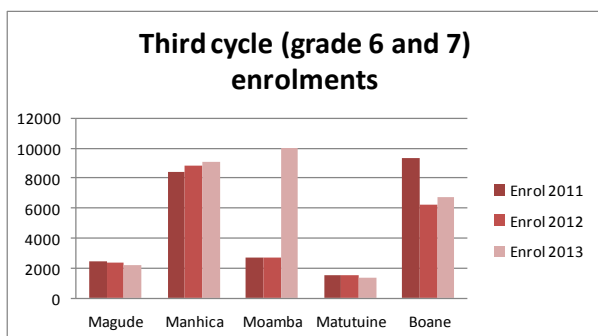


Figure 27: 2011-2013 Third cycle (grades 6 and 7) daytime classes enrolments by district

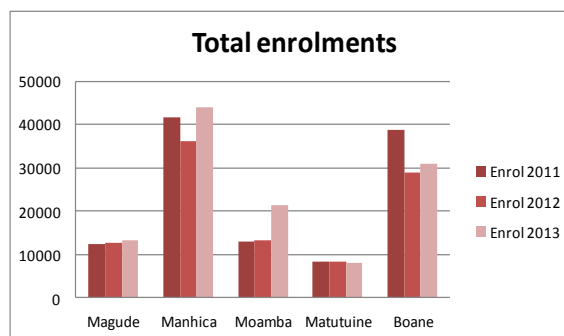


Figure 28: 2011-2013 Total enrolments by district

Retention figures compare the number of pupils in school at the end of the school year with the number who enrolled. School feeding began in June 2013 (although it was not occurring in all project schools until April 2014). Any increase in retention (reduction in dropouts) in 2013 could therefore conceivably be due to the introduction of school feeding. Analysis of the data by cycle and by district shows a potentially interesting pattern. For the first cycle (grades 1 and 2), in all project districts except Moamba, the percentage of dropouts fell between 2012 and 2013; it rose in Boane, the control district (see figure 29 below). Of course it is not possible to claim any sort of causality here, merely a trend. Furthermore, in three of the districts, this fall in dropouts is part of a trend since 2011, so may be due to factors other than the project. For the second cycle (grades 3, 4 and 5) dropouts fell in all of the project districts between 2012 and 2013, and rose in Boane, the control district (see figure 30 below). The same caveats apply. For the third cycle (grades 6 and 7: only the daytime classes were analysed) between 2012 and 2013 dropouts fell in all but one of the project districts, Moamba, and rose slightly in Boane (in Matutuine, the percentage of dropouts was negative, meaning that there were more pupils enrolled at the end of the year than at the beginning)<sup>16</sup>. In this cycle, unlike the other two, there was no pattern of falling dropouts between 2011 and 2012, which makes the fall between 2012 and 2013 all the most interesting, although it is still not possible to make claims about causality (see figure 31 below). Taken overall, there is a decline in dropouts in all project districts except Moamba, which has a slight rise, and an increase in Boane (see figure 32 below).

These are indeed interesting findings, which converge with the statements of multiple interviewees that retention had improved since the onset of school feeding. Once the data from 2014 become available, it will be possible to observe whether this trend continues.

<sup>16</sup> In the third cycle data, the very high level of dropouts in Boane in 2011 requires an explanation and may indicate some numbers are missing; clarification has been sought from the DPEC on this matter.

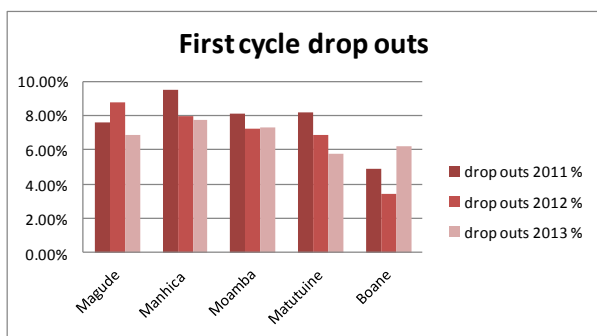


Figure 29: 2011-2013 First cycle (grade 1 and 2) drop outs by district

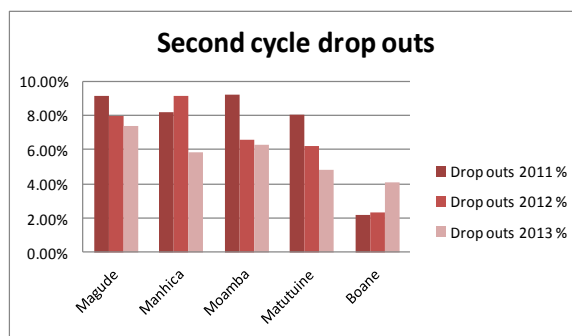


Figure 30: 2011-2013 Second cycle (grades 3-5) drop outs by district

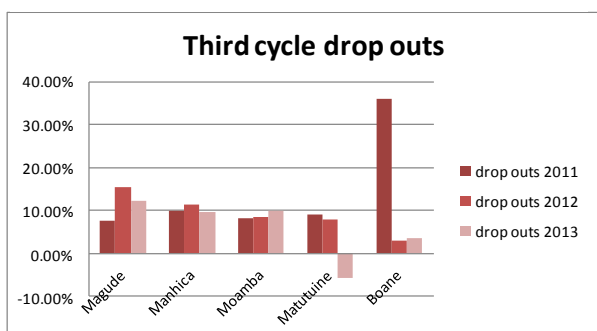


Figure 31: 2011-2013 Third cycle (grades 6 and 7) daytime classes drop outs by district

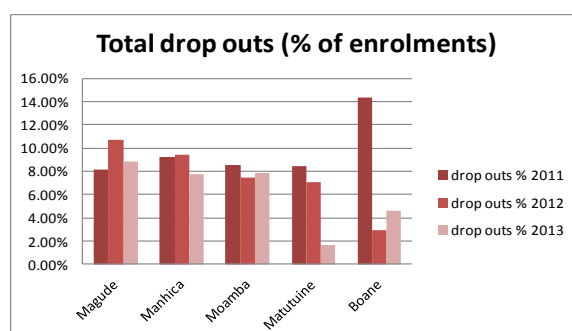


Figure 32: 2011-2013 Total drop outs by district

One strategy by which the project aims to promote enrolment and retention in school is through support for after-school clubs. As presented above, as of September 2014 there were a total of 570 active “learning clubs” (generally promoting literacy or mathematics) in the project schools, designed to support pupils with school work; 59% of pupils interviewed claimed to belong to one or more club.

Of those pupils who said they belong to one or more clubs, 43% said they enjoyed it very much, 19% said they enjoyed it somewhat (a little) and 19% that they did not enjoy going (see figure 33 below). 38% said the club helped them very much with their school work, 21% that it helped them somewhat (a little), and 17% that it did not help with school work (see figure 34 below). When asked whether their school work had improved since going to the club, 27% said it had improved very much, 27% that it had improved somewhat (a little) and 19% that it had not improved (see figure 35 below). 96% of teachers who answered the question said the clubs had had a positive impact on their pupils’ behaviour and performance at school (see figure 36 below).

The role of after-school clubs in promoting enrolment and retention is as yet unclear. However, by supporting some pupils and helping them improve their performance at school, they are likely to improve the way these children feel about school overall. These initial results are encouraging but they show definite room for improvement. If the quality of the learning clubs can be improved, this approach has the potential to help improve both attendance and retention in school and the educational outcomes of pupils. This is discussed in more detail on pages 62-63 below.



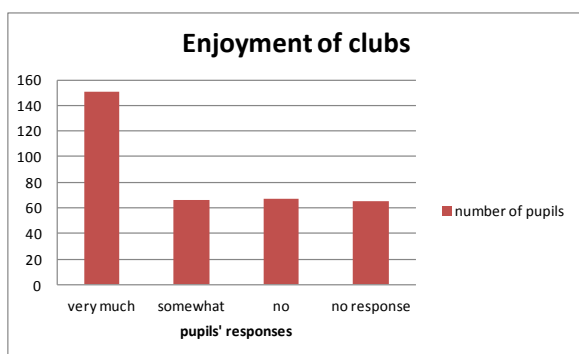


Figure 33: Pupils' enjoyment of after-school clubs

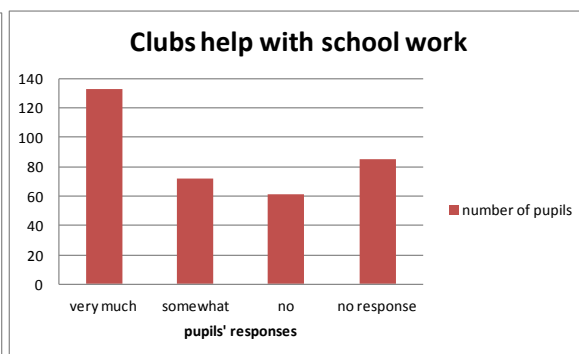


Figure 34: Pupils say whether after-school clubs help with school work

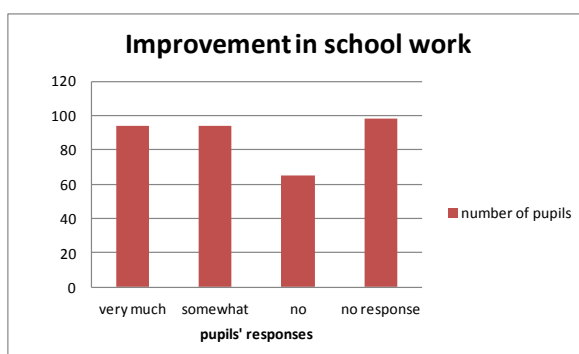


Figure 35: Pupils say whether clubs improve school work

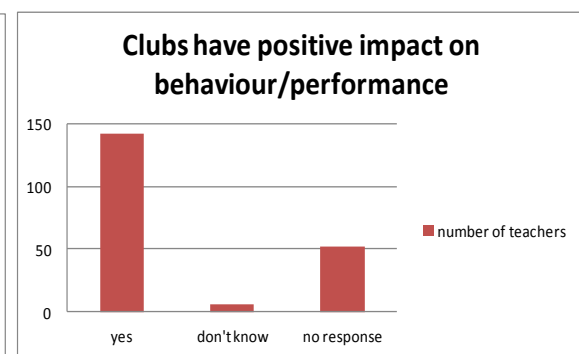


Figure 36: Teachers say whether clubs have positive impact on pupils' behaviour/performance

The Director of EPC Tchelane described how the after-school clubs supported by the project have helped his school: “We have study skills clubs for the younger children, a study skills club for older children, a sports club and an agriculture club. In the learning clubs, pupils with difficulties in reading, writing and counting learn to form syllables, words, sentence and text, to add, subtract, multiply and divide. In the agriculture club, as well as learning how to grow plants, pupils use other disciplines such as mathematics to calculate measurements and natural sciences to study soil, plants and the organisms living in soil. In the sports club, pupils practice physical activities which promote healthy and harmonious growth. I would like to stress the significant reduction in absences, particularly amongst girls, which is leading to their performing better at school. The pupils appear more motivated in class, partly because they now have materials which did not exist before the project, such as exercise books, pencils, pens and coloured crayons.

### Improved school infrastructure (MGD 1.3.3) and Increased access to clean water and sanitation services (MGD 2.4)

The achievements in terms of improved school infrastructure and increased access to clean water are covered in the sections on “Building/rehabilitation of kitchens and storerooms,” “Building/rehabilitation of wells and water stations/systems” and “Building/rehabilitation of latrines” above. The main impact of the improved infrastructure is that it creates the conditions for the school feeding to take place efficiently and in a safe and hygienic manner. The impact of access to water is manifold: safe water is a prerequisite to efficient, hygienic school feeding, as well as to functional, productive school gardens. Interview informants described the benefits of the arrival of clean water in certain schools and the fact that these go far beyond the advantages to

schoolchildren and teachers. In some cases, other community members or even the whole community are benefitting from the arrival of clean water in a school, both in terms of access to safe water and because it means family members, including children, no longer have to travel long distances on foot to fetch water. This in turn increases their availability for school attendance and to concentrate on their school work.

**Increased use of health and dietary practices (MDG SO2), \*Improved knowledge of health and hygiene practices (MGD 2.1) and \*Increased knowledge of safe food preparation and storage practices (MGD 2.2)**

Indicators used to measure increased health and dietary practices include the number of school gardens established and the number of individuals benefiting from these; the practice of cleaning cooking and eating equipment prior to use according to accepted standards; and use of appropriate hand washing practices by pupils and food preparers (cooks). Within the “special study” they also include increases in learners’ height and weight. Also within the “special study”, indicators of \*Improved knowledge of health and hygiene practices are students demonstrating acceptable knowledge of health and hygiene practices; indicators of \*Increased knowledge of safe food preparation and storage practices are that food preparers are trained in hand washing, safe food preparation and storage practices.

The number of school gardens established is reported in the section “Establishing school gardens” above. It appears that where school gardens exist, they are to some extent used for educational activities and to produce food for pupils, although there are problems of water and human resources to be overcome before this can be established on a large scale (see recommendations on page 63-64 below).

The “professional” Isaura Guambe explained how the school at Maguaza is growing cassava (manioc) to diversify the school feeding: “The project has helped reduce the number of pupils dropping out and improve their performance in class. In that school, cassava is cultivate by the community and by the children. The cassava helps to vary their diet. For example, on Mondays, soya is cooked; on Tuesdays they boil cassava. This helps the children a lot because, in addition to the soya, they always have cassava to fall back on. The community helps the school to plant and cultivate the cassava, as well as preparing it to be eaten. The whole community eats it. The school Director was trained in agriculture, so he knows about good agricultural practice and the importance of being able to grow food.

The limited opportunities afforded by the evaluation school visits to talk to the cooks and observe their cooking showed that, at least in this small number of cases, cooks were aware of the importance of washing cooking and eating equipment prior to use and of hand washing before food preparation. Project records appear to show 819 cooks have been trained in personal hygiene and 579 in kitchen hygiene; it is not clear if the same individuals received both



Children at EPC Maguaza queuing to wash their hands at the “Tip-Tap” before eating

training sessions (see page 60). This training has not been extended to all the cooks. At present it would not be practical to do so, due to the number of different cooks who function in rotation. The question of how the cooks are identified, motivated and trained is discussed on pages 54-56 below.

Data from student interviews shows a high level of knowledge of the importance of hand washing before eating and after going to the toilet. When asked what they did before eating, 92% pupils claimed to wash their hands (hand washing was not mentioned in the question) (see figure 37 below). When asked what they did after going to the toilet, 87% of pupils claimed to wash their hands (again, hand washing was not mentioned in the question) (see figure 38 below). 84% were able to give a basic explanation of why hand washing is important (see figure 39 below). The nutrition trainers reported that when they go into schools now, the children all spontaneously show them their hands and call out that they have washed their hands! Whether this knowledge translates into practice or not is another matter. In several of the school visited, there was no water near to the toilets for hand washing (and in one case no water at all). Hand washing did not always appear to be systematic before eating, although in at least one school the children queued up at a “Tip-Tap” to wash their hands before receiving the food. We were told that whilst “Tip-Taps” had been established in around one third of the project schools, they were not very sustainable, having a tendency to “disappear” when the jerry cans were used for other purposes; the project is considering constructing concrete tanks for hand washing.

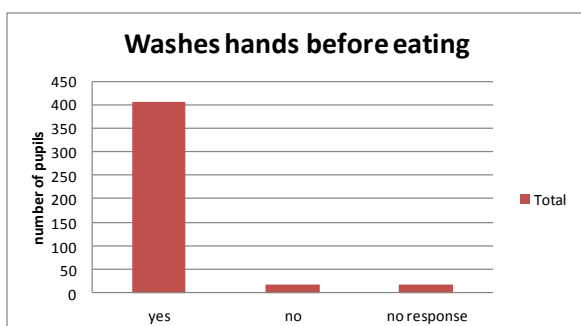


Figure 37: number pupils who claim to wash hands before eating

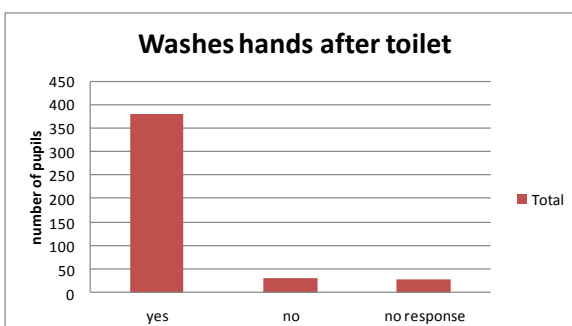


Figure 38: number pupils who claim to wash hands after toilet



Figure 39: number of pupils able to explain why hand washing is important

The mean gain in height in the year since the Baseline study for pupils in the intervention schools was just under 6 cm; the mean gain in weight was just under 4 kg. These are very broadly in line with

the WHO standards for children aged 9-12, although the mean weight gain in both the intervention and control groups is a little higher than would be expected according to WHO standards. The statistical tests run showed no significant association of height or weight outcomes with intervention or dosage at Mid-term (see technical appendix in annex 4 for more information). This was not a surprise: given the relatively short time children in intervention schools had been receiving school feeding we did not expect to find a significant change in their weight and height in comparison to the control group pupils.

