

# School Feeding Handbook

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## Preface

During the three decades of its existence, assistance with food to the education sector has been a priority activity for WFP. Initially, schools were seen as points of convenience to distribute surplus food, but over time food assistance evolved into activities carefully designed to have a maximum impact on education and human development. The experience gained in this process taught many valuable lessons about the possibilities as well as the limitations of food aid.

This Handbook is aimed at project officers and other staff from WFP and government, involved in the design, implementation and evaluation of school feeding projects. It is designed to assist these staff to achieve effective and efficient interventions in the educational sector. The Handbook is based on the experience of WFP and other agencies.

The Handbook contains information and guidance about general policy aspects, health, nutrition, monitoring and evaluation issues connected with food assistance to pre-primary and primary day schools and primary and secondary boarding schools. The Handbook should be used in conjunction with other guidance materials such as the Programme Design Manual and the forthcoming guidelines related to promoting the education of women and girls.

The Handbook consists of three parts. The first part consists of the Information Paper submitted to the Twenty-ninth Session of the CFA and it provides the policy framework for the implementation of school feeding projects. The second part deals with the practical aspects related to health and nutrition, covering ration composition, food safety, water supply and sanitation and deworming interventions. The third part covers many practical aspects of monitoring and evaluation including model reporting forms.

Comments on this Handbook are welcome and should be directed to the Chief of the Technical Support Service, Operations Department, WFP.



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## Foreword

Human resources development, and education in particular, has been a priority area for the World Food Programme throughout the three decades of its existence. In the early years food aid was seen primarily as a relief intervention; schools were convenient points through which food for hungry children could be channelled. Increasingly, the wider potential benefits of food aid as a development input began to be acknowledged. Attempts have since been made to design WFP-assisted education projects so as to maximize their impact on education and human development. WFP continues to seek ways of doing this, by drawing lessons from its own experience and that of other agencies.

A first contribution toward bringing this knowledge together was the Information Paper submitted to the Twenty-ninth Session of the CFA, "WFP Food Aid to Education -Past Experience and Future Directions." This paper set the background for further examination of the central issues. In 1994 WFP decided to develop, jointly with UNESCO, Operational Guidelines which would ensure rigour and consistency in the design, implementation and evaluation of its projects in the education sector. The structure of the present document arose from the need to base such Guidelines on both WFP's mandate and on state-of-the-art knowledge in the relevant areas. Thus, Chapter I establishes the link between education and WFP's mandate to alleviate poverty and hunger; Chapter II provides an overview of research findings on the effects of school feeding; Chapter III draws the operational implications of the preceding information for WFP's activities.

The present Guidelines are largely limited to assistance to pre-primary and primary day schools and primary and secondary boarding schools. This is due to the fact that by far the largest proportion of WFP assistance to education is currently allocated to such activities. It is felt, however, that the scope for providing food aid to education is much wider. WFP and UNESCO will continue to explore other and more innovative ways of using food aid in support of education, and additional guidance will be provided for such activities in the future.

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## Foreword

The principles guiding the formulation of School Feeding Programmes (SFPs) assisted by the World Food Programme (WFP) have been laid down in the "Operational Guidelines for WFP Assistance to Education". This handbook is primarily intended for project managers in both WFP headquarters and country offices who are responsible for the formulation, management and monitoring of WFP-assisted SFPs. It is also expected to be used by experts involved in the formulation and evaluation of these projects.

This manual has been prepared by the Food Aid Programmes Unit (FAP)/Food Safety and Food Aid Programme (FSF) of the World Health Organization (WHO), in close collaboration with WFP. Contributions have been received by relevant programmes in WHO, namely:

- Food Safety (FOS)/FSF
- Rural Environmental Health (REH)/Division of Operational Support in Environmental Health (EOS)
- Schistosomiasis and Intestinal Parasites (SIP)/Division of Control of Tropical Diseases (CTD).

The first section, 'Ration Composition and Size' aims at rationalizing and standardizing food assistance to SFPs. The purpose of the sections on 'Food Safety', 'Water Supply and Sanitation' and 'Deworming Interventions' is to provide basic background information and guidance on preventive measures which should be incorporated into the project's design. By raising awareness and knowledge of these issues among project designers and managers, it is hoped that a) pertinent preventive and/or corrective activities will be included into the design of SFPs and b) relevant indicators will be incorporated in their monitoring and evaluation systems.

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## Foreword

This Manual complements the Operational Guidelines for WFP Assistance to Education through School Feeding.

You should refer to the Guidelines for general information regarding WFP's approach to working in the education sector as well as regarding monitoring and evaluation in WFP-assisted education projects. Other information regarding monitoring and evaluation in WFP, such as ITAD materials or the WFP Project Design Manual, should also be consulted for general guidance.

As a direct complement to the Guidelines, the Manual concentrates on the M&E implications of school feeding activities, including all gender-related aspects. Information concerning monitoring and evaluation of other types of WFP activities in education, particularly those directly promoting the education of girls and women, will be included in a separate document.

The Manual is intended for use by those involved in the design, implementation and evaluation of WFP-assisted school feeding activities, including staff of WFP Country Offices, government project management staff and members of appraisal/evaluation missions. Apart from an overview of the purpose and general "philosophy" of M&E in such projects, the document covers many practical aspects of monitoring and evaluation, including specific sections which are intended to guide and simplify the design and implementation of M&E systems (e.g. detailed chart for monitoring of most common objectives; model reporting forms; graphic model of the reporting chain). For ease of reference, these sections have been placed in annex.

An additional focus of the document is on data collection through field visits and beneficiary contact monitoring (BCM). In addition to a section on the "why" and "how" of field visits and BCM, the Manual includes a list of typical issues to be raised with parents, teachers and pupils as well as a model of a field visit checklist/report.

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## ***Purpose of M&E***

Project monitoring and evaluation serves **two main purposes**:

- provide regular information on the implementation of a project and detect possible malfunctions to allow for corrective measures;
- provide feedback on the project's effects and the degree to which immediate objectives are reached.

As a general rule, M&E systems should be **as simple and user-friendly as possible**, focusing on the essential types of data but avoiding overloading - any M&E system can serve its purpose only if it is actually used and functioning! The degree of complexity or sophistication will depend on the data collection capacity of each country; however, as a general rule, it is preferable to collect only a few data in a regular and reliable manner rather than setting up an ambitious list of indicators which turn out to be impossible to collect.

## ***Focus of data collection***

As set out in the Operational Guidelines, the overall M&E approach for WFP-assisted education projects is based on the principle of '**plausible inference**': if it has been demonstrated (e.g. in a research study; see chapter II of the Guidelines) that an intervention, carried out under specific conditions, produces a certain effect (e.g. giving an early morning snack enhances hungry pupils' concentration capacity; in poor, educationally underdeveloped communities, provision of a sufficiently valuable school meal encourages children to come to school), we can assume that the same intervention will always produce the same effect provided it is carried out under similar conditions. In other words, if we know that food was provided regularly, in sufficient quantities, at the right time of day, to the students identified as needy, and that other important implementation mechanisms were followed, we can assume that short-term hunger was effectively alleviated and, consequently, the students

were better able to benefit from their education.

This principle implies that emphasis is given to monitoring project implementation and production of outputs to derive information on the achievement of immediate objectives. In addition to output monitoring, effects indicators should be added when conditions permit. However, an M&E system will not usually allow for tracking of a project's impact; this requires analyses which are more complex and extend over longer periods of time than what is usually possible as part of project M&E.

**Monitoring and evaluation of WFP-assisted education projects gives emphasis to project implementation and production of outputs; tracking of project effects or impact is done only where conditions permit.**

An M&E system will thus include **three possible levels of data collection**:

- a. core information (to be collected for every project; mostly related to project implementation and production of outputs);
- b. complementary information (optional; indicators of project effects; qualitative information, etc.); and:
- c. special initiatives (optional; special study to be undertaken on an individual project; linking up with relevant M&E initiatives/studies by other organizations; etc.).

To what extent levels b) and c) can be covered will depend on the individual context of each country. This is an important aspect to be examined during design of an M&E system and in the preparation of the project budget.

### ***Types of data to be collected***

Monitoring of core and complementary information is guided by the following questions:

- What data do we need?
- How often should it be collected? This, in turn, will depend on:
  - how often is the information needed (e.g. food distribution needs to be reported quite often, whereas the number of teachers or classrooms in a school will not change from one month to the other); and:
  - how often is it available (e.g. data to be obtained through the regular MOE school census is usually available only once per year).
- Where and how can it be obtained and how will it be used (by whom and for what purpose)?