It is hoped that, after a sustained period of regular school feeding during the second phase of the project, the final evaluation will provide an opportunity for a more thorough analysis and comparison of the intervention and control group pupils' height and weight changes. These should be analysed in terms of body mass index and by sub groups, such as age and sex. There is however one caveat. The data collected on pupils' weights and heights suggest a high level of measurement error, at Baseline or at Mid-term or possibly both. This is probably due to the challenges of accurately weighing and measuring pupils within their schools, where there are often no level surfaces available to place scales on or completely straight walls against which to measure pupils. The analysis took the possibility of measurement error into account as far as possible (see technical appendix pages 86-84 for more information). It may be possible to collect more accurate measures for the final evaluation, using double measuring and weighing of each pupil and improving the equipment and the conditions in which it is used. However the Baseline and Mid-term measures against which they are compared will remain.

### **Increased knowledge of nutrition (MGD 2.3)**

Indicators used to measure knowledge of nutrition are the number of people trained in child health and nutrition messages as a result of USDA assistance and the percentage of food preparers trained in good nutrition and dietary practice.

There has been some difficulty in obtaining numerical data relating to the nutrition training and the number of people trained. This is discussed on page 60 below.

Evaluation interviews provided accounts and examples of positive impact of the nutrition training. The head teachers of the three EPFs interviewed were extremely positive and enthusiastic about the nutrition training being provided to their students and saw this as a clear benefit to future teachers and to the wider community. They spoke of changes in behaviour already being discernible as a result of the training, amongst the EPF students, in schools and in the wider community. Many such changes were apparently due to information provided about possible innovations in the traditional diet and advice that certain locally available products could be used and combined with others to obtain nutritious meals.

### **Increased access to preventative health interventions (MGD 2.5)**

The indicator used to measure access to preventative health interventions is the number of pupils receiving de-worming tablets once a school year. This is reported on pages 33-34 above. While the percentage of pupils reached by the intervention is high, it is regrettable that the district health

services are only able to provide de-worming interventions once a year, not twice as envisaged in the Ministry of Health plan.

#### **Increased engagement of local organisations and community groups (MGD 1.4.4/2.7.4)**

The indicators used to measure engagement of local organisations and community groups are the number of school feeding committees formed or strengthened, the number of school feeding committee manuals distributed and the “number of parent-teacher associations or similar school governance structures contributing to their school as a result of USDA assistance”.

Progress towards these indicators is presented in the section on “Training in commodity management” on pages 23-24 above. However this raises the question of whether the “parent-teacher associations or similar school governance structures contributing to their school as a result of USDA assistance” refers to the school feeding committees (SFCs) or to another type of structure. This is particularly pertinent in the light of what the evaluation visits revealed about the SFCs.

During evaluation visits to a sample of project schools, we asked to speak to a representative of the SFC in each school. In each case, we were directed to the teacher responsible for managing the commodity and the storeroom. It became apparent that, at least in the schools visited, SFCs are not managing the school feeding process; rather than the “new” structure of a SFC envisaged by the project, it is the existing structures, already responsible for decision making and organisation of the school which are playing this role. In the schools visited, the oversight of the school feeding process was being performed by one or more of the following:

- Community representatives and elders;
- The School Council or a sub-section of this;
- The head teacher and/or the teacher responsible for managing the commodity.

This adaptation of the structures planned by the project to fit in with “the ways things are already done” appears to be a positive development in that it signifies that communities and schools are taking responsibility for the process and making it their own. Positive examples of this include communities which have made the decision to solicit a small contribution from each family to pay the cooks, rather than relying on volunteers. Less positive examples include situations where communities have identified a large number of volunteer cooks (up to 35) to prepare the food in rotation, but where the large numbers involved have led to coordination difficulties and gaps in provision (see recommendations p 56).

#### **Increased capacity of government institutions (MGD 1.4.1/2.7.1)**

The indicators used to measure capacity of government institutions are very similar to those used to measure the activity “Training of government officials” reported on page 31 above. This reports that government officials at national, regional and local level have not yet received training in the benefits of school feeding or management of school feeding; this is planned for 2015. Nutrition training has been held for government officials. There appears to be regular, active communication and collaboration between government officials and the project team.

## Case studies

### Ana, pupil at EPC Maguaza

Ana Williams is 14 years old. She arrived in the EPC Maguaza in 2012, from Beira. When she arrived in the school she was in the 5<sup>th</sup> class but did not know how to read or write. The teacher Fernando suggested she should go back to the 2<sup>nd</sup> class to learn to read and write but Ana refused because she felt ashamed. In 2013 she repeated the 5<sup>th</sup> class and during that year Teacher Fernando regularly talked with Ana and with her parents, explaining that she really needed to start again at the beginning. Ana was reluctant but eventually agreed to go back to the 2<sup>nd</sup> class. Teacher Fernando also convinced her to come to the Literacy club which he holds in the school on Saturdays. She began attending the club at the end of 2013, becoming an active member, and in 2014 she began in the 2<sup>nd</sup> grade. Today Ana can read and write. She remembers that when she arrived in the school, in the 5<sup>th</sup> class, she did not even know the alphabet. "Teacher Fernando thought I must have been paying the teachers in Beira, but actually I just used to copy from the pupils next to me and sometimes they would do exercises for me. Today I don't need to copy anybody."



Focus group with pupils at the EP1 de Maguaza

In Beira, Ana lived with her mother and father. One day Ana's grandmother called her father to come back to Maguaza, where there was work for him as a mason and soon after the father sent for Ana and her mother to join him. It was Ana's father who built the kitchen and the storeroom at the school in Maguaza.

Today Ana feels comfortable in the school. In her previous school she was unhappy because her classmates made fun of her and said she didn't know anything. She used to reply: "One day I will know and I'll be somebody." Today she feels sure she really will be somebody; her dream is to become a doctor.

### Fernando, pupil at EPC Bela Vista



Fernando telling his story to Rosa Tinga

Fernando began studying at EPC Bela Vista in 2006; in 2010 he failed the 5<sup>th</sup> class, which he repeated the following year. He failed the 5<sup>th</sup> class three times before in 2013 he was allowed to join the 6<sup>th</sup> class, apparently because if a pupil fails three times they have to stop studying for three years. At this time he joined the Portuguese club because he knew that the reason he kept failing was because he did not know how to read and write: when the teacher wrote on the blackboard, he couldn't copy or understand what was written. Today he feels better because, thanks to the club, he knows how to read. He has also joined the Mathematics club, where he puts into practice what he has learned during the lessons. He used to feel very bad for not being able to read and for failing the 5<sup>th</sup> class so often; he's also sad because his friends are now in the 9<sup>th</sup> class and he's with younger children, although he's not the oldest in the class. However he is happy that he will now be able to go to secondary school.

Fernando's father is retired and owns some cars and minibuses. Fernando's family is not poor; he already knows how to drive and sometimes works in the minibuses collecting fares from passengers. But he wants more. He wants to finish studying so he can pass his driving test and drive legally. He says taking the driving



test is a form of study, which requires him to know how to read and write. Thanks to the Portuguese club and the Mathematics club he believes he will be able to realise his dream of becoming a professional driver.

### A professional's view of how a school has changed

The “professional” Alfredo Américo Cumbi described the positive impact on the EPC Bela Vista in Matutuine of three complementary aspects of the project: the school garden, the after-school clubs and the presence of a teacher trained in hygiene and school health: “The school garden is going well because there is a “school production club” which is responsible for looking after the garden. Each teacher and each class are responsible for a different part. The produce grown is used to benefit the pupils or cooked in the school while the daily meal is prepared. The garden is also used as a learning space where pupils learn to look after plants. The after-school clubs have been really helped by the materials the project provided: the pupils use them all the time and are very happy to have them. Having a teacher trained by the project in hygiene and school health is really important: since she began the classrooms are clean, the toilets are looked after and even the school yard looks clean and welcoming. All this is thanks to the Food for Knowledge project. Every time I go to the school I see something else has improved: this shows how welcome the project is in this school.”



Pupils at the EPC Bela Vista welcoming the evaluation team

### A professional's view of how a community has changed<sup>17</sup>

The “professionals” Jossefa Noa and Caterina Guambe described the impact on the school EP1 Gumbene and the surrounding community of the Food for Education project: “Before the project, the community was not very active, but when the project arrived they felt it was important to combine their forces and take advantage of the opportunity being offered. Now they find their children are doing better at school. Thanks to the project, there’s a strong relationship between school and community. The community is grateful because their children have changed. Now parents and guardians don’t have to force them to go to school: they go of their own accord. They know when it’s time for school! Since the project began, the number of children enrolled in the school has risen. Even some children who are not really old enough have begun coming to school and the teacher has accepted them. The mothers say their children are better nourished and more participative in lessons. They even say that when it’s a holiday they cry because they want to go to school! It’s worth pointing out the teacher has contributed a lot to helping the community evolve; this can be explained by the fact that he was trained as a teacher by ADPP, so also received training in community development. He works with the pupils, parents and guardians and has helped promote many activities in the community”.



Photos taken by the professional Jossefa Noa showing the building of the kitchen at EP1 Gumbene

<sup>17</sup> The evaluators would like to thank Jossefa Noa for providing the photos used in this case study. All other photos in the report were taken by the evaluators during the evaluation process.

### **3. Strategic relevance regarding effectiveness, efficiency, impact and sustainability (“Are these the right things to do? What can be learnt from what has been done so far?”)**

This section of the Mid-term evaluation report assesses the strategic relevance of the project’s activities, systems and processes in order to document lessons learned and identify best practices to date. It makes relevant, useful and realistic recommendations, to allow interventions to be fine tuned and corrected for the remainder of the project. It is organised around a series of themes which emerged from the various evaluation activities and from analysis of the data collected.

#### **Human Resources, capacity, collaboration and ownership**

The evaluators were impressed by the large number of motivated and dedicated people working within the project, both employees of the project and of government or other partner organisations, and volunteers; and by the high degree of competence and experience of many of these. It was also clear that a large amount of learning and capacity development has and is taking place, both through formal training and learning “on the job,” leading to a progressive strengthening of individual and project-wide capacity.

We are told repeatedly that, after an initial period where the project staff and the district education officers were unsure of their respective roles and of how they should work together, now the communication and cooperation between the project and the SDEJT is fluid and systematic. The focal points in the SDEJTs work with the project on an ongoing basis and there is a real sense amongst government representatives we spoke to that the project is “theirs” and an integral part of the national school feeding programme PRONAE. We also saw evidence of teachers working hard to play their role in the project: managing the commodity in the store rooms, supervising after-school clubs and playing the newly-defined role of being responsible for school hygiene and health, following the nutrition training. Likewise we saw and spoke to teams of cooks who are working regularly and with dedication to prepare and distribute the CSB porridge. In some cases, communities have chosen to pay the cooks, so as not to have to rely on volunteers.

In addition to these very positive observations, we saw a number of aspects which are not working so well and which need to be improved in order for the project to function effectively. Both the district leaders and the “professionals” are manifestly not working as effectively as they could, due to:

- Their ambitious job descriptions, which involve managing several tasks at once, in different locations, and combine practical implementation with reporting and transmission of information; many have the potential to play these roles, but have not had sufficient work experience or training in planning, communications and effective working methods;
- Work plans which are not realistic, are not coordinated with the work plans of the wider team, and which change regularly at short notice;

- Lack of equipment and resources (adequate transport, access to computers, adequate shoes for walking between schools on poor roads, etc) which leads to time wasted and saps morale.
- In the case of the leaders, they are also expected to manage and motivate teams of up to 15 people, for which they do not have the experience or training.

We observed several cases where communication within the team was not effective, and work systems did not function, leading to a dynamic of recriminations and blaming others. For example, there is an electronic system for monitoring the stocks of CSB in schools; in addition the “professionals” are supposed to report weekly on the stocks of CSB in their schools and warn when these are low to prevent them running out. The system is not always working: we visited at least one school which had run out of CSB and not been supplied with more. Various explanations were given: there were more children in the school than registered on the system etc. These are no doubt true, but the lesson to come out of this is that both the system and communications within the team need to be improved to avoid such cases reoccurring.

We also witnessed cases where inadequate communication between the project team and volunteers was causing problems. There appears to be a widespread perception amongst many volunteer cooks and teachers that the project should be paying them or providing some incentives in exchange for their work, and the suspicion that incentives they are due are being withheld from them. This perception needs to be understood in the context of Mozambique where there is a widespread culture of NGOs providing incentives to the population; furthermore, volunteers remember that the previous school feeding project, run by the WFP, did provide incentives in the form of food to its volunteer cooks.

In reality, the project does not have funds to pay or incentivise cooks and teachers and firmly takes the position that it is the responsibility of parents and the community to contribute to feeding their children in school and the responsibility of teachers to support their pupils by filling in the attendance sheets required by the project and through after-school clubs. Clear, consistent communication of this position is probably the best way of overcoming this type of problem and the whole team needs to be “on message”; however this is not easy for a young professional, in many cases in their first job, who has no experience of or training in this type of public communication with older people. There is an excellent communications department at the ADPP headquarters, which produces high quality promotional and publicity materials aimed at international partners and donors in relation to ADPP’s various projects; perhaps this department could be called upon to produce some appropriate communications material aimed at the project beneficiaries.

As explained above, some communities have taken the decision to pay the cooks; even where the cooks remain volunteers, it is important that they feel their work is appreciated and that they are recognised and treated with respect. One of the most frequent grievances we heard was that there were not enough equipment or uniforms for the cooks. We were shown pans which had developed holes and buckets which were inadequate for carrying water. Due to the large number of volunteers in the teams of cooks, there are not enough T shirts and aprons for everyone to have one and they feel offended at the idea of sharing these personal items, seeing this as an affront to their dignity. Another issue raised during the evaluation was the question of health checks for cooks. In a context

where airborne diseases such as tuberculosis are not uncommon, it is important that the people preparing the food should be healthy, so they do not inadvertently transmit diseases to the children they feed.

The “professional” Emilia Colana explained how she was able to use her communication skills to overcome a problem in EPC Tchelane. “When we began to implement the project in the school, I explained all the components of the programme, the school called a meeting with the community to present the project, and ladies were chosen to prepare the CSB. When school feeding began everything went well until in March there was some trouble in the group which prepared the food on Thursdays. Some of the ladies did not want to cook the soya any more unless they received something in exchange. Together with the school Director and the School Feeding Committee, we had a meeting with this group of cooks. We explained that the project does not have the means to pay them and that the project really belongs to the community, it is not ours. They should feel they own the project and even after we have gone we hope they will continue to feed the children at school, using the school garden and growing root vegetables. That’s why the schools need to begin planting gardens and growing root vegetables to vary the food served. After we had explained this, the problem was solved: now the ladies in that group always turn up to work.”

### Recommendations

- Redefine the job descriptions of professionals and district leaders, making them achievable.
- Develop realistic work plans, which are integrated and compatible with those of all sectors.
- Identify the training needs of the “professionals” and provide appropriate training. This should include training in data transmission and reporting, communications and team working.
- Identify the training needs of the district leaders and provide appropriate training. This should include training in leadership and people management.
- Provide more professional support to the “professionals” and district leaders. This might include regular appraisals and discussion of their professional development needs with a trained and qualified manager.
- Identify ways to promote team building and improve motivation amongst the project team, such as a team building outing and picnic.
- Identify ways to make the professionals feel they and their work are important and appreciated, such as a small salary increase,
- Improve communications with the project volunteers, in particular teachers and cooks, to foster better understanding of the project’s approach, ownership and motivation. The communications department at ADPP’s headquarters could be involved.
- Ensure the “professionals” have access to the equipment and tools they need to do their job, such as computers.
- Ensure the volunteers have access to the equipment they need to do their job and feel they are valued and their dignity is respected. For example, cooks should have aprons, T shirts, soap to wash these, etc. It is the responsibility of individual schools and communities to work out how to provide these, not of the project.
- Arrange for cooks to have health checks before taking part in the preparation of school feeding.

## Transport

The roads in the project districts are of variable quality and are often in poor condition. Many schools are situated far from the main arteries, several kilometres along sand roads or tracks. There is often little or no public transport, although passing cars may be happy to give a lift in exchange for a financial contribution. During the rainy season the schools can become impossible to reach without a solid truck with four wheel drive. Many of the project's activities involves travelling either from Maputo or from the district administrative centre to different schools, either to deliver CSB, building materials or large water tanks and other water materials.

The building, water and logistics teams all function with hired vehicles and drivers. These can be unreliable, unsuitable and unavailable when needed, leading to delays and inefficiencies. The project has spent a large amount of its transport budget to date on renting vehicles<sup>18</sup>.

We observed that the motorbikes used by district leaders greatly facilitate access to the schools, which frequently involve travelling a considerable distance on poor sand roads. Motorcycles, although useful, are also dangerous and can be deadly. At the end of August 2014, the project's recently appointed co-leader was killed by a car whilst coming home from a project meeting on a motorcycle.

It seems the "professionals" were provided with bicycles, which do not work in these conditions and soon become damaged and unusable. The professionals, who are responsible for 5 schools each, which may be several kilometres apart, usually live close to one or other of these schools. They told us that since their travel allowances are inadequate, they often either walk to their schools or pay for transport out of their own pockets. This wastes their time, limits their effectiveness and saps their morale.

## Recommendations

- Study the possibility of reorganising the project budget in order to purchase two suitable new or recent second hand vehicles in excellent condition, one for use by the logistics team; the other for use by the building and water teams.
- Acquire one or more motorbikes for each district which the professionals can use as required. Provide helmets and training in riding a motorcycle. Only allow the motorcycles to be used in daylight hours.
- Provide the professionals with adequate travel expenses to go to their schools.

## CSB and Logistics

The Logistics team, under the direction of the Logistics coordinator, has managed to set up systems to import the CSB and have it tested and approved for use in schools. Four warehouses have been refurbished – one in each project district – and the commodity is being efficiently managed there. The evaluators visited the main warehouse in Manhica; this appeared to be well organised and efficiently run. These are all significant achievements.