You will find these three aspects (type of data to be collected, frequency of reporting, ways of data collection and processing) reflected in the sections of this document on monitoring of project implementation milestones and monitoring of most common objectives (see [Annexes 4 and 5](#)).

As mentioned above, in addition to monitoring of core and complementary data, information can also be collected through **special initiatives** which go beyond the purpose and ambition of normal M&E. You will find more information on this in section II of this document.

### ***Reporting chain***

A key feature of a sound M&E system is that **data are aggregated at the appropriate level of detail at each step of the reporting chain**. One aspect which therefore has considerable implications for the data flow under M&E is **the managerial set-up of a project**. This, in turn, depends on country size and the way in which a country is administratively divided (e.g. in regions, districts, zones). Typically, there is a central project management unit as well as project coordinators at district and, sometimes, regional/provincial levels. Information will often be reported from schools to, say, the district coordinator and thereon to the central project unit, possibly also passing through a regional coordinator. Many types of data will need to be condensed or aggregated by district or region, as well as by month and quarter, so as not to flood the central project unit with too much information. At the same time, not all information is needed in the same way at all project management levels. For example, the district coordinator often requires monthly information about commodity use in schools in order to prepare the next deliveries. At the regional or central level, such data is required only once per term or even semester. These considerations will have an influence on the regularity of reporting and ways of data processing in individual countries. <sup>1</sup>

In this document, we assume that the typical project management set-up and, consequently, the reporting chain consists of three levels: school, district project coordinator and central project management (where information goes to the WFP Country Office and, ultimately, to WFP Headquarters).

### ***Sources of information***

Regular reports between schools, district and central project management, as well as the WFP Country Office, are the backbone of any M&E system. Typically, they include the following:

- a Daily food distribution sheet for use by schools (to record whether the canteen was operational, the amount of food distributed, etc.);
- a Monthly or Quarterly school report to the district coordinator (in the latter case, reports will be prepared each quarter but will contain information for all three months covered by the report);

- a Quarterly report from the district project coordinator to the central project management;
- Quarterly (QPR) and Six-monthly (PIR) reports from the central project management to the WFP Country Office; from the Country Office, information is ultimately transmitted to WFP Headquarters in the form of the COPR.

In addition, information can also be obtained through the following means:

- field visit reports, to be prepared during school visits by government and WFP staff; they can serve to verify the accuracy of data reported by schools, fill in gaps in these reports and obtain types of information which are difficult to collect through regular reports (e.g. qualitative information). For detailed information on data collection through field visits and beneficiary interviews, please refer to section III.
- regular educational statistics collected by the Ministry of Education;
- data collected by other government departments or other agencies.

Models of daily/monthly, quarterly and field visit reports are included as [Annex 6](#) to this Manual.

**As a general rule, already existing data collection systems should be used as much as possible to avoid duplication and reduce the burden of M&E. Separate forms and reports should be introduced only for such information which cannot be obtained otherwise.**

### ***Monitoring of specific project aspects***

Taking account of the principles described above, the Manual includes detailed guides to monitoring two important aspects of a school feeding activity:

- project implementation milestones (i.e. issues which have been identified during project design as important for sound project execution and, eventually, the results of the project);
- immediate objectives.

According to the Operational Guidelines, the most commonly found immediate objectives in WFP-assisted school feeding activities are the following:

- Contribute to increasing enrolment of girls and boys (food aid provided to day students as incentive for enrolment in the form of school meals or take-home rations);

- Contribute to stabilizing attendance and preventing drop-out of girls and boys (food aid provided as incentive to day students either as school meals or take-home rations);
- Improve the concentration capacity of students by relieving short-term hunger (food aid provided as nutritional supplement to day students in the form of school snacks or meals);
- Facilitate enrolment of female and male boarders and keep boarding schools fully operational throughout the school year (food aid provided as budgetary support to governments for feeding of boarding students).

As regards monitoring of immediate objectives, data have been broken down into core information and complementary information as well as data not to be collected (the latter category was included to eliminate some common misconceptions).

For ease of reference, these sections (Monitoring of Project Implementation Milestones; Monitoring of Most Common Immediate Objectives) are included as [Annexes 4](#) and [5](#) to this Manual.

**The information provided in these Annexes is intended as general guidance and will need to be adapted to the context of each individual country and project.**

### ***Monitoring of gender aspects***

In countries with significant gender gaps in education, school feeding alone does not ensure equal access to WFP resources for boys and girls. However, the following complementary activities to the provision of food at school can contribute to meeting WFP's gender commitments in education:

- Raise awareness of the importance of girls' education at government and community level through information, training and on the occasion of regular school visits;
- Monitor general trends regarding women's and girls' education in the country;
- Monitor government gender-related action;
- Fully involve women in local-level school feeding committees.

Relevant indicators for these activities are included under "Monitoring of Project Implementation Milestones" ([Annex 4](#)). Gender-related issues (e.g. regarding equal participation of boys and girls in school; reasons for non-schooling of girls; status of women in the community) are also reflected in the parts of this document dealing with BCM and field visits (section III; [Annex 3](#)). As is the case for all WFP activities, all indicators are

broken down by gender in order to track the share of WFP benefits and resources going to women and girls.

**Promotion of gender issues in education is a complementary goal of school feeding activities. The Manual includes M&E guidance on all gender-related aspects of these activities. Data collection is gender-sensitive and allows to track the share of benefits and resources going to girls and women.**

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<sup>1</sup>.The question of who uses information and how even has political connotations, such as when the central project management wants to maintain control over all aspects of the project. Decentralization, while desirable in theory, is often difficult to achieve in practice

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As mentioned before, apart from regular monitoring and evaluation of core and complementary data, special opportunities sometimes arise to obtain additional information on the justification, functioning and effects, or even impact, of a project. Such special initiatives **go beyond regular M&E**, and their relevance and feasibility needs to be examined on a case-by-case basis. They might be of the following types:

### ***Comparative analysis of the effects of a WFP-assisted school feeding activity***

The possibility for carrying out such a study can arise in the case of a new project, or of inclusion of new schools in an on-going project, as well as in the case of WFP withdrawing from certain schools. In each case, the idea is to compare the situation with and without WFP assistance at the same schools by doing a "before-and-after-analysis" of some selected indicators. At newly included schools, data should be collected well before the start of the intervention (the prospect of WFP assistance alone may already attract more children to school, even if the food isn't actually available) and again after about one year. Where food is withdrawn from a school, baseline data should be collected several months before the end of the project (e.g. during the last academic year with WFP assistance) and again about one year after the withdrawal.

Such analyses are relatively easy to carry out and not very costly. Nevertheless, the indicators to be monitored should be well selected (depending on, e.g., the project objectives or on which data are relatively easy to obtain and reliable; again, it is better to keep things simple), and at least minimum control of other intervening variables should be ensured (for example, even if the number of girls at school increased after introduction of a school meal this might have been due to an information campaign or posting of a new female teacher at the school; such factors need to be identified from the start and checked each time data are collected). Expert advice should thus be sought when designing (and analyzing) such a study.

Some basic information on the effects of introducing/withdrawing WFP assistance at a school can also be obtained through field monitoring, by visiting new schools before their official inclusion in the project and/or

phased-out schools after their withdrawal (see also [Annex 6.3](#)). While yielding interesting information, such routine field visits cannot, however, achieve the same coverage and degree of reliability as even a small-scale survey.

### ***Linking up with another study***

In some cases, it might be appropriate and possible for WFP to coordinate with another agency for a study on a subject of relevance to the WFP project. Such studies might concern the different factors influencing student enrolment and attendance or internal efficiency of education (drop-out, repetition and promotion; school feeding could be included as one of the variables to be examined); options for recurrent cost funding of education (this is relevant in view of WFP's role in providing budgetary support to governments, particularly at boarding schools); factors enhancing community participation in education (SFPs often serve to stimulate such involvement); studies on household food security (school meals can have benefits in this area); options for promoting education of girls and women (school feeding activities can serve as a vehicle for advocacy and positive action in this area); etc.