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<sup>18</sup> As of September 2014, \$94,456 has been spent on transporting CSB from Maputo port to the warehouses; \$120,000 on transporting CSB to schools; \$12,400 on transporting water materials.

There are also aspects which need to be improved. As mentioned above, the system for ensuring schools have CSB at all times needs to be fine-tuned and communications between the Logistics team and the professionals improved so that schools do not run out of the commodity, leading to interruptions in feeding, with the risk of a loss of momentum and motivation. Incidentally, one way improved communications could lead to more flexibility in delivering the commodity would be if the different teams were kept informed whenever a vehicle is going to a remote school<sup>19</sup>. During the evaluation visits, we were informed and saw that some CSB had become infested with weevils; other bags of the commodity had gone bad. Samples of the commodity had been tested and a plan put into action to deal with the problem. The logistics team was recalling the sacks of infested and bad CSB and was in the process of preparing a second warehouse to store them, so they would not contaminate the good stock. In the meantime schools were instructed to keep the infested or bad bags closed and separate from the good stock. CSB which was mildly infested was treated with an approved insecticide, sifted and repackaged in 2kg bags for distribution to pupils to take home. School storerooms were treated with an approved insecticide and ventilation was improved through the addition of ventilation shafts (see p 16 above).

It appeared to the evaluators that the plan to deal with the infested and bad CSB was being efficiently and actively executed. It will now be necessary to limit the damage this may have caused to the project by ensuring this does not occur again and through remedial action to limit the spread of negative rumours about the product. The evaluators heard reports of pupils and parents who no longer wanted their children to eat the food. Straightforward, frank communication is needed in order to dispel such attitudes. It seems one reason for the problems with the commodity may be the length of time the commodity was in the warehouses and storerooms before being used, due to delays in the onset of feeding. Representatives of MINED told the evaluators that the sacks of commodity should have date stamps and use-by dates. Representatives of USDA told the evaluators this would not be possible and that use-by dates are a marketing gimmick which does not ensure the quality of the food, if this is not stored in the right conditions, so could actually be a damaging distraction. The evaluators suggest that in order to reassure the Mozambican partners, the possibility of putting production dates on the sacks of commodity should be explored.

During the Baseline study in 2013, the nutrition specialist at UNICEF recommended that, given the nutritional status of Mozambican schoolchildren, the project should provide the more highly fortified CSB+ ("CSB plus") rather than simple CSB. Given all the effort and cost involved in providing school feeding, it makes sense to ensure the food provided is appropriate to the nutritional needs of the beneficiary children. To date it has not been possible to change the commodity provided;

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<sup>19</sup> We saw an example of this *not* happening when we went to visit a remote, inaccessible school during the evaluation visits. As we were driving in a twin cab 4x4 vehicle from the district base where the warehouse is situated towards the school more than two hours drive away on very poor roads, we were informed that the supply of CSB in the school we were going to visit had run out. Our visit in a suitable vehicle would have been an ideal opportunity to transport the commodity. In a project operating in inaccessible places with limited access to transport, it is important to take advantage of any possible opportunity provided by a vehicle to transport equipment, goods or people as necessary. At other times we saw this principle being applied and the vehicle we travelled in was asked to stop to drop off some piece of equipment to a member of the project staff waiting by arrangement by the side of the road to receive it.



however the partners should investigate this question further and strongly consider ensuring that CSB+ is provided in future consignments if appropriate.

### Recommendations

- Fine-tune the system for allocating CSB to schools and improve communications between the logistics team and the “professional”, providing extra training to the “professionals” where necessary.
- Continue to implement the plan for dealing with unfit CSB, recalling the bags of unfit CSB and replacing them with good bags as quickly as possible to avoid interruptions in feeding.
- Devise and implement a communications strategy to share information about the problems with the commodity frankly, so as to dispel damaging rumours and misapprehensions.
- Review logistics plans to minimise the risk of the problem recurring.
- Explore with the producers the possibility of putting production dates on the sacks of CSB (USDA).
- Investigate whether there were other reasons for the problems encountered and in particular whether the problematic sacks came from one particular source (USDA).
- Explore the possibility of providing CSB+ in future consignments.



The warehouse in Manhica



CSB which had become infested with weevils has been treated, sifted and repackaged in 2kg bags for distribution to pupils

### Nutrition training

As explained above, there is early evidence that the nutrition training is being welcomed and leading to some positive changes of behaviour. For example, teachers who have received training in nutrition and health are beginning to apply that knowledge in their schools and to work towards improving school health and hygiene.

The nutrition team began their work late due to delays in approving their training materials and, once they had authorisation to begin, planned a very intensive series of trainings in order to make up for lost time. However, since these trainings involved the “professionals”, who already had another work plan, both they and the schools they were working in found themselves overloaded and under pressure. The nutrition team needs to reconcile their work plans with those of the other members of the project team and to communicate regularly with them. One way of improving the

integration of the nutrition team with the rest of the project team would be for one member of the nutrition team to be based in Manhiça, along with the rest of the project team.

There has been some difficulty in obtaining disaggregated numerical data relating to the nutrition training. In the opinion of the consultant who represents WISHH and supports the nutrition team, this is due, at least in part, to the existence of two different data management systems: one designed and implemented by WISHH and a second system which has been created by the team and used in parallel. The consultant working for WISHH is confident that the WISHH system, if properly used, enables ongoing monitoring information to be used to generate numerical reports. It appears the project nutrition education team may not have been comfortable with using this system and so introduced a parallel system they found easier to use; however the numbers produced by the different systems vary greatly. In addition to concerns about the electronic recording of training activities, the paper records on which this is based are not always systematic or well organised. Review of paper lists of training participants revealed the need for these to be more systematically presented, with a title, date and location, so that it is clear what they refer to.

It is my judgement that the confusion in recording nutrition training is due, not to a malicious attempt to falsify these records, but to a genuine lack of capacity on the part of the nutrition team, in particular with regard to using the recording tool WISHH has provided. This may be exacerbated by feeling overstretched by the dual role of training and recording and by language issues: the team works in Portuguese within Mozambique but much of their reporting tools and their support from WISHH in the USA are in English. It is clear that the nutrition team will need extra support and training in recording and data management. This situation has been discussed several times with the consultant representing WISHH who recognises the issues raised and has already begun to put measures in place to simplify the reporting tool and provide more training and support. As part of this effort, WISHH is currently working with the nutrition team in Mozambique to go back through the data, disentangling it, in order to arrive at a clear, unambiguous report of the number of people trained and other data required. An extra member of staff has been engaged to enter the nutrition training data. It is hoped the resolution of this situation will provide a learning opportunity and lead to improved capacity of the team and fine-tuning of the systems used, so that during the second part of the project the nutrition education component can not only provide effective nutrition training to the intended individuals but also demonstrate that it is doing so.

### **Recommendations**

- The nutrition team and the rest of the project team should have integrated work plans and should ensure their activities are compatible and do not lead to excessive burden on the trainees or the “professionals”.
- WISHH should continue to work to improve the data base to make it more user-friendly, whilst providing ongoing training and support in its use to the nutrition team.
- WISHH and the nutrition team should continue to work to disentangle confusions in existing data and achieve clarity in data management and recording so a clear report of their activities can be produced, in particular the number of trainings held and people trained.

## Water and sanitation

As presented above, a large number of schools which did not have access to clean water before the project now have water, with all the associated benefits that brings. The creation or revival of community water committees is an important step in ensuring the ongoing maintenance and therefore the sustainability of these water sources.

However, even in the schools which do have water, pumps and equipment breaking down leads to interruptions in all activities which require water. One school we visited had not had water for several days, due to a faulty pump. School feeding had stopped. The head teacher informed us he had not been able to wash that day. There was no water available for children to drink. Furthermore, a significant number of schools do not yet have water and it has not been possible to make a plan to bring water to these schools, due to the absence of clean water available: even the water table is saline and unfit for human consumption. Where there is no clean water, school feeding becomes a severe challenge; education, health and hygiene are compromised. It seems this should not be a problem for the project to solve alone. The situation should be discussed with the MINED, the Ministry of Public Works and other relevant government bodies and possibly non-government actors, in order to devise creative ways of bringing water to the schools in question. This has already begun: as stated above, the MINED has plans to build new classrooms in schools where rainwater harvesting is not yet possible, due to the absence of suitable roofs, walls and gutters.

The water team is doing a valiant job but is highly stretched by the enormous workload, the absence of one technician and by the problems of transport described above.

In the area of sanitation, the current plan to support schools in building or renovating latrines is working well in some schools. However many latrines do not appear to have hand-washing facilities nearby. In more remote schools, the amount of money provided by the project is insufficient to both buy the materials and pay for their transport to the school.

## Recommendations

- Prioritise the recruitment of a qualified, competent water technician for Magude, in order to free up the sector coordinator for other tasks.
- Find a solution to the problem of transporting equipment and water tanks, possibly thorough the acquisition of a suitable vehicle (see the section on transport above).
- Hold a meeting with representatives of the MINED, the Ministry of Public Works and other relevant bodies, to discuss the possibility of collaborating to bring water to schools which are currently without it and explore funding options.
- Continue to promote and strengthen community water committees.
- Revise the system for allocating funds to schools to build or renovate latrines, so remote schools with fewer pupils are not disadvantaged.
- Encourage and support schools to provide hand-washing facilities alongside newly-built or renovated latrines.

### **Literacy, school clubs and kits**

The after-school clubs and kits of materials distributed have brought some positive results, at least in some schools. However it seems both could be made more effective. More support and training of teachers in using the kits should result in them being used more often and more effectively. More support to the clubs is probably needed to make them more dynamic and to prevent them being a closed system: if a teacher lacks basic knowledge, skills and techniques, more time spent with the same teacher doing the same activities as in class will not necessarily result in better educational outcomes for pupils. If the quality of teaching is one of the factors behind pupil underachievement, then after-school clubs and better access to educational materials, important as those things are, are not enough to improve the quality of education. In this case, some outside input may be necessary in order to achieve genuine change.

This raises three issues: firstly the literacy sector of the project as it currently functions has limited potential to impact on the quality of teaching or teachers' behaviour. The sector coordinator is working more or less alone in coordinating activities implemented through the team of "professionals." Both the literacy coordinator and the "professionals" are young and relatively inexperienced in the education sector. Although the literacy coordinator is a trained teacher, he has little teaching experience beyond the practicum; the "professionals" are not trained teachers and, in many cases, only educated to tenth grade. However competent and hard-working they are and however good at working in partnership with teachers and school directors on the more logistical and organisational aspects of the project, they do not have the profile, authority or credibility with teachers to get involved in classroom practice and to influence, motivate and inspire teachers to revise their methods and try new practices. If the project aspires to impact on the quality of teaching delivered in the project schools, this will need to be done through other actors with more educational experience and skills, whom teachers can recognise as genuinely having something to contribute to them. Reporting of the literacy sector activities also needs to be strengthened.

This leads to the second point. The project as currently conceived seems unlikely to achieve one of its main objectives: to improve the literacy of school-age children in Mozambique. Literacy is a complex phenomenon, which is not susceptible to easy or superficial fixes. Removing short-term hunger, concentration problems and other impediments to learning may be necessary conditions to improving literacy but they are not sufficient. The single main predictor of successful literacy outcomes is to be taught by a well-trained, committed, literate teacher. Although there are many such teachers in Mozambique and this evaluation has focused on several of them, this is one area which the project as currently planned will not be able to produce significant change. Unless there is a real focus on supporting teachers to improve their teaching where necessary, there is a danger that any improvement in literacy the project is able to deliver will be superficial and unsustainable.

This leads to the third point. Rather than seeing teachers as part of the problem, it is important to recognise their commitment and professionalism in extremely difficult working conditions and to work with them. The perception that teachers are not always cooperating with the project, for example in refusing to fill in the project's attendance sheets, needs to be seen in the context of a profession which has a long history of showing commitment to education, working in difficult

conditions and making personal sacrifices to further the cause of education in Mozambique. The contribution made by Mozambican teachers should be recognised and their professional status respected. Plans and changes to working practices which involve the cooperation and commitment of teachers need to be made in consultation with them, not perceived as being imposed on them<sup>20</sup>. The professionals should be trained to better communicate and collaborate with teachers.

### Recommendations

- Provide more training in the use of school kits and support to school clubs.
- Strengthen reporting of literacy sector activities, including recording of the number of clubs.
- Consider how the literacy sector can be made more effective and able to work with teachers, for example by recruiting more staff who should be experienced teachers, able to work credibly with teachers.
- Leave the task of working directly with teachers on pedagogical matters to these new staff, so the “professionals” are able to concentrate on roles for which they are qualified.
- In partnership with the education services, study how the project interventions can be extended to include actual in-service training for teachers, provided by qualified trainers.
- Prioritise communication with teachers so they see the project as a partnership and their role in it as contributing to a worthwhile activity which concerns them directly.

### School gardens

In some cases, school gardens are beginning to play a role in educating pupils about agriculture and nutrition and in providing food which may constitute the first steps along the path of diversification in school feeding. In this respect they constitute an important link to the PRONAE, the national school feeding programme currently being piloted in twelve schools by the GoM and the WFP with support from FAO, and which is based on local production, and includes an important role for school gardens. This aspect of the project is therefore a possible key both to the sustainability of the project and to its integration in the national programme.

However there are two conditions for successful school gardens which are currently widely lacking: water and Human Resources. Any school which has aspiration to have a school garden also needs a reliable water source. Also, as discussed above, the routine, year-round work in a garden should be performed by adult workers, not by children. These are issues which the PRONAE is also facing and the project regularly discusses strategies and solutions with the different partners involved.

### Recommendations

- Continue to promote and support school gardens.
- Explore the potential of strategies such as creating model gardens in each district.
- Continue to work to bring a reliable water source to each school.

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<sup>20</sup> Furthermore, they should fit into a wider strategy for teachers in Mozambique, which provides the support, working conditions and opportunities for professional development which recognise their contribution and allow them to live and work in dignity. It is obviously not the project’s role to change these things, but it is the role of the project’s main partner, the Government of Mozambique.

- Explore means of recruiting adult workers to perform the bulk of the year-round work in school gardening.
- Continue to exchange experiences and examples of good practice with the partners engaged in the PRONAE.

## **EPFs**

As seen above, the EPFs make a valuable contribution to the teacher pool in Mozambique, producing teachers who are committed to working in remote rural areas and contributing to community development. In the context of the discussion of literacy above, it is worth noting that the EPFs produce teachers who are specifically trained in teaching literacy, among other subjects. Trainees spend up to 30 hours per week working on Portuguese language skills and the didactics of teaching reading, writing and calligraphy. Where trainees themselves have gaps or inadequate mastery of these areas, these are diagnosed early in the programme and they are given remedial support through reading and writing clubs. As mentioned above, the new training in nutrition is being well received and appears to be already having some impact in terms of changed behaviour. According to the EPF Directors interviewed, another benefit the project is bringing to the EPFs is regular disbursement of funds; although the amount of funds provided has not changed, the fact that they now arrive on time has made managing the institutions much easier.

One matter of regret is that the plan to extend all teacher training to three years has not been generalised and there are still only 3 EPFs offering the three-year programme. The eight others still train teachers in one year, which is regarded by all informants as inadequate. That said, the EPFs manage to make the one-year programme as full as possible: students are required to live in the EPF in boarding houses, to take part in activities each evening and to be in the EPF three weekends per month. During this time they are engaged in different types of educational and training activities.

Some informants worried that the teacher training component of the project is geographically separate from the school feeding component. One EPF Director told us that since the nutrition training began in his EPF he is constantly being asked by district education officers and other local education stakeholders when school feeding will begin. Conversely, the active teacher training provided by the project is not taking place in the schools receiving school feeding, limiting the possibility for this to impact significantly on literacy, as explained above. Taking a longer view, there are probably advantages to this geographical spread, in terms of the potential for overall impact of the different project interventions in Mozambique. However it remains important to continue to work to preserve the coherence of the different interventions within the project.

For the purposes of this evaluation, limited systematically collected monitoring information was available from all 11 EPFs. Plans are being put in place to create tools and systems for the systematic collection of this data in time for the final project evaluation.

## **Recommendations**

- Continue to train teachers able to work in remote schools in challenging conditions and promote community development alongside their teaching.



- Continue to promote the three-year teacher training course and advocate its generalisation to the other EPFs.
- Develop the tools and systems necessary to collect systematic data on the quality of teacher training and of trainees' teaching during teaching practice, including "use of new and improved teaching methods".
- Explore strategies to ensure coherence is retained between the different components of the project.

### **Budget and costs**

Although the evaluation did not analyse or audit the project budget in detail, since this function is provided by other reporting and accounting systems and activities, it did make efforts to evaluate whether financial resources were being used effectively. The project coordinators state that despite unforeseen costs, such as the need to refurbish a second warehouse to deal with the infested CSB, the project is within budget. All the evidence seen by the evaluators through reviews of project documentation and observation, discussions and interviews suggest that funds are prudently managed with a focus on staying within the budget. There is awareness that the project is funded through aid donated by individuals as well as by the US government and that there is a responsibility to use this aid responsibly. Observation of the project premises, activities and equipment suggests the project is run with a desire to be efficient and avoid unnecessary or ostentatious expenditure. Furthermore, many of the project staff are members of ADPP and receive extremely modest salaries, since they work out of conviction rather than for personal gain.