In order to explore the possibilities of such linkages, the WFP Country Office should maintain contacts with other donors operating in the education sector who often include various studies/surveys within their assistance programmes. Linking in with another agency's initiative addresses the issue of the limited capacity of most WFP Country Offices for undertaking such studies and also saves costs.

### ***In-depth review of a particular project***

In exceptional cases, WFP itself might decide to undertake a more in-depth review of a particular project or project component. In order to be relevant, such an exercise requires sufficient time and funding as well as sound design, implementation and analysis. It typically exceeds the capacity of a WFP Country office, and of many government authorities, and would be carried out in cooperation with a university or other type of research institution, if possible locally-based.

### ***In-depth examination of gender issues***

While gender-related aspects are included at all stages of project M&E, it may also be decided to carry out in-depth analyses of specific gender issues in certain cases: for example, where the gender gap in enrolment and attendance is particularly significant and resistant to change; where major advocacy efforts have been undertaken with the government or other partners; where WFP-assisted schools were included in a comprehensive programme to improve the education of women and/or girls; etc. In-depth studies may include analyses of statistical information, but should always employ qualitative techniques as well in order to permit not just description of a situation but **understanding** of the processes involved, from the perspective of beneficiary children, their families, teachers and other key community members. As the issues of interest are heavily linked to cultural and family values, it is important to involve local sociologists in these exercises.

***Periodic review of continued government commitment to education***

Another example of an initiative which goes beyond regular M&E, although less optional than the examples described above, is the periodic review of continued government commitment to education to be carried out for all WFP-assisted education projects (see chapter II of the Operational Guidelines). Although information required for this study will be obtained separately, some relevant data may also be included under "Monitoring of project implementation milestones" (see [Annex 4](#), item H).

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### [Field Visits](#)

#### [Beneficiary Contact Monitoring \(BCM\)](#)

Previous sections have described ways of collecting and compiling statistical data. Mention has also been made of field visits and beneficiary interviews as sources of information. This section provides guidance on how these sources can be used most effectively to complement the quantitative data flowing from the routine reporting system.

#### **Field Visits**

##### ***Purpose***

Field visits have always been an important means by which Country Offices follow the progress of WFP-assisted project activities being implemented by the Government. The purpose of field visits should not be seen as "policing" but as collaborative efforts with Government project authorities to ensure implementation in compliance with the Plan of Operations.

Naturally, irregularities observed during field visits should result in corrective action by WFP and Government. Such cases are the exception, however, and for the most part field visits are occasions for information gathering. While the field visit allows spot-checking of food storage, handling and stocks, it is NOT intended to replace the QPR. Field visits cannot confirm the statistical information on commodities and beneficiary numbers, particularly as it would never be possible to visit 100% of schools during a reporting period.

Information gathered during field visits complements and in part explains the information coming through the reporting chain. Field visits permit collection of data through observation of physical conditions on site and, most importantly, they provide an opportunity for Beneficiary Contact Monitoring (discussed below).

**Field visit reports are not intended to replace the QPR or any other regular M&E report. Field visits cannot confirm statistical information such as on commodities and beneficiary numbers, particularly as it would never be possible to visit 100% of schools during a reporting period. Rather, information gathered during field visits complements and in part explains the information coming through the reporting chain.**

### ***Conducting field visits***

Each WFP Country Office must face the difficulty of scheduling field visits in function of the size of its staff, the logistical constraints (transport, road conditions, etc.) and the geographic location of sites. The latter may be particularly problematic in school feeding projects as schools are often widely dispersed and/or in inaccessible locations.

Country Offices have devised various ways for addressing these difficulties. Some use a "team" approach in which Programme officers go together to an area and visit the sites of all WFP-assisted projects there. Visits are usually carried out with Government project staff, and executing NGOs may also participate. In the end, the Country Office must decide on a schedule which strikes a balance between frequency and intensity of coverage (e.g. visiting all sites within a certain period, or visiting a sample of sites more frequently.) UNVs can play a vital role in carrying out field monitoring, and Country Offices should consider engaging them whenever possible.

### ***Structuring information gathered in the field***

WFP Country Offices have adopted the practice of using checklists to structure information gathering in the field. The checklist is not intended to add to the statistical data base for project sites, but rather to ensure that the same issues are looked into at all sites and by all officers making field visits. While each checklist must be tailored to specific country conditions, the principles guiding their design remain the same:

- A checklist should not be a questionnaire, but rather a form on which observations can be noted quickly and legibly during a routine field visit.
- The checklist is NOT intended as a detailed inventory of the school's infrastructure, as this is obtained when each school is accepted into the programme. Use of the checklist will verify that these infrastructures are still adequate and conform to the criteria specified for eligibility.
- The checklist should be seen as a dynamic monitoring tool: if specific problems or issues need to be looked into in a particular project, a checklist may be modified or even redesigned to address these. Moreover, checklists should be reviewed from time to time during project implementation to ensure the information is still pertinent and that nothing

needs to be added.

- When visiting a site/school, the completed checklist from the previous visit should be taken along for reference whenever possible.

A model of a Field visit checklist is included in [Annex 6](#), section 3

The briefing modules prepared by ITAD contain more detailed guidance on field visits in general, and are pertinent for school feeding projects.

### ***Handling and using the information***

Use of a checklist eliminates the need to write lengthy narrative field visit reports. The completed field visit checklists/reports should be maintained in the country office as an archive. The decision as to whether to enter the information into an automated computer system lies with the Country Office. In offices which are fully automated, and where this can be done by writing a simple programme (for which an outside consultant may be engaged), it may be desirable.

If Field visit reports are computerized, it must be remembered that they do NOT constitute a representative sample. Any statistical manipulation must be done with this in mind and should be limited for the most part to calculating totals which can be examined by inspection. Tallies, i.e. counting the numbers of schools falling into certain categories derived from the checklists, provide a useful way of examining this type of data. This may include, for example, the number of schools having experienced ruptures in stock of more than "x" days, or the number of schools in which BCM revealed an increase in girls' drop-out rate. Without going so far as to compute the total number of days of rupture or total number of girls having dropped out one can obtain a general overview of the situation and can do further systematic investigation if problems seem to exist.

The field visit reports constitute a rich bank of information both for the Country Office and WFP/Headquarters. An obvious use is for missions (Appraisal, Evaluation, Management Review, etc.) coming to the country. To make maximum use of the information for on-going project management, ways must be found which are appropriate to the size and operating methods of each Country Office. For example, some large Country Offices hold monthly staff meetings in which officers exchange information from their respective field visits.

### **Beneficiary Contact Monitoring (BCM)**

#### ***Purpose***

Monitoring of financial and commodity flows and of physical outputs are essential to good management of school feeding activities. Other issues are equally important, such as: the monitoring of the perceptions and reactions of the persons (both women and men) directly and indirectly affected by the project, or tracking of

positive action toward community participation or education of girls. BCM refers to a variety of techniques used for such monitoring. The techniques, many of which are those of Rapid or Participatory Rural Appraisal (RRA, PRA), may be used in carrying out special studies, alone or in conjunction with quantitative techniques. The present section describes the use of simple BCM techniques during regular field visits by WFP and government project staff.

### ***Carrying out BCM***

The main techniques used for BCM during field visits are individual interviews and group interviews. While some techniques of RRA/PRA require too much time and advance preparation to be carried out during a routine field visit (e.g. focus groups), others, such as transect walks, are well-suited.

BCM should not be carried out using a standard, structured questionnaire (i.e. a formal interview setting). Talking with beneficiaries and local people in a less formal way (during the course of a walk through a village, or by stopping to chat with persons around the school grounds) is much more likely to elicit valuable information. It is preferable to avoid a large entourage during such talks. Informal interviews should cover people/ families directly concerned by the project but also others (e.g. parents having no children at school, to find out reasons for non-enrolment). It is also important to obtain information from women and girls (such interviews are often best carried out by other women) as well as, possibly, representatives of minority groups in order to obtain a comprehensive picture of the communities concerned (obtain replies from respondents of different **gender, age and position in the community**).

Group interviews must of course be somewhat more structured, but striking a relatively informal, non-threatening tone will facilitate information gathering. While it is necessary to take notes during talks with beneficiaries, this should be done as discretely as possible. One may take note of only key words and concepts and then be sure to take the time to expand upon the notes immediately after the interviews have been completed.

**BCM should not use formal interview settings and structured questionnaires. Make sure to create an atmosphere and conditions where people can talk freely, by paying attention to gender aspects, language/interpretation and to not "overwhelming" interview partners. Avoid limiting discussions to (male) community leaders only.**

Interpreters will usually be required, and their skills are an important determinant of the success of BCM. It is often best to select interpreters who have some general familiarity with WFP and the project; in-depth technical knowledge is not necessary and in fact is usually not desirable. Interpreters should be well briefed and should have a good rapport with the officer with whom he/she is working. It is particularly important to ensure that interpreters do not answer FOR people being interviewed (i.e. by "putting words into their mouths.") If it becomes clear in early interviews that the interpretation is not acceptable, the interpreter should be replaced before further work is carried out.

The term BCM is misleading in several ways, and a different terminology should eventually be adopted. In the

first place, there is a move in the international development community toward eliminating the use of the term "beneficiary" in favour of "participant". Beyond this semantic issue, the very intent of BCM would not be served if information gathering were limited to "beneficiaries" (or participants).

While issues to be covered in BCM must be tailored to specific aspects of a project (especially the immediate objectives and the intended role of food aid) and country conditions, most "standard" WFP-assisted school feeding activities involve similar issues; a listing of these is attached in [Annex 3](#).

### ***Handling information***

In compiling information obtained through BCM, it must be remembered that this is for the most part **qualitative** information and therefore not subject to complex statistical manipulation. As a general rule, quantitative handling of the data will be limited to tallies, frequency distributions, and occasionally averages or medians, these latter requiring prudence in interpretation. Results of BCM carried out during field visits are not generalizable to the entire beneficiary population, and one must be cautious in drawing broad conclusions from them.

**Quantitative data may be collected as a part of BCM, e.g. through mini-surveys, which may then be handled in a somewhat different manner; see ITAD training modules and other reference documents for details.**

Some Country Offices have written special programs permitting the entry of BCM results into computerized monitoring systems. This may be desirable especially in large country programs where hundreds of sites are visited yearly. If it is done, however, the limitations of the data must still (or perhaps even more so) be recognized. Computerization can facilitate preparation of tallies, averages, and even percentages, but the data collected through regular BCM will not be amenable to complex statistical analyses.

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Monitoring and evaluation is a key feature of project implementation. To function well, M&E systems need to be adequately planned and managed. After having gone over the general purpose and philosophy of monitoring and evaluation, this section covers several practical issues surrounding project M&E. In this connection, the specificities of WFP's operations in the education sector are taken into account, namely the focus on least-developed countries, and least developed regions within countries, as well as the principle of national project execution.

### ***Limited national capacity for M&E***

Monitoring and evaluation, like project implementation, is the responsibility of the government. It is not something which is done through selected studies carried out by (foreign) experts. As such, it is frequently hampered by the limited capacity of government authorities to manage a project, and collect and analyze data, especially in the less developed countries. This is true at schools (many teachers and headmasters are already overloaded with reporting requirements and poorly trained to fill in forms) as much as at higher management levels (district project coordinators, for example, often lack transport to visit schools and sometimes have other responsibilities in addition to managing the WFP project). Some ways to address these difficulties are outlined below:

Make the M&E system as user-friendly as possible:

- Keep M&E simple, limit it to the essentials and adapt it to local needs and capacities;
- Make reporting forms easy to fill in, using clear language (watch out for specific local terminology!), sufficient space and attractive layout whenever possible;
- Adapt the layout of Monthly school reports to other reporting forms used by the Ministry of

Education (e.g. use same system of school identification at the top of the form);

- Harmonize the layout of reports to be prepared at various levels of the reporting chain to enhance their compatibility (e.g. to the extent possible, present items in the same order, use the same layout for specific items such as commodity movements, include items which can be copied from one report to the other);
- Test all reporting forms used under project M&E before finalization and printing to ensure that users understand them;
- Distribute reporting forms in sufficient numbers and on time (e.g. distribute the yearly stock of blank forms to all schools at the beginning of the academic year);
- Provide for file copies which can be kept at schools or by district coordinators (schools usually have no photocopying, and often not enough paper); for example, reporting forms can be printed on self-copying paper so that copies are automatically generated as the original is filled in;
- Provide schools with plastic folders to keep their copies of the reports (to avoid forms getting lost); these folders are then consulted during field visits to the school.

#### *Training:*

Training should cover all those involved in M&E, from school/community level upwards, and ideally be repeated during the life of a project (keep in mind possible staff turn-over). It should emphasize the function of and need for M&E (bring out that reporting is not just an additional burden but also has benefits, including for schools) and explain the filling in of forms and processing of information. Training on M&E can often be combined with other issues concerning school feeding (e.g. hygiene at school, food storage, food preparation).

#### *Information materials:*

Wall charts, posters, booklets or other information materials can contain information such as the correct ration scale (keep in mind that cooks may be illiterate!), the use of reporting forms or key messages regarding the purpose of the project and/or of record keeping. They can enhance the effects of training and are also useful in the case of staff changes. In some countries, School Feeding Manuals with a section on M&E were produced with good results.

#### *Make food deliveries to schools subject to submission of reports:*

This can work in some countries to ensure regular submission of (school) reports, which is a typical bottleneck in M&E. However, this practice should not be generalized. If M&E works poorly, it may be due to lack of motivation and rigour on the part of school staff but also to other, practical reasons (difficulties of transport between schools and district project management; M&E system too complicated and poorly understood; lack of supervision and backstopping by district coordinator, etc.). Furthermore, this might be difficult to accept socially/politically.

### ***Relationship with other government departments***

The relationship between the project management and the Statistical/Planning Department, the other data-collecting unit within the Ministry of Education, needs to be well defined. To avoid confusion (and possible tensions) between the two units, project M&E should not duplicate efforts undertaken by that Department but rather build on them whenever possible. The Department should be consulted for design and use of reporting forms as well as training courses or production of information materials.

### ***Use of informatics***

Computers can considerably facilitate the processing of data. A decision regarding use of computers for project M&E needs to take into account the following:

- At which management level should they be used (central project management, district level, school level)? This will essentially depend on the amount of information to be treated and the degree of complexity of data analysis at the respective level;
- Which hardware and software is needed and most suitable?
- Who would "design" the database (this involves questions such as whether informatics expertise is available at the WFP Country Office or if an external informatics specialist should be hired, and whether knowledge of WFP procedures is considered an important prerequisite for this task)?
- Who should be trained in the use of computers (e.g. data entry clerks, persons analyzing data such as district coordinators)?
- Who would carry out the training?
- Who pays for the equipment and training (see also below)?

### ***Use of additional expertise***

Throughout the process of designing and implementing an M&E system, there may be tasks for which neither the government nor the WFP Country Office has the necessary know-how; they therefore need to resort to local or external expertise. This may include carrying out of a training course, production of information materials, design of reporting forms or field visit checklists or decisions regarding any special initiatives. Where to find the necessary specialists has to be decided on a case-by-case basis. As a general rule, priority should be given to experts from the country or the region (the familiarity with local conditions is often an important asset, although technical qualification must also be ascertained). Only in extreme cases should expertise be contracted from outside the region.

### ***Budgets for M&E components***

Development and implementation of M&E systems involve costs which will vary from case to case (e.g. for printing of reporting forms, hiring of an M&E expert, production of M&E training materials). These costs should be identified during project formulation or during finalization of the M&E system. As a general rule, and in line with the philosophy that WFP-assisted projects "belong" to and are implemented by national governments, most on-going monitoring expenses should be covered by the government. WFP can provide support for certain items, such as design of reporting forms (although these can often be adapted from the model reporting forms presented in [Annex 6](#) of this Manual), basic in-country M&E training for government staff assigned to the project, development of computer programmes or, in exceptional cases (to be determined on a project-by-project basis), computer equipment.

Special initiatives, as described in section II, will generally be financed by WFP or, in the case of particular interest, by an external donor.

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## **Annex 1 - Explanation of Most Important Terms**

**Afternoon absenteeism:** Children going home during the break in the school day (e.g. in order to get food) and not returning back to school afterwards.

**Attendance:** The number of children coming to school every day and not being absent (to ensure regular attendance of students, in addition to their enrolling at the beginning of the school year, is a typical objective of school feeding activities).

**Beneficiary Contact Monitoring (BCM):** During project implementation, the process of on-going assessment of the effects of project activities on people living in the project areas, as well as their perceptions of and reactions to the project.