In some cases, this financial prudence may be somewhat counterproductive. As exposed above, the work of the professionals would be more effective if they had access to laptops and if their travel expenses were paid. The culture of modest expenditure and salaries or incentives and work through engagement to a cause rather than for personal gain is admirable, but it may only work if all those involved share those values. Otherwise it may become divisive and a source of de-motivation and dissatisfaction. Additional efforts to show the "professionals" that their work is valued by giving them access to the equipment they need and to either a means of transport or travel costs may reap dividends in terms of increased commitment and motivation. The "professionals" earn just over \$200 per month; the district leaders around \$300. These salaries are low considering the wide range of tasks and skills required and the fact that many of the "professionals" are supporting family members. However they are by no means the lowest salaries in Mozambique; furthermore the professionals consider themselves lucky to have a job, given the amount of youth unemployment. With careful management and training, this role could be a valuable opportunity for these young people to gain valuable skills and experience in an interesting role.

### **Recommendations**

- Enhance promotion and communication of the ethical culture of the project, so that it is well understood by staff, partners and beneficiaries; this includes the messages that the value of people within the project is determined by their work and the contribution it makes, not by what they earn; professional satisfaction can be obtained and motivation enhanced by

working in a team with shared values towards a common goal, rather than through material incentives.

- Without compromising this vision or the responsible financial management of the project, find ways to make a gesture to the “professionals” to show their work is important and valued, such as modest salary rise, providing them with laptops and either access to a means of transport or travel costs.

### **Sustainability and relevance to the local and national school feeding policy and programme environment**

As discussed in the Baseline report, the Food for Education project is one element in the PRONAE. In 2011, a new school feeding programme was developed, with input from the WFP and the FAO, based on local purchasing, school production, lower costs and more community involvement. This has been piloted since 2012 with financial and technical support from the WFP and the Government of Brazil, with the objective of implementing a sustainable school feeding programme from 2016 (Rego, 2012). This reflects the presence of school feeding in the Second Strategic Plan for the Education Sector 2012-2016 (PEE, 2012: 39-40, 45-46, 62, 65, 108, 125) and of school nutritional support in the Government of Mozambique’s Poverty Reduction Action Plan 2011-2014 (PARP, 2011:24).

In addition to piloting the new model of school feeding in 12 schools, within the tripartite programme a strategy for sustainable school feeding was developed. This led to the National School Feeding Plan (*Programa Nacional de Alimentação Escolar: PRONAE*) which was approved on 14 May 2013 by the Council of Ministers of Mozambique. Discussions with the three partners reveal that the pilot is encountering many of the same successes and challenges as the project being implemented by PAI/ADPP; commonalities include the need to find ways to recruit and motivate volunteers and the challenges of school feeding and production in the absence of reliable water supplies. The pilot has been extended and is ongoing; results of the pilot are awaited before a plan for implementation of a national school feeding plan can be developed and costed.

In this context, the Food for Education project and the partners conducting the pilot of the PRONAE have every interest in continuing to exchange experiences and lessons learned. It is hoped that the Mid-term evaluation reported here will provide one such opportunity.

In terms of sustainability, it seems likely that a long-term school feeding programme would contain elements of both the PRONAE and the Food for Education approach. It seems likely that a sustainable programme would need to be based on one or more staple “base” products, either locally produced or imported in sufficiently large quantities to ensure continuity of supply. This might be soya or another product or combination of products. Although both approaches use school gardens for teaching pupils about agriculture and nutrition, and these have the potential to produce products which can contribute to some diversification of school feeding, school gardens are unlikely to ever provide sufficient food products to contribute significantly to school feeding on a regular basis.

Other nutrition-based interventions in Mozambique include a programme to combat chronic malnutrition amongst pregnant women, infants and pre-school aged children, coordinated by the Ministry of Health and supported by UNICEF and other partners. A programme to combat anaemia, by providing iron and folic acid supplements to school aged children, coordinated by the MINED and supported by the World Bank and UNICEF is beginning in the northern provinces of Mozambique and may be extended to the central provinces in 2015. The Food for Education project, which includes support to the annual de-worming campaign currently carried out by the Ministry of Health, is therefore complementary to other interventions and currently the only nutrition-based intervention available to most school-aged children in the four project districts of Maputo province.

In the immediate future, the Food for Education project needs to plan for sustainability. It should continue to promote and develop a real sense of commitment to and ownership of the project by the different partners and beneficiaries. It should also begin to plan for how the different project activities will continue after the period of financial and technical support provided by the project. Now the first phase of the project has on the whole been successfully accomplished, and most of the conditions are in place for the different activities to take place, a key focus for the remainder of the current project should be how it can continue after the end of the project period. There are already encouraging signs in terms of community commitment and ownership, the active role played by the education authorities, the potential for school gardens to expand and the other elements presented in this report. These now need to be capitalised on and strengthened, and explicit planning put in place for “after” the current project.

Given the investment of time and resources in creating the infrastructure and other conditions for the current project, four years is a relatively short period for a project on this scale to become sustainable. If the project continues to function effectively, overcomes the challenges encountered and is able to improve and fine-tune its operations, it would be coherent to consider extending it for a further four years, in order to build on what has been achieved so far and to increase the prospects of long-term sustainability.

### **Recommendations**

- Continue to communicate and share experiences and lessons learned with the three partners piloting the PRONAE, including identifying opportunities for more integration of the two approaches.
- Make planning for sustainability a key focus of the remaining period of the current project.
- Consider the merits of extending the current project, in order to capitalise on the investment of time, effort and resources and to improve the prospects of school feeding and the other activities continuing after the current financial and technical support has finished.

### **The evaluation process and recommendations for future evaluations**

The Mid-term evaluation provided the opportunity to observe how the project monitoring data are collected, collated and used. The new M&E coordinator has introduced more efficient systems and working practices and some of the challenges of processing a large volume of data are being overcome. The long-awaited and much-needed data base is in the process of being trialled and

should hopefully contribute to the efficiency of these processes. Challenges remain: a backlog of monitoring data has built up: in particular a large number of paper records, such as pupil attendance sheets, which are gradually being entered by the M&E assistant. However throughout the evaluation process, I have been extremely impressed by the competence and commitment of the M&E team and by the panoramic vision and understanding of the project they have developed after only a few months in post. They have been able to provide project data quickly where it was already available and frequently to obtain it where it was not. The whole project team has been cooperative and open throughout the evaluation process and have made considerable efforts to provide information and explanations to the evaluators, despite their other commitments.

The qualitative data collection was successful, thanks to a great extent to highly competent logistical support from the M&E team and other members of the project team. The quantitative data collection was also successful on the whole, although some lessons were learned which would lead to things being done differently another time. In particular, if ISET/OWU students were used again for data collection, rather than training and working with a whole class of students, in future it would be easier and more efficient to work with a smaller number of the more motivated and able students.

The collaboration with the NFER was extremely effective and productive and meant the statistical analysis was far more detailed than the evaluators could have provided working alone. It also allowed them more time to focus on other aspect of the data collection and analysis. The NFER team has provided a number of recommendations for future evaluations.

### **Recommendations**

- The M&E team should continue to prioritise the introduction and use of the new data base.
- The M&E team should be assisted in data entry in order to deal with the backlog of data which has built up for reasons beyond their control.
- If ISET/OWU students are used for future data collections, only the most motivated and able students should be used.

### **Recommendations from the statistical team at NFER for the final evaluation**

- In order to achieve the statistical power that was laid out in the original scope of works, stated sample size needs to be achieved. This means following-up as many pupils as possible who were also interviewed at Baseline, regardless of whether they were interviewed at Mid-term.
- To promote consistency in observation/measurement, pupils could be weighed and measured twice (by different people) at follow-up.
- Ensure that the questionnaire instruments remain unchanged.
- Data recording:
  - There should be a unique ID which can be used to link various datasets. E.g. a school ID will help to link the dataset of pupil interviews with the effective days feeding data.
  - Interview data from each pupil should be recorded on a separate line. This will ease identifying missing data from each time point. Either use IDs or enter data into the existing spreadsheet to avoid difficult matching at follow-up.

## Conclusion

The Food for Education project is a relatively new area for Planet Aid and its implementing partner ADPP Mozambique; it is the first time the organisation has worked in large-scale school feeding, although it already had extensive experience of other sectors, including education, health and community work in Mozambique. In applying to a school feeding project its well-tested approach of implementing a project in partnership with communities and working alongside community and school-based actors to produce positive change, Planet Aid has shown that this approach is transposable to other sectors and has achieved very creditable results in the first half of the project. The Baseline report identified the risk involved in undertaking such a large-scale project in a new area and the possibility that scaling out the PAI/ADPP approach using large numbers of newly recruited staff who were not familiar with the culture and working methods of the organisation might not succeed. In the event, this Mid-term evaluation shows that the risk has paid off; although the experience has not been without problems and challenges, the first phase of the ambitious project has been remarkably successful.

In particular, the first phase of the project has seen the majority of the planned activities carried out effectively and targets met; where targets have not been met this has been for very understandable reasons. In several cases the targets have been exceeded. The project has begun to show signs of initial impact, and there is every reason to hope this will be sustained and increased. Finally it has been an opportunity to learn a large number of lessons, identifying both good practices and areas where improvements are needed, which are documented in this report. If the lessons learnt and the recommendations offered in the report are taken to account in adapting and improving the project systems and working practices, there is every reason to expect the second phase of the Food for Knowledge project will be very successful.

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## Annex 1 Performance indicators (amendment submitted to USDA by PAI 25 August 2014)

Activity	Indicator	Target 2012	for	Target 2013	for	Target 2014	for	Target 2015	for	Target 2016	for
Building/ Rehabilitation: Kitchens	Number of kitchens at target schools constructed or rehabilitated.	0		100		142		0		0	
	Number of firewood saving stoves at target schools constructed or rehabilitated.	0				242		0		0	
	Number of kitchen water storage tanks distributed at target schools.	0		100		142		0		0	
	Number of sets of bowls and utensils distributed at target schools.	0		20,000		80,000		0		0	
Establish School Gardens	Number of school gardens established	0		20		30		0		0	
Training: Government Officials	Number of seminars and meetings conducted at the Local, Regional and National Level	0		14		11		11		0	
	Number of Government Officials trained in managing the administration of school feeding program.	0		200		200		200		0	
	Number of Government Officials trained in nutrition	0		200		200		200		0	
Building/Rehabilitation: Latrines	Number of latrines at target schools constructed or rehabilitated	0		0		100		400		400	
Building/Rehabilitation: Wells and Water Stations/Systems	Number of Clean Water Systems at target schools constructed or rehabilitated	0		100		142		0		0	
Distribution: De-worming Medication, Vitamins & Minerals	Number of de-worming tablets distributed to students	0		60,000		60,000		60,000		60,000	
Distribution: School Supplies and Materials	Number of education materials' kits distributed to schools	0		0		1,600		1,600		0	
	Number of awards given to teachers and students	0		0		12,000		6,000		0	

Training: Commodity Management	Number of school feeding committees formed or strengthened	0	125	117	0	0
	Number of school feeding committee seminars held	0	0	8	8	8
	Number of school feeding committee manuals distributed	0	0	500	250	250
Training: Good Health Nutrition Practices	Number of nutrition training materials disseminated	0	50,000	50,000	50,000	50,000
	Number of health and hygiene education trainings conducted at target schools	0	50	243	243	0
Training: Teachers	Number of primary teachers in training as a result of USDA assistance	1,040	900	1,260	800	0
Provide School Meals	Number of daily school meals (breakfast, snack, lunch) provided to school-age children as a result of USDA assistance	0	850,883	11,400,000	11,400,000	10,549,117
	Number of metric tons provided for school meals	0	165	1,200	1,200	1,035
Building/Rehabilitation: Warehouses and Storerooms	Number of constructed or rehabilitated storerooms at target schools.	0	100	142	0	0
Extra-Curricular Activities	Number of after-school learning clubs formed	0	100	142	0	0

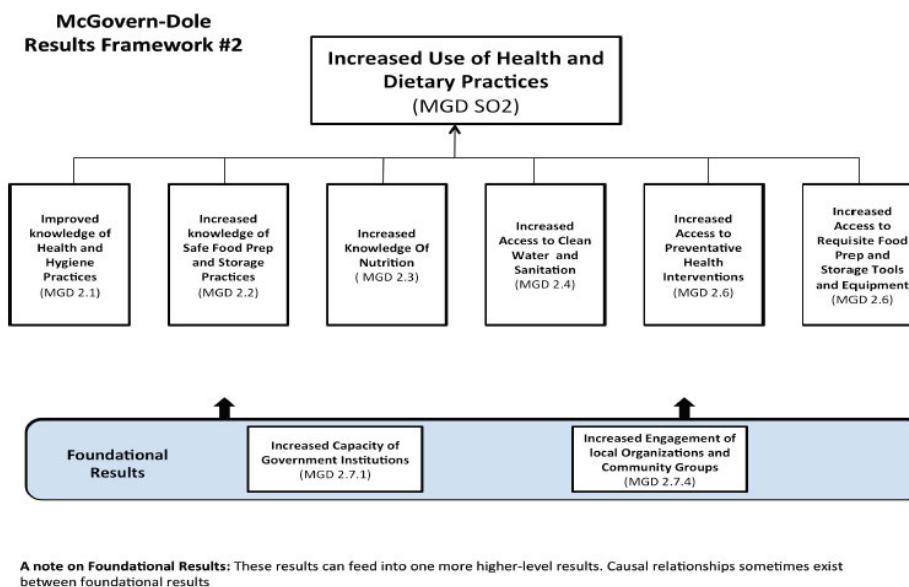
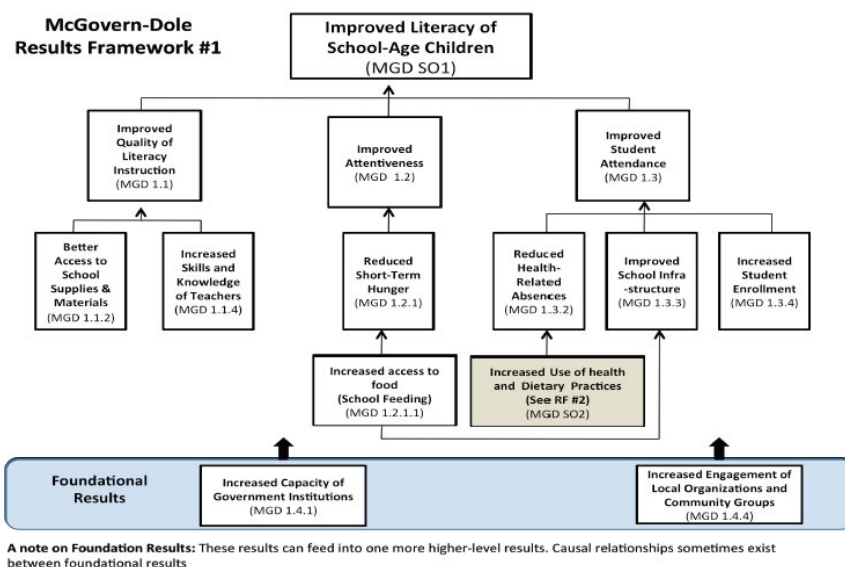
### Outcome indicators

Result	Indicator	Baseline	Final Target
Increased Student Enrollment	Number of girls enrolled in school as a result of USDA assistance.	0	1,500
	Percentage increase in students enrolled in target schools as a result of USDA assistance.	0	5
	Number of boys enrolled in school as a result of USDA assistance.	0	1,500
	Number of after-school learning clubs formed.	0	242
Improved School Infrastructure	Number of firewood saving stoves at target schools constructed or rehabilitated.	0	242

	Number of kitchens at target schools constructed or rehabilitated.	0	242
	Number of kitchen water storage tanks distributed at target schools.	0	242
	Number of sets of bowls and utensils distributed at target schools.	0	100,000
	Number of storage rooms at target schools constructed or rehabilitated.	0	242
Increased Access to Preventative Health Interventions	Number of students receiving de-worming tablets once a school year.	61,204	60,000
	Number of de-worming tablets distributed to students.	0	240,000
Increased Access to Clean Water and Sanitation Services	Number of schools with access to a clean and safe water source.	192	242
	Number of latrines at target schools constructed or rehabilitated.	0	900
	Number of Clean Water Systems at target schools constructed or rehabilitated.	0	242
Increased Knowledge of Nutrition	Number of people trained in child health and nutrition messages as a result of USDA assistance.	0	400,000
	Percentage of food preparers at target schools trained in good nutrition and dietary practices.	0	80
Increased Use of Health and Dietary Practices	Number of individuals benefiting directly from school gardens.	0	14,000
	Number of school gardens established.	113	163
	Percentage of schools in target areas that clean cooking/eating equipment prior to use according to accepted standards	0.00	80
	Percentage of target beneficiaries (students/food preparers) that use appropriate hand washing practices	Pupils grade 3 is 78.41%; grade 5 is 87.92% Food preparers 0%	Pupils grade 3 - 85%; grade 5 - 94% Food preparers 80%
Improved Student Attendance	Percent of girls regularly (80%) attending USDA supported classrooms/schools.	76 Manica 80.5 Magude 84.5 Moamba 86 Matutuine	80 for Manica 84.5 for Magude 88.5 for Moamba 90 for Matutuine
	Percent increase in regular attendance by year.	0	5
	Percent of the total number of student/days attended to the potential total number of students/days.	0	75
	Percent of boys regularly (80%) attending USDA supported classrooms/schools.	76 Manica 80 Magude 83 Moamba	80 for Manica 84 for Magude 87 for Moamba and

		and Matutuine	Matutuine
Increased Access to Food (School Feeding)	Number of school-aged children receiving daily school meals (breakfast, snack, lunch) as a result of USDA assistance.	0	60,000
Increased Skills & Knowledge of Teachers	Number of teachers anticipated to graduate as a result of USDA assistance	0	1,550
	Number of teachers using new/or improved teaching techniques in the classroom	0	700
Better Access to School Supplies & Materials	Number of schools receiving school supplies and materials as a result of USDA assistance.	0	242
Improved Quality of Literacy Instruction	Number of teachers in target schools who demonstrate use of new and quality teaching techniques and tools.	0	540
Increased Capacity of Government Institutions	Number of government officials trained in nutrition and benefits of school feeding.	0	200
	Number of seminars and meetings conducted at the local, regional and national level.	0	36
	Number of Government Officials trained in nutrition.	0	200
Increased Engagement of Local Organizations and Community Groups	Number of School Feeding Committees formed or strengthened.	0	242
	Number of School Feeding Committee manuals distributed.	0	1,185
	Number of Parent-Teacher Associations or similar "school" governance structures contributing to their school as a result of USDA assistance.	0	242
Improved Literacy of School Age Children	The percent increase if children in participating schools passing the trimestrial literacy test.	0	10
	The number of individuals benefiting directly from USDA-funded interventions.	0	60,000
	Number of education and literacy public-private partnerships formed as a result of USDA assistance.	0	2
	Number of social assistance beneficiaries participating in productive safety nets as a result of USDA assistance.	0	60,000

## Annex 2 Results Framework including the “special study” indicators, which shows the role of these in the Theory of Change upon which the project is based



## **Annex 3 General and specific evaluation questions**

### **General evaluation questions for all activities**

#### **ACTIVITIES AND PROCESSES**

- Is each activity on target?
- If not, is it still possible to achieve the final target, and what needs to be improved in order to do so?
- Are all activities being carried out effectively, according to principles of good practice and to the satisfaction of different stakeholders?
- What needs to be improved regarding these activities/processes?
- What are the main problems and constraints?

#### **RESULTS**

- Is the project making adequate progress towards achieving its Intermediate Results?
- What has the initial impact been on the direct beneficiaries?
- What has the initial impact been on their families (and other indirect beneficiaries)?
- Have the activities carried out begun to improve their wellbeing?
- Have there been any unintended effects on people, including undesirable effects?
- Have any factors external to the project changed the situation of the project and/or its beneficiaries?
- Are any changes observed due to the project interventions?
- Are any changes observed due to factors external to the project?

#### **PROJECT STAFF AND PARTNERS**

- Are the different project roles being performed effectively?
- Do project staff feel motivated, committed to the project objectives and able to carry out their functions effectively?
- If not, what needs to be improved?
- Are implementing partners contributing to the project as planned?
- If not, what needs to be improved?
- Has the capacity of the programme staff increased since the beginning of the programme?
- If so, what factors have led to improved staff capacity?
- Has the capacity of the programme partners increased since the beginning of the programme?
- If so, what factors have led to improved partner capacity?

#### **SUSTAINABILITY**

- Are the project plans designed to produce sustainable change after the conclusion of the project?
- What are the perspectives of the interventions being continued by government and/or other partners after the conclusion of the project?
- What is the level of ownership of and commitment to the project by implementing actors and beneficiaries at national, provincial, district and local level?
- Is the project building sufficient capacity to ensure sustainability after the duration of the project?

#### **COLLABORATIONS AND COORDINATION**

- What is the level/quality of collaboration and coordination between the project and its implementing partners?
- What is the level/quality of collaboration and coordination between the project and national, provincial and district government?



- What is the level/quality of collaboration and coordination between the project and local and community leaders, including traditional leaders?
- What is the level/quality of collaboration and coordination between the project and other organisations implementing school feeding programmes in Mozambique?
- How is the project working with the GOM and WFP to share lessons learned and good practices to help inform a national school feeding policy and programme environment?
- How relevant is the project to the local and national school feeding policy and programme environment?
- How relevant is the project to the cultural and social environment?
- To what extent does the project fit within existing policy and programme contexts, both those planned and/or implemented by the government and those implemented by programmes supported by other donors?

## **BUDGET AND COST**

- Is the project within its budget?
- Have there been unforeseen expenses?
- Are resources being used as effectively as possible?
- Could the project activities be made more cost-effective?

## **Specific evaluation questions for each activity (activities, processes, progress towards targets and initial results)**

### **A. School feeding, water supply development, school gardens, and related activities**

1. Conduct a school-feeding program that provides a daily meal to 60,000 primary schoolchildren attending 243 targeted schools in the four target districts 190 school-days per year.
  - i. Is the food (sacks of CSB) being delivered to schools in a timely fashion, in sufficient quantities and in good condition?
  - ii. Are food (sacks of CSB) storage, handling, distribution and safeguarding procedures adequate?
  - iii. Are food preparation procedures adequate and safe?
  - iv. Are food serving procedures adequate and safe?
  - v. Have food preparers at target schools been trained in hand washing and safe food preparation and storage practices?
  - vi. Have food preparers at target schools been trained in good nutrition and dietary practices?
  - vii. Is the food served palatable?
  - viii. Is the food served adequate for the children's nutritional needs?
  - ix. Is there any variety in the food served?
  - x. How many children are receiving a daily meal at school as a result of the project?
  - xi. Are all eligible children receiving a daily meal at school as per the project calendar?
  - xii. If food is not always provided as per the calendar, why is this?

Taking into account the date at which each school began providing food<sup>21</sup> :

- xiii. Has there been any significant improvement in pupils' general school performance since the beginning of the project?
- xiv. Has there been any significant improvement in pupils' literacy since the beginning of the project?

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<sup>2121</sup> The introduction of feeding was staggered, with feeding being introduced gradually as the necessary infrastructure and organisation was ready in each school.

- xv. Have there been any significant changes in school enrolment rates since the onset of school feeding?
  - xvi. Have there been any significant changes in school attendance rates since the onset of school feeding?
  - xvii. Have there been any significant changes in school drop-out rates improved since the onset of school feeding?
  - xviii. Has there been any change in health-related absences since the onset of school feeding?
  - xix. How do average increases in height of learners benefiting from school feeding compare with those of students who are not benefiting from the programme?
  - xx. How do average gains in weight of learners benefiting from school feeding compare with those of students who are not benefiting from the programme?
  - xxi. Are there any unforeseen consequences of learners receiving food at school?
2. Install/renovate a safe, adequate source of water at all targeted schools.
- i. How many water sources have been installed/renovated?
  - ii. What types of water sources have been provided?
  - iii. Are water sources provided adequate and safe?
  - iv. Is the system for providing water adequate?
  - v. Is the water being used?
  - vi. If so, by whom is the water being used?
3. Construct or rehabilitate a water tank in all 243 targeted schools.
- i. How many tanks have been constructed and using which methods?
  - ii. How many tanks have been rehabilitated and using which methods?
  - iii. Are the tanks adequate and fit for purpose?
  - iv. Are the tanks being used?
4. Construct or rehabilitate latrines in all 243 targeted schools.
- i. How many latrines have been constructed and which type?
  - ii. How many latrines have been rehabilitated and which type?
  - iii. Are the latrines adequate and fit for purpose?
  - iv. Are there separate latrines for girls and boys?
  - v. Are there separate latrines for teachers?
  - vi. What is the ratio of pupils to one latrine?
  - vii. Is there water and soap for hand washing nearby?
  - viii. Are the latrines kept clean and hygienic?
  - ix. Are the latrines being used?
5. Construct or rehabilitate a school kitchen, including a storage room and firewood saving stove in all 243 targeted schools.
- i. How many kitchens have been constructed?
  - ii. How many kitchens have been rehabilitated?
  - iii. Are the kitchens adequate and fit for purpose?
  - iv. Are the kitchens being used?
  - v. Do all kitchens include a storage room?
  - vi. Are storage rooms dry, clean and suitable for storing food?
  - vii. Can storage rooms be locked?
  - viii. Are the storage rooms being used?

- ix. Do all kitchens have a firewood saving stove?
  - x. Are the firewood saving stoves proving economical and beneficial?
  - xi. Are the firewood saving stoves being used?
6. Procure and distribute cooking and eating utensils to all 243 targeted schools.
- i. Have cooking and eating utensils been distributed to all schools?
  - ii. Are they adequate and fit for purpose?
  - iii. Are systems in place for their maintenance and storage?
  - iv. Are they being adequately maintained and looked after?
  - v. Are they being used?
7. After consultation with schools regarding their needs, procure and distribute a package of educational materials and school supplies to all 243 targeted schools.
- i. Was there a consultation; who was consulted and how?
  - ii. Have educational materials been distributed to all target schools?
  - iii. Have school supplies been distributed to all target pupils?
  - iv. What did the materials consist of?
  - v. What do the school supplies consist of?
  - vi. Are the materials and supplies fit for purpose?
  - vii. Are they being used?
  - viii. Are systems in place for their maintenance and storage?
  - ix. Are they being adequately maintained and looked after?
  - x. What is the beneficiaries' opinion of the materials and supplies?
  - xi. Are the materials and supplies making a difference to teaching and learning?
  - xii. What added value are they providing?
8. Form after-school learning clubs
- i. How many after-school learning clubs have been formed?
  - ii. When/How often do they function?
  - iii. How do they function?
  - iv. How many children are attending them?
  - v. Are they popular with learners?
  - vi. What activities do they provide?
  - vii. Do they actively support learners in school work/activities?
  - viii. What benefits are they providing?
  - ix. Are they perceived to be promoting school attendance?
9. Develop a vegetable garden at 50 targeted schools
- i. How many vegetable gardens have been developed?
  - ii. Are they functioning and being regularly maintained?
  - iii. How are they managed?
  - iv. Are they producing food?
  - v. Are they producing enough food to contribute to school feeding?
  - vi. Is produce from the gardens being consumed by learners as part of the school feeding?
  - vii. Are learners involved in maintaining the gardens?
  - viii. Are educational activities taking place involving the gardens?
  - ix. Are systems in place to ensure the sustainability of the gardens?
10. Procure and distribute seeds, hand tools, and garden equipment to be used in the planting and upkeep of the school gardens.
- i. How many sets of seeds, hand tools, and garden equipment have been distributed?
  - ii. How were these selected?

- iii. Are they adequate and fit for purpose?
  - iv. How are they managed, maintained and stored?
  - v. Are they being effectively used?
11. In partnership with the Ministry of Health/Provincial and District health services, assist in the distribution of de-worming tablets to schoolchildren in all 243 targeted schools two (2) times per school year.
- i. Are all target schools benefiting from de-worming twice a year?
  - ii. Are all children within the target schools benefiting from de-worming twice a year?
  - iii. Are there gaps in provision?
  - iv. What are the reasons for any gaps in provision?
  - v. Are there gaps in take-up by children/their families?
  - vi. What are the reasons for any gaps in take-up?
  - vii. Is the de-worming accompanied by educational interventions regarding the importance and benefits of de-worming within the school?
  - viii. Is the de-worming accompanied by educational interventions regarding the importance and benefits of de-worming within the communities?
  - ix. Are the health and education authorities collaborating effectively on provision of de-worming?
12. Conduct school-feeding seminars for government officials annually per district to explain the operation of the program and increase awareness of the need for and benefits of school feeding.
- i. How many school feeding seminars have taken place annually per district?
  - ii. How many government officials attended?
  - iii. What were the profiles of those who attended?
  - iv. What methods did the seminars use?
  - v. What content did the seminars include?
  - vi. Were the seminars evaluated in any way?
  - vii. Was the benefit to participants evaluated in any way?
  - viii. What benefits/added value were provided by the seminars?
13. Train government officials at the local, regional and national level through seminars and meetings.
- i. How many seminars and meetings have taken place?
  - ii. How many government officials have been trained at the local level?
  - iii. How many government officials have been trained at the regional level?
  - iv. How many government officials have been trained at the national level?
  - v. What methods did the seminars and meetings use?
  - vi. What was the content of the seminars and meetings?
  - vii. Were the seminars and meetings evaluated in any way?
  - viii. Was the benefit to participants evaluated in any way?
  - ix. What benefits/added value were provided by the seminars/meetings?
  - x. Was capacity increased as a result of the seminars/meetings?
14. Organize a School-Feeding Committee at each of the 243 targeted schools for the purpose of preparing the meals, storing the CSB, and the performance of other tasks related to the management and operation of the school-feeding program.
- i. How many school feeding committees have been organised?
  - ii. Are the school-feeding committees functioning effectively, regularly and democratically?
  - iii. Are the committees inclusive, diverse and representative of the whole community?
  - iv. Are the school-feeding committees performing the function of managing the school-feeding programme effectively?

- v. Are the school-feeding committees managing to recruit volunteers or paid workers to prepare and distribute food?
  - vi. How are the school-feeding committees managing volunteers' expectations regarding incentives?
  - vii. What is the relationship between school feeding committees and school councils?
  - viii. How many school councils are contributing to their schools as a result of the project?
15. Train members of the School-Feeding Committees and other key stakeholders, including teachers, parents, volunteers, etc., in the management and operation of the school-feeding program.
- i. How many of the following stakeholders have received training in the management and operation of the school-feeding program? School-Feeding Committee members, Teachers, Parents, Volunteers?
  - ii. Has the training been of adequate quality?
  - iii. Has training addressed the health, safety and hygiene aspects of delivering the programme?
  - iv. Has there been adequate take-up of training offered?
  - v. Has training received been applied in delivering the programme?
  - vi. Has the capacity of the school feeding committees improved as a result of training?
16. Develop and distribute school feeding committee manuals
- i. How and by whom were school feeding committee manuals developed?
  - ii. How many school feeding committee manuals have been distributed?
  - iii. To whom have they been distributed?
  - iv. Are the manuals made of durable, good quality materials?
  - v. Are the contents clear and accessible?
  - vi. Are the contents accurate?
17. Evaluation questions for special study
- i. How many target learners report improved attentiveness in the classroom?
  - ii. How many teachers report improved attentiveness of learners in the classroom?
  - iii. How many target learners report reduced short-term hunger in the classroom?
  - iv. How many teachers report signs of reduced short-term hunger in the classroom?
- B. Teacher-training conducted at eleven (11) teacher-training colleges**
1. Train 4, 000 primary school teachers at eleven (11) teacher-training colleges (TTCs).
- i. How many primary school teachers have been trained since the beginning of the project?
  - ii. How many primary school teachers have graduated since the beginning of the project?
  - iii. Are all 11 TTCs currently training teachers?
  - iv. Are trainee test scores increasing as a result of teacher training?
  - v. Do graduate teachers achieve satisfactory final grades?
  - vi. Are graduate teachers explicitly trained in literacy provision?
  - vii. Are graduate teachers explicitly trained in nutrition and hygiene?
  - viii. Do graduate teachers become competent classroom teachers?
  - ix. Do graduate teachers become committed, motivated classroom teachers?
  - x. Do graduate teachers demonstrate improved knowledge and skills as a result of their training at the TTCs?
2. Train teachers in target schools in the use of new and quality teaching techniques.
- i. What training activities have taken place to train teachers in target schools in the use of new and quality teaching techniques?
  - ii. Have these activities been evaluated?
  - iii. How many teachers are using new/or improved teaching techniques in the classrooms?

**C. Nutrition education program**

1. Facilitate the design and development of nutrition education and training materials through a sub-recipient agency, the WISHH program of the American Soybean Association (ASA).
  - i. Have the materials been designed and developed?
  - ii. Are the materials being used in Mozambique?
  - iii. Are the contents clear and accessible?
  - iv. Are the contents accurate?
2. Provide training in nationwide nutrition education and training to 11,000 teachers who, in turn, will implement a nationwide nutrition education and training program.
  - i. How many teachers and student teachers have successfully completed nutrition and health trainings?
  - ii. How many students are taught by teachers trained in nutrition and health trainings?
  - iii. What is the content and duration of the trainings?
  - iv. Is the training resulting in increased knowledge of nutrition and health amongst teachers and students?
  - v. Is the training producing changes in behaviour amongst teachers and students?
3. Conduct health and hygiene education training.
  - i. How many people have been trained in child health and nutrition messages as a result of the programme?
  - ii. How many students demonstrate acceptable knowledge of health and hygiene practices?



## **Annex 4 Food for Education Mid-term Evaluation: Technical appendix prepared by the statistical team from NFER**

### **Introduction**

The specific evaluation questions that this statistical analysis aims to address are as follows. (Numbers relate to Annex 2 of the Draft Scope of Works):

1. xiii. Has there been any significant improvement in pupils' general school performance since the beginning of the project?

xiv. Has there been any significant improvement in pupils' literacy since the beginning of the project?

xix. How do average increases in height of learners benefiting from school feeding compare with those of students who are not benefiting from the programme?

xx. How do average gains in weight of learners benefiting from school feeding compare with those of students who are not benefiting from the programme?

17. i. How many target learners report improved attentiveness in the classroom?

ii. How many teachers report improved attentiveness of learners in the classroom?

iii. How many target learners report reduced short-term hunger in the classroom?

iv. How many teachers report signs of reduced short-term hunger in the classroom?

### **Schools and pupil characteristics**

#### **Datasets**

- Independently gathered pupil interview dataset and teacher questionnaire dataset
- DPEC trimestrial test data

### **Sample size**

Figure 40 (below) presents statistical power curves for three scenarios based on number of intervention and control schools. Two of these scenarios relate to DPEC trimestrial test data and one relates to data collected by the evaluation team.