**Drop-out:** Strictly defined, calculation of drop-out rates at a school requires grade-wise information on the number of students enrolled, promoted and repeating for two consecutive academic years. For WFP's purpose of monitoring, a simplified calculation is usually sufficient, based upon decrease or increase in numbers of students enrolled *during the course of the school year* (often, children enrol at the beginning of the school year but leave school again after a few months, temporarily or permanently; this type of drop-out can be reduced as a

result of school feeding). However, educational data collection systems in most developing countries usually do not capture the distinction between a student abandoning the school system or transferring to another school.

**Effects:** The outcome/results of the use of project outputs (for example, the output *pupils fed* could produce the effect *alleviation of short-term hunger*).

**Empowerment:** A term used to describe a *process* by which women and men become conscious of their own situation, usually through increased access to knowledge, resources and decision making, *consciousness raising* about their utilization and participation in decision making; it is also an *outcome* when women and men reach a level of control over their own environment.

**Enrolment:** Strictly defined, the number of children having registered at school at the beginning of the school year up to a certain cut-off date. In actual practice, schools often adjust their "enrolment" figures during the course of the school year to account for late arrivals or departures/drop-out of students.

**Enrolment ratio:** The number of pupils as percentage of the population in the relevant age group in a certain area. Gross ratios take into account all pupils, net ratios only those of relevant age.

**Evaluation:** A process for determining systematically and objectively the relevance, efficiency, effectiveness and impact of activities in the light of their objectives (on-going evaluation does this during implementation).

**Gender:** Gender refers to the relationship between women and men which is determined by society and therefore changeable over time (as opposed to "sex" which identifies the biological differences between men and women).

**Gender advocacy:** Efforts aimed at raising awareness regarding the need to eliminate gender gaps and ensure women's equal participation in all areas.

**Gender gaps in education:** Differences between women/girls and men/boys regarding their educational opportunities (access, retention and completion of schooling). Indicators to measure such gaps include the following: gross/net enrolment ratio, by gender; percentage of girls in total enrolment, by grade; percentage of women in the teaching force; drop-out, repetition and promotion rates, by gender; adult literacy rate, by gender.

**Impact:** The outcome of project effects, also defined as the ultimate change in the living conditions of beneficiaries resulting (wholly or partly) from a project/programme. Impact is related to attainment of long-term objectives and is usually not measurable within the lifetime of an individual project.

**Inputs:** The goods, services, technical advice and other resources provided for an activity with the expectation of producing *outputs* and achieving the objectives of a project/programme (in school feeding activities, for example, inputs typically include food rations, cooking equipment, training in food management, etc.).

**Monitoring:** The continuous or periodic review and oversight of the implementation of an activity to ensure that input deliveries, work schedules, targeted outputs and other required actions are proceeding according to plan.

**Outputs:** The specific products which an activity is expected to produce from its inputs in order to achieve its objectives (for example, in school feeding activities *number of pupils fed* is a primary output).

**Plausible inference:** A form of reasoning, often applied in evaluation methodologies, according to which: if it has been demonstrated that an intervention, under specific conditions, produces a certain effect (e.g., an early morning snack enhances hungry pupils' concentration capacity), one can assume that the same intervention, carried out under similar conditions, will produce the same effect. One would not then be required to demonstrate empirically the validity of the relationship each time an intervention is designed.

**Project Implementation Milestones:** Specific actions which must be taken or inputs which must be provided to ensure successful implementation of a project and, eventually, project results.

**Short-term hunger:** This is to be distinguished from chronic hunger and is not related to overall nutritional status (although malnourished people may also suffer short-term hunger). In the education sector, it is used to refer to the temporary condition of pupils who have not had an adequate meal for many hours before coming to school. Short-term hunger is known to have a negative effect on the ability to concentrate and to assimilate information.

### **Annex 3 - Beneficiary issues to be examined in connection with school feeding activities**

The following is not intended for the design or execution of surveys, but to guide discussions with beneficiaries and other relevant persons during field visits. Please refer back to chapter III for more information regarding field visits and beneficiary contact monitoring. Ensure to elicit information both from female and male interview partners.

#### **1. Parents/ community members**

##### **Issue: Enrolment**

Begin by talking to them (i.e. not interrogating them) about enrolment of their own children, how many boys/girls are enrolled; whether any have completed primary school; whether any previously enrolled are no longer enrolled; whether they intend for their boys/girls to complete primary school, or continue their education further. The point here is to begin a relaxed conversation, NOT to obtain quantitative information. Note-taking should be as unobtrusive as possible; the objective is not to produce statistical tables.

**Issue: Reasons for enrolling/withdrawing children from school**

Using the informal interviewing style, reasons for the behaviour discussed above should be elicited in the course of the discussion (e.g. if respondent replies that a child was taken out of school, ask why; in particular learn whether parents' behaviour is different for girls and boys: do they intend to send their daughters to school? Will girls be withdrawn from school when they reach puberty? In a poor family - do boys get priority over girls for schooling?)

**Issue: Attendance**

A good approach is to have the respondent focus on a particular timeframe: e.g. did your child/children (those enrolled) go to school every day last week? why did he/she/they not go to school? (However, see the note on seasonality of attendance below.)

Regarding afternoon absenteeism: try to learn whether their children ever leave school before the official end of the schoolday, how often, why. Especially if children come home for lunch, do they go back to school for afternoon sessions, if these exist?

Do girls stay home from school more often than boys? If so, what are the reasons (e.g. household chores, need to look after younger siblings)?

Care must be taken to address the seasonality of attendance, by:

- taking into account the period in which the interview is being carried out; and:
- asking specific questions related to seasonality.

For example: are there certain times of the year when your children stay home from school more frequently? why? Be careful not to "lead" the respondent. If he/she mentions the need for children to help with agricultural or household chores, discuss whether sons and daughters are treated differently.

**Issue: Short-term hunger**

The point is not to enquire directly, but rather to assess the likelihood that children suffer from short-term hunger by learning about:

- how long and by what means do children travel to school;
- whether/what type of breakfast is taken before leaving home for school;
- what/how much do children eat in general at home?
- do boys and girls eat the same (quantity and quality of food)?

Do children ever/sometimes/usually bring a snack from home to eat at school? Are they given money to purchase food from vendors around the school? During field visits, the presence of such vendors and their potential competition with the canteen should be observed.

While it may be of interest to learn whether children who eat at the canteen are given less to eat in the evening at home such information is virtually impossible to obtain by interviewing parents.

### **Issue: Parents'/community members' participation in school feeding and related activities**

Special care must be taken not to lead respondents to "say what they think they should say" on this issue. The topic should thus NOT be introduced by asking questions like "do you participate..?" Begin with specific questions such as whether or not he/she has recently been at the school and for what reason; whether he/she has participated in activities including canteen-related issues; whether any friends/neighbours do so; etc. With regard to Parents' Associations, find out whether such a group exists and whether the respondent is a member; what are its activities? Especially, do they participate in food management/storage? in management of any generated funds?

Are women well-represented in the Association and do they hold any official positions within it? Do men and women have different tasks within the Parents' Association? If so, which ones? If women do not participate, what are the reasons (ask men and women separately)? Would women be willing/interested to participate? What could be done to include more women in the Parents' Association?

What parental contributions are made for the canteen (in-kind and cash)? Are these obligatory? Does the respondent have difficulties meeting this obligation? What has happened in cases where parents have not been able to make a required contribution? Have parents (on their own or on behalf of the Association) participated in any construction/maintenance work related to the school and/or the canteen?]

### **Issue: Promotion of girls' and women's education**

These issues should be discussed both with female and male community members, at best separately!

What is their general view about education of girls: do people in this community/area send their daughters to school? If not, what are the reasons? What was the situation before - has it evolved over the years? If so, what/which factors made it evolve? What are the benefits of educating girls? What could be perceived as the "risks" of sending girls to school? Are they aware of any activities aimed at encouraging girls' education? For example, have they been contacted by an NGO, school personnel or others to discuss their daughters' schooling? Have they heard or seen any public service message on the subject? Are these issues discussed at meetings of the Parents' Association or other meetings?

Try to determine through discussions what they see as the main obstacles to education of girls (security at school; lack of female teachers; schools too far away; traditional beliefs/practices; lack of separate dormitories, toilets etc. for girls; etc.). What could be done about these problems? What can the community do on its own and for what activities do they need external assistance, and what type? Do they themselves participate in any activities, such as construction/improvement of school infrastructure or contacting other parents concerning education of their daughters?