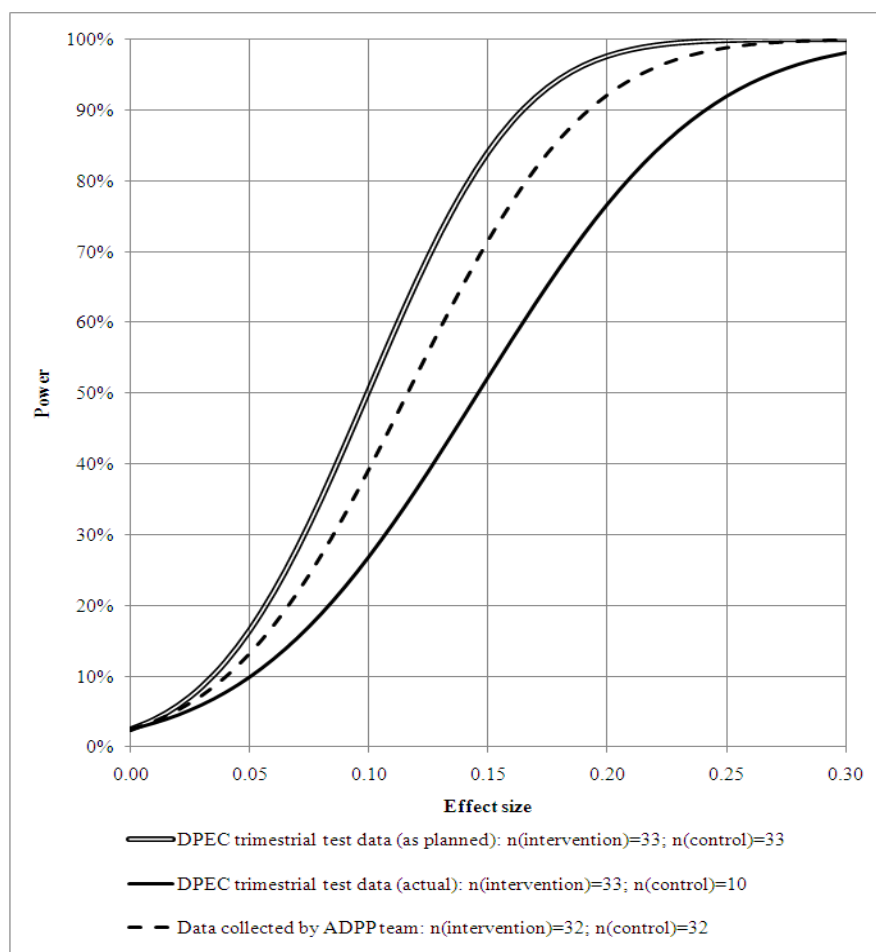


Figure 40: Power curves for DPEC and independently gathered datasets

### Independent pupil interview and test dataset

Pupils were interviewed in July 2014, at the mid-term point of the project. These pupils were interviewed and tested first at Baseline. There were a number of pupils from Baseline who were no longer available for interview at mid-term. These pupils were substituted by pupils from the same class with similar characteristics (e.g. girls substituted for girls). Table 2 (below) presents such pupils.

	n	%
Baseline and mid-term data available	781	60.7%
Substituted pupils (Baseline data available)	253	19.7%
Substitute pupils (mid-term data available)	253	19.7%
<b>Total</b>	<b>1287</b>	<b>100.0%</b>

Table 2: Total number of pupils, independent pupil dataset

As seen in the above table, the team interviewed a total of 781 pupils at the mid-term point who were also interviewed and tested at Baseline. Further 253 pupils were substituted by pupils from the same school with similar characteristics.

A series of data cleaning took place, where 8 records were removed based on extreme low or high value for pupil age<sup>22</sup> and missing information on their school. The following tables show further characteristics of these pupils.

	Number of pupils		Number of schools	
	n	%	n	%
Intervention group	657	51.4%	34	61.8%
Comparison group	622	48.6%	21	38.2%
<b>Total</b>	<b>1279</b>	<b>100.0%</b>	<b>55</b>	<b>100.0%</b>

Table 3: Intervention and comparison schools

	Intervention		Comparison		Total	
	n	%	n	%	n	%
Girl	314	47.8%	296	47.6%	610	47.7%
Boy	343	52.2%	326	52.4%	669	52.3%
<b>Total</b>	<b>657</b>	<b>100%</b>	<b>622</b>	<b>100%</b>	<b>1279</b>	<b>100%</b>

Table 4: Gender breakdown

Intervention	Mean	10.76
	Minimum	6.00
	Maximum	16.00
	Standard Deviation	1.99
	Total N	657
	Valid N	647
Comparison	Mean	10.28
	Minimum	7.00
	Maximum	16.00
	Standard Deviation	1.82
	Total N	622
	Valid N	620
Total	Mean	10.52
	Minimum	6.00
	Maximum	16.00
	Standard Deviation	1.93
	Total N	1279
	Valid N	1267

Table 5: Age at Baseline

<sup>22</sup> Pupil's age at Baseline is used throughout the Mid-term evaluation. And where this information was missing, it was filled in using age at mid-term which is exactly one year apart.

### Pupils' reading ability at Baseline

		Intervention		Comparison		Subtotal	
		n	%	n	%	n	%
Was the learner able to name overall theme of the text they just read?	Yes	169	32.20%	190	38.10%	359	35.10%
	No	356	67.80%	309	61.90%	665	64.90%
<b>Total</b>		<b>525</b>	<b>100.0%</b>	<b>499</b>	<b>100.0%</b>	<b>1024</b>	<b>100.0%</b>

		Reading fluency at Baseline (1-5, where 5 is the highest score)	Score for the learner's ability to identify 4 specific points from the comprehension (0-4, where 4 is the highest score)	Score for the learner's ability to identify 2 specific points from the comprehension (0-4, where 4 is the highest score)
Intervention	Mean	2.62	1.7	.97
	Minimum	1.00	0.0	0.00
	Maximum	5.00	4.0	3.00
	Standard Deviation	1.45	1.1	.55
	Total N	657	657	657
	Valid N	526	526	524
Comparison	Mean	2.80	1.6	1.05
	Minimum	1.00	0.0	0.00
	Maximum	5.00	4.0	2.00
	Standard Deviation	1.47	1.1	.52
	Total N	622	622	622
	Valid N	502	502	499
Total	Mean	2.71	1.7	1.01
	Minimum	1.00	0.0	0.00
	Maximum	5.00	4.0	3.00
	Standard Deviation	1.46	1.1	.54
	Total N	1279	1279	1279
	Valid N	1028	1028	1023

### Height and weight

In a number of cases, extreme low or high values of height and weight were observed both at Baseline and at mid-term. This meant abnormal gains or losses for both the variables between Baseline and mid-term. In some cases, these could be attributed by measurement errors at Baseline or at mid-term, whereas for others the source wasn't clear. Following rules were applied in order to ensure that all such cases were excluded from the dataset when height and weight were considered.

**Weight**

- Exclude pupils with values  $\leq 10$  kg and  $\geq 60$ kg at Baseline and with values  $\leq 13$  kg and  $\geq 70$ kg at mid-term.
- Exclude pupils with an apparent weight loss of 20% or more of their Baseline weight; and exclude pupils with an apparent weight gain of 30% or more of their Baseline weight.

**Height:**

- exclude pupils with values of 30cm and 51 cm at mid-term
- exclude pupils with an apparent height loss of more than 4cm (to allow for measurement error and fluctuations throughout the day) and exclude pupils with an apparent height gain of more than 16 cm (to allow for 4 cm measurement error and fluctuations throughout the day + maximum 12 cm plausible growth)

On the basis of the above rules, 304 pupil records were excluded from height and weight analysis. The following tables present summary statistics at both time points.

		Height at Baseline	Height at mid point	Weight at Baseline	Weight at mid point
Intervention	Mean	135.02	141.0	30.50	34.41
	Minimum	110.00	116.0	17.00	20.60
	Maximum	164.00	175.0	57.00	64.80
	Standard Deviation	11.20	11.4	6.89	8.63
	Total N	518	518	518	518
	Valid N	387	301	390	301
Comparison	Mean	133.39	140.9	29.81	33.94
	Minimum	100.00	117.0	12.00	17.90
	Maximum	160.00	166.0	55.00	66.60
	Standard Deviation	11.12	10.0	6.87	7.95
	Total N	457	457	457	457
	Valid N	339	263	339	263
Subtotal	Mean	134.26	141.0	30.18	34.19
	Minimum	100.00	116.0	12.00	17.90
	Maximum	164.00	175.0	57.00	66.60
	Standard Deviation	11.19	10.8	6.89	8.32
	Total N	975	975	975	975
	Valid N	726	564	729	564

Table 6: Height and Weight distribution at Baseline and at mid-term

### Teacher dataset

A total of 200 teacher interviews took place across 81 intervention schools. This dataset was used to ascertain changes in teachers' views for short-term hunger and attentiveness of pupils since the intervention had started. Since there were more than one response from most schools, it was necessary to create an average response for each school to assign equal importance to each responding school.

### School and pupil characteristics for DPEC dataset

Results from grade 3 Maths and Portuguese tests were first compiled at Baseline. This dataset is updated at mid-term which includes pupil results for tests taken in April 2014. It contains 2,149 pupil records. Further 14 pupil records were removed from the dataset as they were either found to be duplicate records or had extreme low/high value for pupil age (similar rule applied to that of independent dataset). Resultant dataset had 2,135 records with following pupil characteristics.

	Number of pupils		Number of schools	
	n	%	n	%
Intervention group	1635	76.6%	49	83.1%
Comparison group	500	23.4%	10	16.9%
<b>Total</b>	<b>2135</b>	<b>100.0%</b>	<b>59</b>	<b>100.0%</b>

	Intervention		Comparison		Subtotal	
	n	%	n	%	n	%
Girl	807	49.4%	250	50.0%	1057	49.5%
Boy	828	50.6%	250	50.0%	1078	50.5%
<b>Total</b>	<b>1635</b>	<b>100.0%</b>	<b>500</b>	<b>100.0%</b>	<b>2135</b>	<b>100.0%</b>

	Age at Baseline	
Intervention	Mean	9.36
	Minimum	7.00
	Maximum	16.00
	Standard Deviation	1.45
	Total N	1635
Comparison	Mean	8.85
	Minimum	7.00
	Maximum	14.00
	Standard Deviation	1.26
	Total N	500
Subtotal	Mean	9.24
	Minimum	7.00
	Maximum	16.00
	Standard Deviation	1.43
	Total N	2135



		Maths at Baseline	Maths at mid-term	Portuguese at Baseline	Portuguese at mid-term
Intervention	Mean	12.16	11.79	11.94	11.42
	Minimum	0.25	0.00	1	0
	Maximum	20.00	20.00	20	20
	Standard Deviation	3.84	3.33	3.85	3.44
	Total N	1356	1356	1351	1351
Comparison	Mean	14.34	11.62	12.67	11.70
	Minimum	0.00	6.00	0	5
	Maximum	20.00	20.00	20	20
	Standard Deviation	4.00	3.16	4.11	3.43
	Total N	385	385	385	385
Subtotal	Mean	12.64	11.75	12.10	11.48
	Minimum	0.00	0.00	0	0
	Maximum	20.00	20.00	20	20
	Standard Deviation	3.98	3.29	3.92	3.44
	Total N	1741	1741	1736	1736

## Overview of statistical methods

### Paired t-test

In order to detect differential impact of the intervention on secondary outcomes, paired t-test was used. Paired t-test compares two samples where each value in one sample has a natural partner in the other. In this case, we had Baseline and mid-term data from pupil and teacher interviews on short-term hunger and attentiveness in classroom.

### Factor analysis

Factor analysis was used to create a single literacy measure at Mid-term. Pupils were scored on each of the four tasks- total no. of words read correctly from the word card, no. words read correctly in one minute, no. of words read correctly in the passage and total no. of correct answers to the comprehension questions. Using factor analysis to create composite measures not only results in measures that are more robust than the individual items, it also reduces the problems that arise from collinearity (the inter-connectedness of correlated variables).

### Multilevel modelling

Schools rather than pupils were allocated into groups, whereas the outcome measures were measures of pupil performance, so analysis of the difference in outcomes needed to take into account the fact that pupils were clustered in schools. This clustering of pupils within schools was

accounted for by using multilevel models.<sup>23</sup> Multilevel models estimate a school-level variance and a pupil-level variance, allowing the average outcome to be different between schools. Multilevel models have more statistical power than school-level analysis of averages, so is the main model for the primary analysis. The multilevel models were estimated in the statistical software package 'R'.

Each multilevel model has the outcome of interest as the dependent variable and the following covariates were included in every model:

- an indicator of whether the pupil's school is in the intervention group,
- the pupil's raw score on the Baseline measure, and
- other covariates which may explain additional outcome variance such as age and sex.

The coefficients of the statistical models were measured in terms of raw scores. Hence, pseudo effect sizes were calculated which has no units and can be compared directly with the pseudo effect sizes across all variables. Effect sizes represent the expected change in the outcome variable (expressed as a proportion of a standard deviation) associated with each of the background factors. In the case of continuous background measures, the change is approximated for moving from a low to a high value. Effect sizes allow us to compare the strength of the association with the outcome for each of the background factors. Only statistically significant associations at five per cent level are presented.

We estimated a 95% confidence interval alongside the pseudo effect sizes to give the precision with which the effect size has been estimated. The upper and lower bounds of the confidence interval were calculated as the effect size plus/ minus the product of the critical value of the normal distribution ( $\approx 1.96$ ) and the standard error of the group indicator coefficient estimated from the multilevel model.

### **Dosage of the intervention**

Dosage was defined as number of effective days feeding in each intervention school. This information was matched with the pupil dataset to differentiate impact of the intervention based on how far it was implemented in each intervention school. Using this information, it was possible to generate two types of model results:

Intention- to-treat analysis (ITT): This type of analysis helps differentiate the impact of the intervention purely based on which school the pupil comes from- intervention or control. It ignores different dosage intervention pupils received.

On-treatment analysis: This type of analysis considers dosage each pupil received and therefore helps differentiate the impact of the intervention based on how far it has been implemented.

---

<sup>23</sup> For both the independent and DPEC datasets, comparison schools had to be selected from a neighbouring district due to limited availability of non-intervention schools in intervention districts. Therefore, district was not considered as one of the clusters in the analysis as control schools were from a different district than the intervention schools' districts.

### Literacy outcome from the independently collected pupil dataset

Analysis from the intention-to-treat model suggests that

- There is a negative association between intervention and literacy outcome at Mid-term ( $p < 0.05$ ).
- There is a positive association between reading fluency at Baseline and literacy outcome at Mid-term ( $p < 0.001$ ).
- Other variables like Baseline scores on reading comprehension, age and gender were not significantly correlated with the outcome.

Following table presents quasi effect sizes for significant explanatory variable.

#### Quasi effect size for literacy outcome at Mid-term

	Quasi Effect Size		
	Lower 95% CI	Mean	Upper 95% CI
Intervention/Control	-57.8	-32.7	-7.7
Reading fluency at Baseline	55.2	65.0	74.8

In order to detect differential impact on sub groups, interaction terms were added to the above model. This included interaction between intervention and gender, intervention and age, and intervention and reading fluency at Baseline. Of these, only interaction with reading fluency at Baseline was found significantly positive. This suggests pupils who were more fluent readers at Baseline had a less negative association with the intervention at Mid-term. This relationship is presented in the following chart:

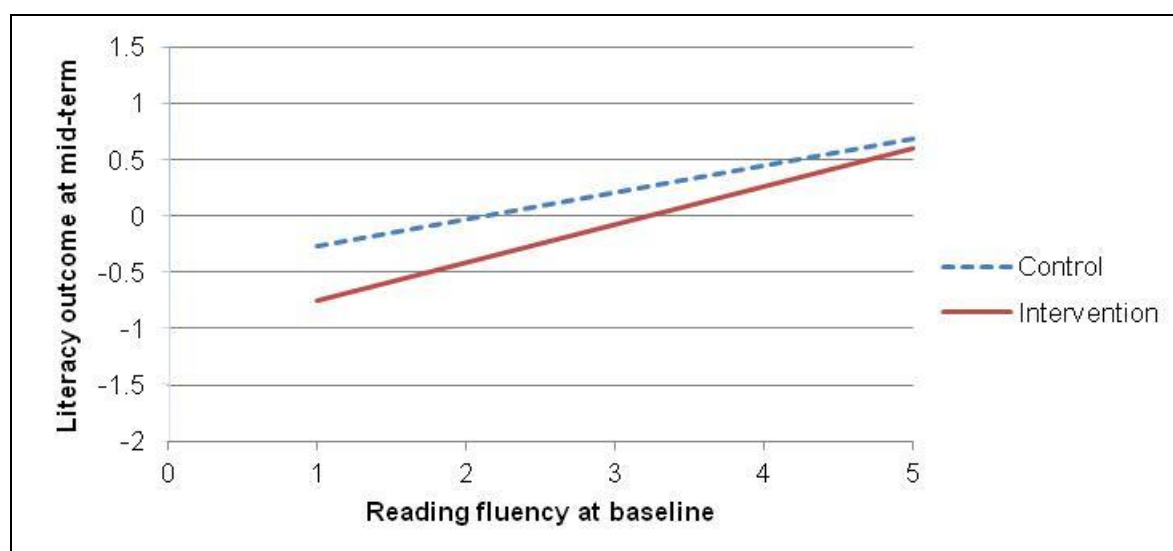


Figure 41: Interaction between intervention and reading fluency at Baseline

Analysis from the on-treatment models suggest no significant association between dosage (effective days feeding) and literacy outcome. Whereas, reading fluency at Baseline is positively associated with the literacy outcome at Mid-term ( $p<0.001$ ) as seen in the above model. There were no significant interactions when the effects of dosage were explored for the following variables: age, gender and reading fluency at Baseline.

### Height and weight

Similar to the literacy outcomes, all background factors were included for the height and weight models- for both intention-to-treat analysis and as-received treatment analysis. The only difference between these models and the literacy models was the way data was structured. For height and weight, there were two data points of the same variables (e.g. height at Baseline and height at mid-term). This allowed a data structure where each pupil had two records for the same measurement where first record related to height at Baseline and the other for height at mid-term. This added one more level to the clustering- where pupils were clustered within a school and each pupil having data at two time-points. Therefore, there were three levels of hierarchy- schools, pupils and time points.

Analysis of these models suggested there is no significant association with intervention or dosage with height or weight outcomes at Mid-term. Other background variables were included in the model as well, some of which were significantly associated with the outcome measures.

### Model results from DPEC trimestrial test data

Similar to the models using independent pupil interview data, these models included background factors such as age, gender and Baseline score for each subject.

### Mathematics score at Mid-term

There is a significant association with Mathematics at Mid-term for the following factors:

Positive significant association between intervention and the Mathematics score at Mid-term ( $p<0.05$ ). This suggests that compared to similar pupils from the control schools, intervention pupils are likely to have higher Mathematics score at Mid-term.

Positive significant association for Mathematics score at Baseline. This suggests those with higher scores at Baseline were more likely to have higher Mathematics score at Mid-term ( $p<0.001$ ).

Negative significant association for Mathematics score at Mid-term suggesting compared boys girls were more likely to have higher Mathematics score at Mid-term ( $p<0.01$ ).

	Quasi Effect Size		
	Lower 95% CI	Mean	Upper 95% CI
	Lower	Mean	Upper
Intervention/control	7.4	30.1	52.7

Mathematics at Baseline	at	59.7	66.0	72.3
Boys		-24.3	-16.5	-8.7

When interaction terms were added in the model, interaction of intervention and age showed negative association with the outcome at Mid-term ( $p < 0.05$ ). This suggests that compared to similar pupils from control schools, older pupils from intervention schools are likely to have lower Mathematics scores at Mid-term. This relationship is presented in the following chart:

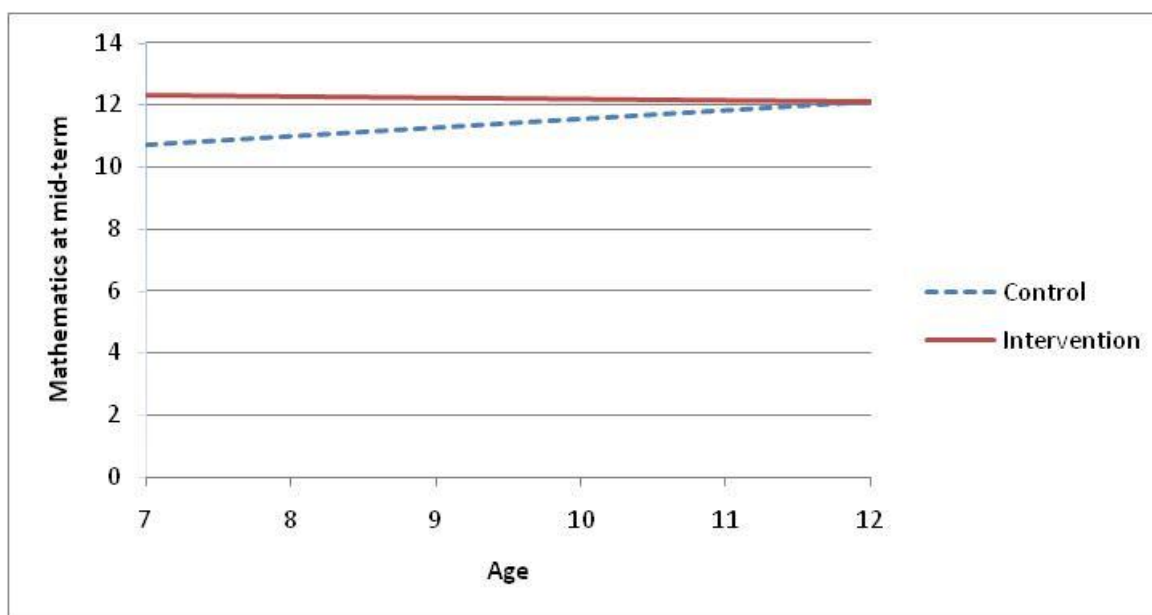


Figure 42: Relationship between interaction of intervention and age and Mathematics at Mid-term

### Portuguese score at Mid-term

Results from this model suggest there isn't a statistically significant association between intervention and Portuguese score at Mid-term. There are few other factors which are significantly correlated with the outcome:

Positive association for Portuguese score at Baseline

Negative association for gender suggesting boys are likely to have lower Portuguese scores than girls at Mid-term

Interaction between intervention and Portuguese at Baseline was negatively associated with the outcome. This suggests that compared to similar pupils from control schools, intervention pupils with higher Portuguese score at Baseline are not making as much progress at Mid-term.

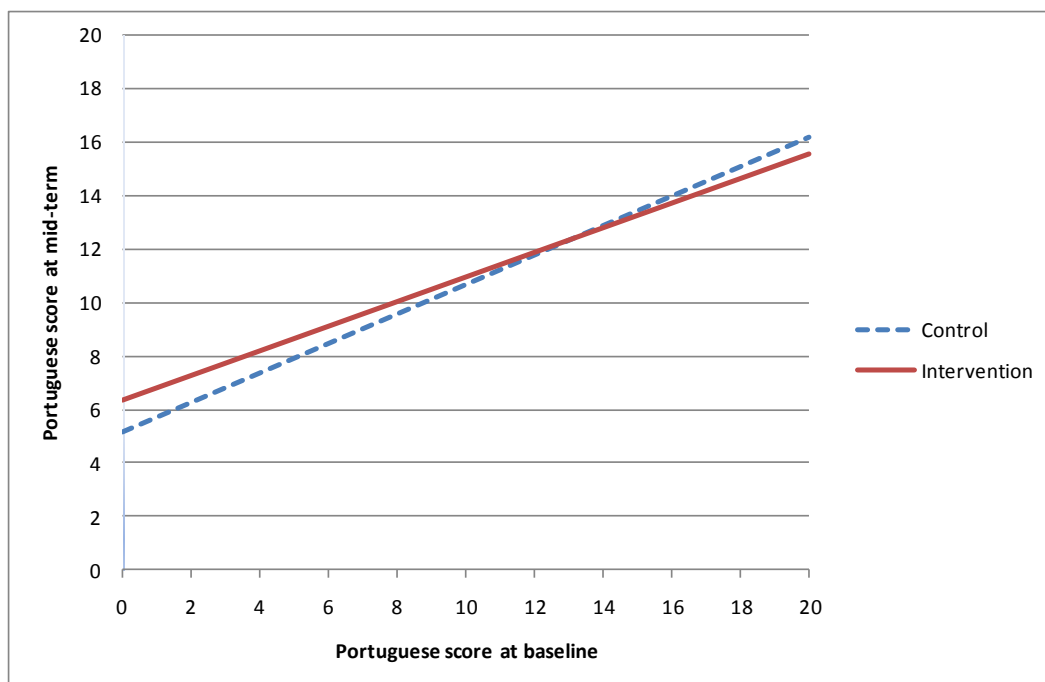


Figure 43: Relationship between interaction of intervention and Portuguese score at Baseline and Portuguese score at Mid-term

## Short-term hunger and attentiveness

### Pupil responses

Following table summarises pupil responses to two questions about short-term hunger and one question about difficulty in paying attention in class (Q2a, Q2b and Q4 respectively from Baseline questionnaire). Please note that the Baseline and mid-term data in this table isn't like-for-like comparison due to some pupils being substituted at mid-term data collection.

		Intervention		Comparison		Subtotal	
		n	%	n	%	n	%
Ever feel hungry at school? -at Baseline	Yes	211	40.3%	217	43.2%	428	41.7%
	No	313	59.7%	285	56.8%	598	58.3%
Ever feel hungry at school? -at Mid-term	Yes	240	56.5%	230	56.9%	470	56.7%
	No	185	43.5%	174	43.1%	359	43.3%
Feel hungry right now? - at Baseline	Yes	319	61.0%	297	59.0%	616	60.0%
	No	204	39.0%	206	41.0%	410	40.0%
Feel hungry right now? - at Mid-term	Yes	151	34.9%	130	30.9%	281	32.9%
	No	282	65.1%	291	69.1%	573	67.1%
Ever have difficulties paying attention in class? -at Baseline	Often	81	15.5%	67	13.5%	148	14.5%
	Sometimes	247	47.2%	176	35.4%	423	41.5%
	Never/no	195	37.3%	254	51.1%	449	44.0%
Ever have difficulties paying attention in class? -at Baseline	Often	39	9.8%	44	11.2%	83	10.5%
	Sometimes	120	30.3%	95	24.2%	215	27.3%
	Never/no	237	59.8%	253	64.5%	490	62.2%



Where there was data available for both the time points from the same individual, a 'paired t-test' was used to detect changes over time for intervention pupils' short-term hunger and attentiveness. It showed statistically significant difference over time.

Compared to Baseline,

- more pupils sometimes feel hungry at school at mid-term;
- when asked whether they feel hungry right now, fewer pupils say 'yes'
- fewer pupils have difficulties in paying attention in class at mid-term.

### Teacher responses

Following table summarises average rating of teachers' perception about pupils' short-term hunger and difficulty in paying attention (Q29 and Q31 from the teacher questionnaire). Scores are assigned such that a higher the score, more likely the teachers are to agree to the questions. E.g. a score of 1 would mean the teachers feel pupils appear to be hungry frequently and conversely a score of 3 would mean the teachers feel pupils never appear to be hungry.

	Number of schools	Minimum	Maximum	Mean	Std. Deviation
Pupils appear to be hungry at Baseline	82	1.00	3.00	1.73	0.44
Pupils appear to be hungry at mid-term	79	1.00	3.00	2.01	0.39
Pupils have difficulty paying attention at Baseline	82	1.00	2.50	1.89	0.31
Pupils have difficulty paying attention at mid-term	80	1.00	3.00	2.02	0.25

Teacher rating to both these questions were analysed using 'paired t-test'. The findings suggest that average school rating increased between Baseline and mid-term. This suggests that teachers were more likely to respond 'never' to both the questions at mid-term and this increase was statistically significant ( $p < 0.001$  for short-term hunger and  $p < 0.01$  for difficulty in paying attention).

### Conclusions

The Mid-term evaluation report aimed to evaluate progress so far and to assess whether the interventions are showing early signs of producing the desired results. As the allocation of schools to receive the food for education intervention was not at random, it is not possible to attribute causality to any of these findings. Instead, whether positive or negative, they could be explained by systematic differences between schools in the intervention and control groups. In particular, schools from the control group were from different districts to intervention schools, and these districts differ in terms of their socio-economic characteristics. Where possible, background characteristics of the pupils in the two groups were controlled in order to remove systematic differences that were measured.

In terms of pupils' general school performance, Mathematics and Portuguese test scores from the DPEC dataset were considered. Overall, pupils from intervention schools made more progress in Mathematics compared to similar pupils from control schools. However, sub-group analysis suggested that older pupils from intervention schools made less progress compared to similar pupils from control schools. In relation to the Portuguese test, there wasn't a significant overall association with the intervention. However, a negative association was found whilst comparing pupils with similar Portuguese score at Baseline suggesting intervention pupils with higher Portuguese score at Baseline made less progress at Mid-term than control pupils.

In relation to pupils' literacy scores from the independently collected dataset, intention-to-treat analysis indicated an overall negative association with the intervention. Pupils with higher reading fluency had a less negative association with the intervention at mid-point. On-treatment analysis suggested no significant association between the intervention and literacy score.

The intervention was not significantly associated with any improvement in height or weight.

Analysis of pupil attentiveness suggested positive change over-time between Baseline and Mid-term. Both pupil and teacher responses suggested that fewer children have difficulty in paying attention in class at mid-term. Similarly, responses from pupil and teacher questionnaire suggested fewer pupils appear to be hungry right now. However, when pupils were asked whether they sometimes feel hungry at school, more pupils responded 'yes' at mid-term than those at Baseline.

## Annex 5 List and characteristics of schools visited

Number	School	Province	Date visited	District	Type of school	Number of pupils	Number of teachers	CSB in school on date of visit	Functioning water system on date of visit	Latrines	Kitchen and storeroom constructed by project
1	Escola Primaria 1 de Tchelane	Maputo	12/09/2014	Manhica	Rural	517	9	Yes	Yes	Yes	Yes
2	Escola Primaria Completa Palmeira	Maputo	12/09/2014	Manhica	Rural	1567	32	Yes	No	Yes	Yes
3	Escola Primaria 1 de Gumbene	Maputo	16/09/2014	Magude	Remote rural	30	1	No	Yes	Yes	Yes
4	Escola Primaria 1 de Mahel	Maputo	16/09/2014	Magude	Remote rural	65	6	Yes	No	Yes	Yes
5	Escola Primaria 1 de Maguaza	Maputo	17/09/2014	Moamba	Semi-rural	82	3	Yes	Yes	Yes	Yes
6	Escola Primaria Completa 25 de Junho	Maputo	17/09/2014	Moamba	Semi-urban	948	18	No	Yes	Yes	Yes
7	Escola Primaria Completa de Tinonganine	Maputo	18/09/2014	Matutuine	Rural	183	8	Yes	No	Yes	Yes
8	Escola Primaria Completa de Bela Vista	Maputo	18/09/2014	Matutuine	Semi-urban	922		Yes	Yes	Yes	Yes

## Annex 6 List of interviewees

### Planet Aid representatives

[REDACTED]  
[REDACTED]

### ADPP/Food for Education project employees

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

### WISHH employees/representatives

[REDACTED]  
[REDACTED]  
[REDACTED]

### USDA/FAS representatives

[REDACTED]  
[REDACTED]  
[REDACTED]

### Other key partners/stakeholders

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

### EPF headteachers

[REDACTED]  
[REDACTED]  
[REDACTED]

### Government of Mozambique

[REDACTED]  
[REDACTED]

[REDACTED]

**School directors, teachers and SFC representatives**

[REDACTED]

**Focus Groups**

[REDACTED]

## Annex 7 Framework for the observation of the infrastructure of schools visited, food preparation and distribution

### Framework for observation of the infrastructure of schools visited, food preparation and distribution

Name and location of school \_\_\_\_\_ Date \_\_\_\_\_

Names of observers \_\_\_\_\_

Observation criteria	Yes	No	Comments
<b>Food preparation area</b>			
Is the food preparation area well organised and functional?			
Is the food preparation area clean and hygienic?			
Are utensils and bowls/plates stored in hygienic conditions?			
Is the food preparation area sufficiently far from the toilets?			
Is the food preparation area protected from the sun?			
Are hand-washing facilities available, including soap and towels?			
Is a wood-saving stove present and used?			
Is a supply of firewood present?			
<b>Food storage area</b>			
Are the sacks of CSB stored in a clean, locked cupboard which adequately protects the food and allows adequate air circulation?			
Does a system exist for controlling access to the CSB?			
Is there a stock record book, which is kept up to date?			
<b>Water</b>			
Is there a supply of clean water in sufficient quantities?			
Is the water source adequately protected?			
Is a water storage tank(s) present and being used?			
Is the water tank(s) closed and adequately protected?			
Is clean water available to prepare the porridge?			
Is clean water available to wash utensils and bowls/plates?			
<b>Food distribution area</b>			
Is the food distribution area well organised and functional?			
Is the food distribution area clean and hygienic?			
Is the food distribution area protected from the sun?			
Is the food distribution area sufficiently far from the toilets?			
Are there facilities for hand washing before and after eating?			
<b>Toilets and washing facilities</b>			



Are there adequate toilet facilities for male and female learners?			
Are there adequate washing facilities close to the toilets?			
Are there adequate toilets for male and female staff?			
Are there adequate washing facilities close to the staff toilets?			
<b>Other comments, including pressing deficiencies/requirements (continue on reverse side as necessary)</b>			
<b>Food preparation process</b>			
Do the food preparers wash their hands adequately?			
Do the food preparers use clean water to prepare the porridge?			
Do they wash the utensils before using them?			
Do they wash the utensils after using them?			
Does the team function effectively together?			
Is the process performed according to an efficient routine?			
Are responsibilities within the team clearly defined?			
Do the food preparers appear motivated and engaged?			
Does the porridge appear well prepared?			
<b>Food distribution process</b>			
Are there sufficient bowls/plates and spoons for all children?			
Do all children wash their hands before receiving the food?			
Is the food distribution process well organised?			
Is the same quantity served to all the children?			
Is there a system to control who has received the food?			
Do all children have equal access to the food (including those with handicaps/special needs)?			
Do the children eat the food in a salubrious place?			
Do the children eat sitting down?			
Do the children eat in the shade?			
Does a system/routine exist to collect the used plates/bowls?			
<b>Other comments, including pressing deficiencies/requirements (continue on reverse side as necessary)</b>			
<b>N.B. Are the kits of school materials visible/available in the school and being used?</b>			

## Annex 8 Framework for the observation of teaching in primary schools visited

## Framework for observation of primary teaching: checklist

Name of teacher observed \_\_\_\_\_ Grade \_\_\_\_\_ School \_\_\_\_\_

Date \_\_\_\_\_ Number of students in class \_\_\_\_\_ Names of observers \_\_\_\_\_

Observation criteria	Yes	No	Comments
<b>Use of lesson plan</b>			
Is the teacher using a lesson plan?			
If so, are the lesson objectives clearly stated?			
Is the lesson plan well-designed and coherent, with activities which are appropriate to the context, objectives and the class?			
Does the teacher generally follow the content and activities of the lesson plan?			
Does the teacher generally respect the timing of the lesson plan?			
When the teacher deviates from the lesson plan does he/she manage to return and carry on smoothly?			
<b>Structure and execution of lesson</b>			
Does the lesson/section have an introduction and conclusion?			
Is the lesson/section otherwise well-structured?			
Does the teacher manage to make meaningful transitions between lesson content/activities?			
Does the teacher make/help learners to make meaningful connections between concepts and activities?			
Does the teacher appear to be monitoring learners' progress and achievement of the objectives?			
Do the objectives appear to be met for the majority of learners?			
<b>Communication</b>			
Are the learning objectives and assessment criteria clearly communicated to the class?			
Is the teacher's language appropriate? (child-friendly, precise, polite)			
Does the teacher avoid demeaning/abusive language, sarcasm etc.?			
Does the teacher speak audibly and clearly?			
Does the teacher use effective body language?			
Does the teacher's communication take account of learners with special needs?			
<b>Use of materials /resources</b>			
Are materials/resources used which are appropriate to the context and the class?			
Are any of the resources from the project kits being used?			
Are materials/resources used to their full potential?			
Are the materials used appropriate for learners with special needs?			
Is use of the chalk board (or other equipment) clear, orderly and well structured?			