Are there any women in the community who attended primary/secondary school? Are these many or just few? How many years of schooling did they receive on average? Did any women participate in literacy classes? Were such classes held often or rarely? If women did not attend literacy training, what were the reasons (no classes available, or too much demand; no time; negative pressure from family and/or community; etc.). Is there a need/interest in more literacy training? Do educated women value and "use" their education (e.g. occupy special position in the community; help other, uneducated women; etc.)?

## 2. Teachers / School Personnel

Most of the issues listed for parents/community members are also pertinent for teachers. However, it is usually necessary to address many of these issues in a more focused manner in order to avoid too-lengthy interviews and, moreover, to allow time to cover issues of specific relevance to teachers.

It is often possible to talk with teachers who have been in the school for many years. They should be asked about changes they have observed in enrolment/ attendance (especially of girls), in particular if they knew the situation before the canteen existed or during interruptions in its functioning.

### **Issue: Enrolment and attendance**

Refer back to the list of issues in the parents/community members section. In discussing enrolment/attendance with teachers, the focus should be on:

- current patterns and past trends which they have observed;
- gender differences;
- the factors which they believe explain these points, including parents' attitudes but also others such as government policies, social or economic conditions, civil strife, etc.

Has the presence of the canteen attracted children from other schools? Has this led to any problems (e.g. overcrowding of classrooms)?

### **Issue: Short-term hunger**

The focus should be on finding out what teachers have observed regarding the presence of short-term hunger among their pupils and its effects on their behaviour. Do they observe sleepiness/irritability/inability to concentrate which the teachers think is related to short-term hunger? Have they observed any changes which they believe are linked to the canteen?

### **Issue: Operation of the canteen**

According to the Operational Guidelines, there should be no targeting of individual pupils within classes/schools. Confirm that the canteen is open to all children. Do some children prefer to leave school for lunch? Do they return for afternoon classes?

Are children required to contribute anything to participate in the canteen? Is this in cash or in kind? What provisions, if any, are made for special cases in which extremely poor families cannot make the required contribution? How are funds generated this way managed, and for which purpose are they used?

Regarding "unofficial" participants at the canteen: do pupils bring their younger siblings to school to eat (e.g. girls bringing younger brothers or sisters who they have to look after)? Is this a frequent occurrence? Do non-enrolled children from the neighbourhood come to eat? To what extent does this cause problems, such as of disruption or dilution of rations?

How are the logistics of food preparation and serving organized? What role do teachers play? Do parents/community members participate? Do teachers feel operation of the canteen is a burden and/or interferes with normal classroom activities? Is the food well accepted by the children?

### **Issue: Health/hygiene**

The focus should be on obtaining respondents' views regarding:

- any factors which might lead the canteen to have negative health effects (for example, lack of water supply or inappropriate or unhygienic food preparation conditions);
- any health-related problems which could be addressed through the canteen, such as intestinal parasites or symptoms of specific micro-nutrient deficiencies.

Is there any school health/nutrition programme? How does it work and, if the need is identified, would it be possible to furnish a service such as deworming through the school?

### **Issue: Action and advocacy in favour of girls' and women's education**

How do they think local parents feel about education of their daughters (e.g. how strong is the resistance, and why)? What could be done to change attitudes? What is being done already, if at all, and how effective is it? Do teachers discuss with parents the need to enrol their daughters at school and ensure they can complete their education? Are such issues discussed during meetings of the Parents' Association? Were any "special" discussions or activities ever organized on the subject? Do teachers/headmasters take any action to contact parents of girls who are frequently absent, or drop out, or never enrolled at school? Do they feel that local/regional/national education authorities are committed to girls' education? If so, what evidence is there to demonstrate this?

What do they see as the main obstacles to girls' education? What could be done to address these obstacles? Are they aware of any literacy programmes, particularly for women? If no/only few women attended such classes, what are the reasons (no programmes exist; women too shy, or discouraged, to enrol; women too busy to attend; etc.)? Would they be willing to become involved in literacy training?

## **3. Pupils**

**Issue: Attendance/enrolment**

Primary school children themselves can provide extremely useful insights into attendance patterns, but it is important not to make them feel they are being interrogated. To discuss with them: did they stay home from school any day last week (focus on a specific time period in the beginning, then discuss more generally)? Why? Did their brothers/sisters stay home from school? Why? Try to learn about differences in girls'/boys' attendance without asking directly. What, in their opinion, can be or should be done about these gender differences? Do they think that there exists a difference between boys and girls in general when it comes to education (e.g. girls less "gifted" than boys; girls should stay at home; etc.)?

Are there certain times of the year when they miss school more often? What do they do when not at school? Do they ever leave school before the official end of the schoolday? Why?

**Issue: Short-term hunger**

How do they get to school in the mornings? How long does it take? Do they usually eat something before leaving? Do they bring food or money to buy food? What/how often do they eat at home?

**Issue: Participation in the canteen**

Do both boys and girls participate in preparation or serving of food? Which tasks do each carry out? Who assigns these tasks, and what do the children think of the division of work? Do their mothers and/or fathers participate in canteen work? Which tasks do each carry out?

Do the children like the food in the canteen? What do they like/dislike specifically?

**Annex 4 - Monitoring of project implementation milestones**

This section covers implementation issues identified during project design as important for sound project execution and, eventually, achievement of project results. Below are examples, not all of which may be relevant to each project!

A
<p><b>Type of data to be collected:</b></p> <p>Parents' contribution to school feeding: how many parents contributed in cash and/or in kind? total amounts collected and how used;</p> <p>other types of contributions by parents (e.g. provision of labour);</p> <p>possible problems encountered with parents' contributions; functioning of Parents-Teachers-Association (number of members by gender, number of meetings, activities carried out by PTA, position/function of women in PTA, gender issues discussed in PTA meetings? positive action on girls' education by PTA? etc.)</p>
<p><b>Frequency of reporting:</b></p> <p>Monthly reporting by schools;</p> <p>quarterly from district to central project management;</p> <p>whenever possible if collected during field visits</p>
<p><b>Data collection and processing:</b></p> <p>Information will be included in the monthly school reports and summarized by district coordinators for each type of school (e.g. pre-school, primary);</p> <p>information should also be checked during school visits.</p>

B
<p><b>Type of data to be collected:</b></p>

Complementary activities by other donors or government departments (e.g. school and/or community health programme; improvement of school facilities; school agriculture programme; provision of educational materials to SFP schools; teacher training courses; activities to enhance education of girls and/or women, etc.)
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management; six-monthly if information obtained directly from other donor or government department; whenever possible, if collected other than through school reports (depending on frequency of field visits or on how often information is available from other sources)
<b>Data collection and processing:</b>
Information to be included in monthly school reports and summarized each quarter by the district coordinator; in addition, information can be obtained during school visits and by liaising with other donors or government departments that carry out such activities

<b>C</b>
<b>Type of data to be collected:</b>
Productive activities, fund raising by schools (this may be important to enhance sustainability of the SFP although UNLIKELY to replace WFP aid!)
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management; whenever possible, if collected during field visits
<b>Data collection and processing:</b>
Information to be included in monthly school reports and summarized each quarter by district coordinator; in addition, information can be obtained during school visits

<b>D</b>
<b>Type of data to be collected:</b>

Training courses organized under the project (type of course, number of participants by gender, duration, subjects covered including possible discussion of gender issues, results achieved, etc.)
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management; whenever possible, if collected during field visits
<b>Data collection and processing:</b>
Information to be included in monthly school report and/or directly available at district level (courses are often organized by district project management); information from individual schools to be summarized by district coordinator; information, especially on qualitative aspects of training, should be verified during school visits

E
<b>Type of data to be collected:</b>
Availability of non-food items
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management; whenever possible, if collected during field visits; quarterly, if reported directly from central project management to WFP
<b>Data collection and processing:</b>
Information to be included in monthly school reports and summarized each quarter by the district coordinator

F
<b>Type of data to be collected:</b>
Government contribution to the project, as per Plan of Operations (e.g. LTSH payments, provision of adequate project staff and equipment, positive action regarding education of women and girls, etc.)
<b>Frequency of reporting:</b>
Quarterly or six-monthly
<b>Data collection and processing:</b>
Information to be provided directly from central project management to WFP; relevant aspects should also be checked during school visits