<b>Classroom setting</b>			
Is the classroom environment clean, functional and welcoming?			
Are there enough chairs, tables and equipment for all learners?			
Is the arrangement of chairs, tables and equipment conducive to learning?			
Is learners' work attractively displayed on the walls?			
Are learners with special needs appropriately placed?			
<b>Classroom management</b>			
Does the teacher manage to focus on all students in the class?			
Are learners actively participating and involved?			
Is there evidence of class rules being applied?			
Is the teacher able to detect and respond to learners' needs?			
Is there a good balance between teacher input and learners' activities?			
<b>Group work</b>			
Is group/pair work used?			
Is group/pair work well facilitated?			
Does the teacher monitor students' participation?			
Is the composition of groups well planned? (variation, rotation of roles, learners with special needs)			
Are group work activities properly 'wrapped up'? (rather than 'left hanging')			
<b>Questioning and feedback</b>			
Is there enough waiting time after questions?			
Does the teacher regularly re-phrase questions?			
Does the teacher give appropriate (constructive) feedback to learners?			
<b>Special needs</b>			
Are activities appropriately adapted for learners with special needs?			
Are learners with special needs able to participate fully?			
Are learners with special needs (including gifted and talented learners) given differentiated tasks/activities?			
<b>Other comments (continue on reverse side as necessary)</b>			

## Annex 9 Plan and interview schedule for collecting information from pupils (English translation)

### Plan and interview schedule for collecting information from pupils

#### 1. Planning for interviews

The interviews with pupils are individual and will last 20-25 minutes. Prepare a plan allowing 30 minutes per pupil, to minimize the time each pupil will be absent from class. Please note the names of the pupils in advance and call them in a random order in order to minimise the risk of respondents communicating amongst themselves about the contents of the interview.

#### 2. Choice of pupils

**Wherever possible, the pupils interviewed will be the same learners who took part in the baseline study.**

The Baseline study had 1 032 learners in all, 529 intervention group and 503 control group. These were selected on the following basis: *Intervention group: 16 pupils per school (4 x grade 4 girls, 4 x grade 4 boys, 4 x grade 6 girls, 4 x grade 6 boys), from each of 32 schools (8 in each intervention district). Alphabetical sampling: first 4 girls and the first 4 boys on the register from each target class.*

*Control group: 16 pupils (4 x grade 4 girls, 4 x grade 4 boys, 4 x grade 6 girls, 4 x grade 6 boys), selected in the same manner from each of 32 schools in the district of Namaacha.*

**Where these pupils are no longer available, other pupils should be substituted for them, using the same criteria (same class, substitute girls for girls, boys for boys, using the 5<sup>th</sup> boy/girl on the register, then the 6<sup>th</sup> etc. from each target class). Where substitutes are used, this must be clearly indicated.**

#### 3. Instructions and Verbal Consent

The interview will take place sufficiently far from the other pupils to minimize the risk of interruptions/interference or of other pupils hearing and preparing their answers, but within view of the school. The interviewer explains the aims of the interview and reassures the pupils that s/he is not being personally assessed: the information collected will not be used to judge or evaluate individual pupils. Therefore there are no "right" or "wrong" answers, and the pupils should answer truthfully without fearing repercussions.

Explain to the pupil that there is no obligation to take part in the interview. They are free to choose not to participate if they prefer. If they do take part, their responses will be very useful for our work. Verbal consent must be obtained before beginning.

#### 4. The interviewer should fill in the following information about each pupil:

Pupil name: \_\_\_\_\_ PREFILLED \_\_\_\_\_

Pupil's date of birth: (d/m/y) \_\_\_\_/\_\_\_\_/\_\_\_\_

(or age if date of birth unknown) \_\_\_\_\_

School name: \_\_\_\_\_ PREFILLED \_\_\_\_\_

Class/Grade: \_\_\_\_\_

District: \_\_\_\_\_

Sex of pupil: boy / girl (please circle one)

#### **Substitution**

**If a pupil has been interviewed in place of an absent or unavailable pupil:**

Name of the pupil actually interviewed: \_\_\_\_\_

School name of the pupil actually interviewed: \_\_\_\_\_

Date of interview \_\_\_\_\_

Time of interview \_\_\_\_\_

Name of interviewer \_\_\_\_\_

## A. Reading test

### 1. Reading words

Give the pupil the word card and read the following instructions:

There are some words on this card. Please will you read aloud as many words as you can.

The pupil begins to read the words on the list. The interviewer marks the word read as correct, incorrect or no response, using an "X". If the pupil hesitates for more than five seconds, or attempts to read a word for more than five seconds, the interviewer asks the pupil to read the next word on the list. The interviewer should never correct a word read by the pupil. Furthermore, the interviewer should never read a word correctly to the pupil.

The interviewer continues to ask the pupil to read the words on the list. The interviewer stops the test when the pupil reads incorrectly or does not respond to five words in a row. However, if the pupil reads incorrectly three words in a row, for example, then reads one word correctly, the interviewer continues with the exercise until the pupil either reads five words incorrectly in a row or finishes the exercise.

At the end add up the number of "X" in each column:

		Correcto	Incorrecto	Não Responde
1	E			
2	De			
3	Ter			
4	Dia			
5	Ele			
6	Segundo			
7	Depois			
8	Primeiro			
9	Lá			
10	Anos			
11	Também			
12	Cada			
13	Vir			
14	Triste			
15	Um			
16	Avô			
17	Bandeira			
18	Saúde			
19	Lembrar			
20	Ela			
21	Classe			
22	Descrever			
23	Rua			
24	Atrás			
25	Olhos			
26	Pai			
27	Nunca			
28	Através			
29	Entre			
30	Três			
TOTAIS				

## 2. Reading and understanding a text

[SAY:] Here is a story which I would like you to read. When I say “begin”, start to read the story aloud, beginning from the first word. Please read from left to right (show the pupil how to do this).  
[SAY:] Begin reading each word; if you find a word you don’t recognise or can’t read, I’ll tell you what it is. Please read as well as you can. Do you understand what I would like you to do?  
**Very good. Can we start?**

1. **Start the chronometer when the pupil begins to read the first word.** If after three seconds the pupil does not manage to pronounce the first word of the passage, say the word aloud, mark it as incorrect and start the chronometer again.

2. Follow the pupil reading on your copy of the text (this page) and **cross through the words which are incorrectly read with a diagonal (/)**.

3. **After one minute, insert a square bracket in closed position after the last word which the pupil tried to read ( ] )**.

4. When the pupil has finished reading the text [Say:] **Thank you very much, now I am going to ask you some questions about what you were reading. You can look at the story if you like.**

5. If after one minute the pupil has only read the first line, [Say:] **Thank you very much.** It is not necessary to continue with the comprehension questions because the pupil is not able to read.

## 6. Ask the comprehension questions.

If the pupil has read as far as 15, ask question 1.

If the pupil has read as far as 35, ask question 2.

If the pupil has read as far as 70, ask question 3.

If the pupil has read as far as 110, ask question 4.

7. When the pupil has finished the questions, ask him/her if s/he already knew the story, then say: **Thank you very much.**

## INSTRUCTIONS TO CALCULATE THE PUPILS’ PERFORMANCE SCORE.

1. Only calculate the scores after ALL the pupils for the day have finished.

2. Count the number of words read CORRECTLY in one minute.

3. Count the number of words read CORRECTLY in the passage.

4. Total the number of correct answers to the comprehension questions.

## Story text to be read by the pupil

A vida em comunidade	4	1. Como se sentia o macaquinho? [O aluno(a) leu até à linha 15] (Resposta: triste)
Era uma vez um macaquinho que	10	Correcto <input type="checkbox"/> Incorrecto <input type="checkbox"/> Não Responde <input type="checkbox"/>
andava sempre triste. Um dia,	15	
o mocho encontrou-o assim triste	20	
e perguntou-lhe o motivo da	25	
sua tristeza. -Eu gostaria de	30	
ter muitos amigos que brincassem	35	2. Porque o macaquinho andava triste? [O
comigo – respondeu o macaquinho. O	40	aluno(a) leu até à linha 35] (Resposta: Queria ter
que é que faço para	45	mais amigos)
arranjar amigos? O mocho, um	50	Correcto <input type="checkbox"/> Incorrecto <input type="checkbox"/> Não Responde <input type="checkbox"/>
animal sábio, deu os seguintes	55	
conselhos ao macaquinho: -Temos de	60	
trabalhar para mostrar aos outros	65	
que temos valor. É desta	70	
maneira que conquistamos o coração	75	3. Para fazer amigos, que conselhos deu o
dos outros e fazemos amigos.	80	mocho ao macaquinho? [O aluno(a) leu até à
Então, o macaquinho decidiu seguir	85	linha 70] (Resposta: Tem de mostrar aos outros
o conselho do mocho. E	90	que tem valor)
dai em diante, todos naquela	95	Correcto <input type="checkbox"/> Incorrecto <input type="checkbox"/> Não Responde <input type="checkbox"/>
floresta passaram a gostar dele:	100	
todas as mães macacas o	105	
tratavam como filho, os outros	110	
macaquinhos tratavam-no como irmão e	115	
todos o tratavam como amigo.	120	4. Como as mães macacas tratava o
		macaquinho? [O aluno(a) leu até à linha 110]
		(Resposta: como filho)
		Correcto <input type="checkbox"/> Incorrecto <input type="checkbox"/> Não Responde <input type="checkbox"/>

A. Did you already know this story? YES / No / No response

B. Total number of words read CORRECTLY in one minute \_\_\_\_\_

C. Total number of words read CORRECTLY in the passage \_\_\_\_\_

D. Total number of correct answers to the comprehension questions \_\_\_\_\_



### B. Questions for the pupil

Ask the pupil the following questions. You may encourage them and rephrase the question or explain using simple words or child-friendly language; however do not influence their response. The pupil should answer the question wherever possible: only choose "no answer" exceptionally. Please circle one answer.

1. a) Are you a member of one or more school clubs? If so, how many clubs do you belong to? 0 / 1 / 2 / 3 / 4 / 4+  
(NOTE TO INTERVIEWER, If response is no, circle 0 and go to question 2)

- b) How often do you usually attend the school clubs?

never / from time to time / once a week / twice a week / 3 times a week / 4 or more times a week

- c) Do you enjoy going to the clubs? very much / somewhat / no / no answer

- d) Does going to the club help you with school work? very much / somewhat / no / no answer

- e) Has your school work improved since you began going to the club? very much / somewhat / no / no answer

### 2. (Questions for pupils in schools which have already received sports and educational materials)

- a) Do you play with the sports equipment which recently arrived at your school?

never / from time to time / whenever possible / 1-2 times a week / 3-4 times a week / every day

- b) Do you use the learners' materials which recently arrived at your school/ in the school clubs?

never / from time to time / whenever possible / 1-2 times a week / 3-4 times a week / every day

3. a) Do you ever feel hungry at school? yes/no/no answer

- b) Do you do feel hungry right now? yes/no/no answer

- c) Did you eat something at home before you came to school today? yes/no/no answer

(Questions for pupils whose schools are already providing food)

- d) Do you get food to eat at school every day you come to school? yes/no/no answer

If not, why? \_\_\_\_\_

- e) Do all the children at school get food every day at school? yes/no/no answer

If not, why? \_\_\_\_\_

- f) Did you have food to eat at school today? yes/no/no answer

- g) Did you have food to eat at school yesterday? yes/no/no answer

- h) Does the food at school taste good? yes/no/no answer

If not, why? \_\_\_\_\_

i) (Remember last year before you had food at school) has having food at school changed how you feel at school?

yes / no /no answer

j) If so, what has changed? \_\_\_\_\_

4. a) How many meals do you eat at home each day?

Put number \_\_\_\_ / no answer

b) How many meals did you eat at home yesterday?

Put number \_\_\_\_ / no answer

c) Before you began getting food at school, how many meals did you eat at home each day?

Put number \_\_\_\_ / no answer

5. Do you ever have difficulties concentrating/paying attention in class?

often / sometimes / no / no answer

6. a) What do you do after going to the toilet (use child-friendly/accessible language)?

**(NOTE TO INTERVIEWER: DO NOT READ:** Does the response mention hand washing?)

yes / no /no answer

b) What do you do before you eat?

**(NOTE TO INTERVIEWER: DO NOT READ:** Does the response mention hand washing?)

yes / no /no answer

7. (If the pupil has not mentioned had washing, introduce the subject of hand washing). Why is it important to wash your hands?

**(NOTE TO INTERVIEWER: DO NOT READ:** Does the response mention illness / germs / microbes?)

yes / no / no answer

8. Have you taken anti-parasite tablets this year/since you've been in this grade?  
no answer

yes / no /

### E. Height and weight of pupil

Ask the pupil if they know how much they weigh. Explain you would like to weigh them. The pupil should remove their shoes. Ask the pupil to stand on the scales and help them to read their weight (to the nearest decimal place/0.1 kg).

Weight of pupil \_\_\_\_\_. \_\_\_\_ kg

Ask the pupils if they know their height. Explain you would like to measure them. Invite the pupils to stand against the wall where the ruler/tape is positioned. Check their heels and shoulders are touching the wall and the whole of their feet are firmly on the ground. Using a flat object such as a book, which should be perfectly horizontal and at a right angle to the wall, read the pupil's height (to the nearest centimetre)

Height of pupil \_\_\_\_\_ cm

Ask the pupil if they have any questions about the activity they have just performed. After responding to any questions, thank the pupil and say they should go back to their class.

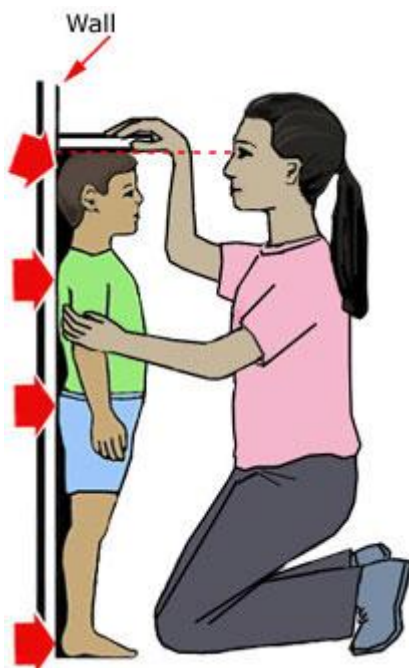
Interviewer's observations

### Measuring Weight Accurately

1. Use a digital scale. Place the scale on firm flooring (such as cement, tile or wood).
2. Have the child remove shoes and heavy clothing.
3. Have the child stand with both feet in the centre of the scale.
4. Record the weight to the nearest decimal fraction (for example, 25.1 kilograms).



### Measuring Height Accurately



1. Remove the child's shoes, bulky clothing, and hair ornaments, and unbraid hair that interferes with the measurement.
2. Take the height measurement on flat flooring and against a flat surface such as a flat wall.
3. Have the child stand with feet flat, together, and against the wall. Make sure legs are straight, arms are at sides, and shoulders are level.
4. Make sure the child is looking straight ahead and that the line of sight is parallel with the floor.
5. Take the measurement while the child stands with head, shoulders, buttocks, and heels touching the flat surface (wall). (See illustration.) Depending on the overall body shape of the child, all points may not touch the wall.
6. Use a flat headpiece (e.g. a book) to form a right angle with the wall and lower the headpiece until it firmly touches the crown of the head.
7. Make sure the measurer's eyes are at the same level as the headpiece.
8. Lightly mark where the bottom of the headpiece meets the wall. Then, use a metal tape to measure from the base on the floor to the marked measurement on the wall to get the height measurement.
9. Accurately record the height to the nearest centimetre

Adapted from Centres for Disease Control and prevention website

[http://www.cdc.gov/healthyweight/assessing/bmi/childrens\\_bmi/measuring\\_children.html](http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/measuring_children.html)