G
<b>Type of data to be collected:</b>
Possible phasing-out of WFP support, take-over by government and/or communities: <ul style="list-style-type: none"> <li>- type and number of schools withdrawn, by geographical unit (district, zone, etc.; use the same unit applied during initial project targeting);</li> <li>- extent of government/ community support to such schools;</li> <li>- does feeding continue at phased-out schools?</li> <li>- possible negative effects observed at such schools (e.g. drop in enrolment/ attendance)</li> </ul>
<b>Frequency of reporting:</b>
Quarterly or six-monthly from central project management to WFP; whenever possible, for information collected during field visits (depending on frequency of such visits)
<b>Data collection and processing:</b>
Number of phased-out schools and extent of government support to such schools to be reported directly from central project management to WFP; other aspects (e.g. does feeding continue, community support to phased-out schools, possible negative effects observed) to be verified during school visits

H
<b>Type of data to be collected:</b>
Government budget for education, (recurrent/capital), distribution of budget by educational level (see chapter III of Operational Guidelines)
<b>Frequency of reporting:</b>
Yearly
<b>Data collection and processing:</b>
The central project management can obtain this information either within the Ministry of Education or from the Ministry of Finance

I
<b>Type of data to be collected:</b>
Local-level information, awareness raising, advocacy activities regarding women's and girls' education (e.g. discussion with community; distribution of information materials to school/community; discussion/special event with students regarding e.g. gender relations at school; school contest regarding e.g. how gender relations at school can be improved, what boys/girls like/dislike about school)
<b>Frequency of reporting:</b>
Monthly reporting by schools;  quarterly from district to central project management;  whenever possible, if collected during field visits
<b>Data collection and processing:</b>
Information to be included in monthly school reports and summarized each quarter by the district coordinator;  information should also be collected during field visits.

K
<b>Type of data to be collected:</b>
General trend regarding education of girls and women in the country, as expressed for example in the following indicators: pre-primary enrolment, by gender; gross/net primary enrolment ratio, by gender; primary enrolment, by grade, by gender; primary education drop-out, repetition and promotion rates, by gender; gross/net secondary enrolment ratio, by gender; secondary enrolment, by grade, by gender; secondary education drop-out, repetition and promotion rates, by gender; number of primary and secondary teachers, by gender; number of trained primary and secondary teachers, by gender; adult literacy rate, by gender (this indicator may not be regularly updated in all countries); adult education courses: number of participants and graduates, by gender (this information may not be available in all countries)
<b>Frequency of reporting:</b>
Yearly

<b>Data collection and processing:</b>
Practically all these indicators are included in the regular school census normally carried out by each Ministry of Education.
The central project management can thus obtain this information directly from within MOE (Statistical/ Planning Department)

## Annex 5 - Monitoring of most common immediate objectives

### 1. Objective: Contribute to increasing enrolment of girls and boys

(food aid provided to day students as incentive for enrolment in the form of school meals or take-home rations)

#### 1.1 Core information

A
<b>Type of data to be collected:</b>
Number of schools assisted, by type of school (pre-school, primary, etc.) and geographical unit (district, zone, etc.). Use the same unit applied for initial project targeting
<b>Frequency of reporting:</b>
Quarterly from district project coordinator to central project management
<b>Data collection and processing:</b>
Information available with district project coordinators

B
<b>Type of data to be collected:</b>

Number of beneficiaries (i.e. number of students for whom schools receive food), by gender, by type of school (pre-primary, primary, etc.) and geographical unit;  reasons for possible significant changes in number of beneficiaries
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district coordinator to central project management
<b>Data collection and processing:</b>
On the basis of monthly school reports, district coordinators calculate the average monthly number of beneficiaries (add up figures for individual months, divide by number of months), by gender, for each type of school in their district; this information, along with information on possible significant increases/drops in beneficiary numbers, is then passed on to the central project management  If there is a large discrepancy between "number of beneficiaries" and "enrolment" (see item g, the reasons and consequences should be checked during field visits

C
<b>Type of data to be collected:</b>
Quantities of food distributed, by type of commodity
<b>Frequency of reporting:</b>
Monthly reporting by schools; monthly or quarterly from district to central project management (this will depend on how food deliveries are organized)
<b>Data collection and processing:</b>
The information contained in monthly school reports will be added up by the district coordinators for all schools in their district

D
<b>Type of data to be collected:</b>
Total number of feeding days and total number of school days (i.e. number of days when the school was operational);  In the case of take-home rations: number of times when food was distributed;  Reasons for possible irregular food distribution
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management

<b>Data collection and processing:</b>
Schools will record daily if the canteen functioned. Monthly school reports will also indicate the total number of school days during the month. On this basis, district coordinators work out a ratio, the "Monthly feeding rate" (number of feeding days as percentage of number of school days). Schools will then be classified according to three categories: <ul style="list-style-type: none"> <li>- number of schools where the Monthly feeding rate was 90-100%;</li> <li>- number of schools where the Monthly feeding rate was 50-90%;</li> <li>- number of schools where the Monthly feeding rate was below 50% (these cases must be explained)</li> </ul>
In the case of take-home rations: schools will be classified according to two categories: <ul style="list-style-type: none"> <li>- number of schools where food distribution was as planned;</li> <li>- number of schools where food distribution was less than planned;</li> </ul>
Reasons for irregular food distribution indicated by schools will be summarized in quarterly reports from district to central level

E
<b>Type of data to be collected:</b>
Any extended periods of non-distribution of food at school and reasons thereof (disruption of food stocks, water supply problems, absence of cooks, etc.)
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management
<b>Data collection and processing:</b>
District coordinators will include in their quarterly reports information provided by individual schools (no need to summarize since it is unlikely that such information will come from large numbers of schools at the same time).

F
<b>Type of data to be collected:</b>
Possible changes in targeting criteria met by individual schools (i.e. criteria which schools have to meet to participate in the project; this can include, for example, existence of water supply, functioning Parents Teacher Association, minimum participation of women in PTA, existence of a store room, minimum percentage of girls in total enrolment, etc.)
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management
<b>Data collection and processing:</b>

Same as under E above
-----------------------

<b>G</b>
<b>Type of data to be collected:</b>
Enrolment, by gender, by type of school and geographical unit
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management
<b>Data collection and processing:</b>
On the basis of monthly school reports, district coordinators calculate monthly average enrolment (add up figures for the individual months during the quarter, divide by number of months), by gender, for each type of school in their district;
In addition, enrolment can also be verified directly at schools during field visits

<b>H</b>
<b>Type of data to be collected:</b>
Other events which might influence enrolment (change in number of teachers, opening of new school near by with resulting transfer of students, significant increase in cost of education to parents, etc.)
<b>Frequency of reporting:</b>
Yearly (at the beginning of the school year)
<b>Data collection and processing:</b>
This information can be included in the monthly school report with a mention that it is to be provided only once a year (specify in which month to be reported). Alternatively, the data can be obtained during school visits (Field visit report)

## 1.2 Complementary information

<b>A</b>
<b>Type of data to be collected:</b>
Qualitative information, such as possible effects of school feeding on enrolment of girls
<b>Frequency of reporting:</b>
Whenever possible (i.e. depending on the frequency of field visits)
<b>Data collection and processing:</b>

Interviews at school and community level (Field visit report)
---

### 1.3 Data not to be collected

- Enrolment ratios in the area covered by the project (calculation of enrolment ratios, i.e. enrolment as percentage of the population in the relevant age group, requires population data, by age, which are not usually available);
- Information on enrolment at non-assisted schools (this might appear attractive to gain more insight into the impact of WFP assistance on enrolment; however, it is difficult in practice to select schools which are actually comparable, i.e. equal in all aspects except for the functioning of a canteen).

## 2. Objective: Contribute to stabilizing attendance, preventing drop-out of girls and boys

(food aid provided as incentive to day students either as school meals or take-home rations)

### 2.1 Core information

A B C D E F G
<b>Type of data to be collected:</b>
see above under 1.1
<b>Frequency of reporting:</b>
see under 1.1
<b>Data collection and processing:</b>
see above under 1.1

H
<b>Type of data to be collected:</b>
Attendance rates, by gender, and reasons for possible absenteeism
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from the district to the central project management
<b>Data collection and processing:</b>

The number of students in attendance (by gender) will be recorded daily by schools on the daily food distribution sheet. The monthly school reports to the district project coordinator will contain cumulative monthly attendance, by gender (adding up daily figures) as well as enrolment, by gender. On this basis, average monthly attendance rates can be calculated (see Note after this table!). This calculation will NOT be done by school staff (too difficult, risk of errors) but by trained district project coordinators, central project management and during school visits. Quarterly reports from district coordinators to central project management will classify schools according to six categories:

#### **Attendance of boys**

- number of schools where monthly attendance rates of boys were 90% and above;
- number of schools where monthly attendance rates of boys were between 70% and 90%;
- number of schools where monthly attendance rates of boys were below 70%;

#### **Attendance of girls**

- number of schools where monthly attendance rates of girls were 90% and above;
- number of schools where monthly attendance rates of girls were between 70% and 90%;
- number of schools where monthly attendance rates of girls were below 70%;

The quarterly reports from the districts will also contain a summary of reasons for possible absenteeism indicated by schools

---

#### NOTE on 2.1, item H:

Average monthly attendance rates are calculated as follows:

Step 1: Calculation of average monthly attendance, by gender (the cumulative total of the number of students present during the month is divided by the total number of school days during that month);

- Example:  
Attendance during the month of May:

Day 1: Boys 50, Girls 60, Total 110  
Day 2: Boys 48, Girls 62, Total 110  
Day 3: Boys 55, Girls 58, Total 113

Cumulative total attendance in May:  
boys 153, Girls 180, Total 333  
Total number of school days in May:  
3  
Average monthly attendance in May:

Boys 51, Girls 60, Total 111  
 Step 2: Calculation of average monthly attendance rate, by gender (average monthly attendance as percentage of total enrolment);

● Example:

Total enrolment:  
 Boys 55, Girls 65, Total 120  
 Average monthly attendance in May:  
 Boys 51, Girls 60, Total 111  
 Average monthly attendance rate in May:  
 Boys 93%, Girls 92%, Total 93%

## 2.2 Complementary information

A
<b>Type of data to be collected:</b>
Drop-out rates, by gender, and reasons for possible drop-out
<b>Frequency of reporting:</b>
If to be obtained through M&E reports: quarterly from district to central project management; If drop-out rates are already calculated by the Ministry of Education: yearly
<b>Data collection and processing:</b>

Through M&E reports: Monthly school reports include information on enrolment, by gender. In addition, an item on "reasons for drop-out" needs to be inserted. Drop-out rates can be calculated (by trained personnel, NOT by school staff) by comparing enrolment each quarter and working out the percentage of decrease or increase. District coordinators will then classify schools according to six categories:

#### Retention of boys

- number of schools where enrolment of boys was stable;
- number of schools where enrolment of boys dropped;
- number of schools where enrolment of boys increased.

#### Retention of girls

- number of schools where enrolment of girls was stable;
- number of schools where enrolment of girls dropped;
- number of schools where enrolment of girls increased.

Explanations for this will be extracted from monthly school reports and summarized in the quarterly reports to the central project management.

Already available with MOE: Drop-out rates are calculated every year based on information obtained through the annual school census. Data for WFP-assisted schools can be extracted (project management to liaise with Statistical/Planning Unit of Ministry of Education)

### B

#### Type of data to be collected:

Qualitat. informat.:  
possible effects on attendance/drop-out of girls;  
children returning home after having eaten; possible reduction in number of afternoon absentees;etc

#### Frequency of reporting:

Whenever possible (depending on frequency of field visits)

#### Data collection and processing:

Interviews at schools and with communities (Field visit report)

---

NOTES on 2.2, item A:

- Strictly speaking, "enrolment" is the number of children having registered at school at the beginning of the school year up to a certain cut-off date. In practice, however, schools often adjust their "enrolment" figure during the course of the school year to account for students dropping out or enrolling late.
- It should be mentioned that comparison of varying "enrolment" during the school year is not a classical definition of drop-out rates (this would require following a cohort of children, and gathering data on classwise enrolment, promotion and repetition, for at least two consecutive school years). However, such calculations would exceed the M&E capacity of most countries. Calculation of drop-in or drop-out during the school year is thus considered to be a sufficient proxy indicator for the purpose of project M&E.

### 3. Objective: Improve concentration capacity of students by relieving short-term hunger

(food aid provided as nutritional supplement to day students as school snack or meal)

#### 3.1 Core information

A B C D E F G
Type of data to be collected:
see above under 1.1
Frequency of reporting:
see above under 1.1
Data collection and processing:
see above under 1.1

H
Type of data to be collected:
Timing of school meal
Frequency of reporting:
Whenever possible
Data collection and processing:

School visits
---------------

### 3.2 Complementary information

<b>A</b>
<b>Type of data to be collected:</b>
Effects of school feeding on children's ability to concentrate, behaviour in class, learning capacity
<b>Frequency of reporting:</b>
Whenever possible (depending on frequency of field visits)
<b>Data collection and processing:</b>
Interviews with students, school staff and community members (Field visit report!)

<b>B</b>
<b>Type of data to be collected:</b>
Continued incidence of short-term hunger amongst local school population
<b>Frequency of reporting:</b>
Whenever possible
<b>Data collection and processing:</b>
Same as above a

### 3.3 Data not to be collected

- Information on children's nutritional status, malnutrition rates, etc. (a school meal will not usually result in marked improvements of children's overall nutritional status);
- Educational efficiency data such as repetition rates or examination pass rates (the effects of school feeding are limited compared to other intervening factors such as teachers' qualifications, availability of textbooks, etc.).

## 4. Objective: Facilitate enrolment of female and male boarders and keep boarding schools fully operational throughout the school year

(food aid provided as budgetary support to governments for feeding of boarding students)

#### 4.1 Core information

A B C D E E F G
<b>Type of data to be collected:</b>
see above under 1.1
<b>Frequency of reporting:</b>
see above under 1.1
<b>Data collection and processing:</b>
see above under 1.1

H
<b>Type of data to be collected:</b>
Enrolment, by day students/boarders, by gender, for each type of school and geographical unit
<b>Frequency of reporting:</b>
Yearly (at the beginning of the school year)
<b>Data collection and processing:</b>
If to be obtained through M&E reports: This should be included in the monthly school report, with a mention that the information is only required once a year (specify in which month to be reported). In addition, data can also be collected/verified during school visits.
If already available with MOE: If the Ministry collects this information as part of the annual school census, data for WFP-assisted schools can be extracted (central project management to liaise with Statistical/Planning Unit of Ministry of Education).

I
<b>Type of data to be collected:</b>
Number of places available at boarding hostel, by gender
<b>Frequency of reporting:</b>
Yearly (at the beginning of the school year)
<b>Data collection and processing:</b>
This should be included in the monthly school report, with a mention that the information is required only once a year (specify in which month to be reported). In addition, data can also be collected during school visits (Field visit report).

## 4.2 Complementary information

A
<b>Type of data to be collected:</b>
Boarding fees paid by parents, by type of school and geographical unit
<b>Frequency of reporting:</b>
Yearly
<b>Data collection and processing:</b>
This information can be included in the monthly school report with a mention that it is to be provided only once per year (specify in which month to be reported). Alternatively, data can be obtained during school visits

B
<b>Type of data to be collected:</b>
Feeding budget of schools provided by Ministry of Education, by type of school and geographical unit
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management
<b>Data collection and processing:</b>
Information to be included in monthly school reports. The district coordinator will add up the budget for all schools of the same category during the quarter (total budget received by primary boarding schools, secondary boarding schools, etc.).

C
<b>Type of data to be collected:</b>
Availability of food stuffs or cash to purchase food from e.g. other donor, school production, parents' contribution - by type of school and geographical unit
<b>Frequency of reporting:</b>
Monthly reporting by schools; quarterly from district to central project management
<b>Data collection and processing:</b>

Monthly school reports should include information on the type of support received (cash, in-kind - breakdown by type of food stuffs), from whom, how much and how it was used. Information will be summarized by district coordinators for the quarter and by type of school.

This information should also be checked during field visits

#### D

##### Type of data to be collected:

Socio-economic origin of boarders (food aid is often expected to help contain boarding fees and thus facilitate enrolment of poorer students)

##### Frequency of reporting:

Whenever possible (i.e. depending on the frequency of field visits)

##### Data collection and processing:

Interviews with students, school staff and community members (Field visit report)

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# School Feeding Handbook

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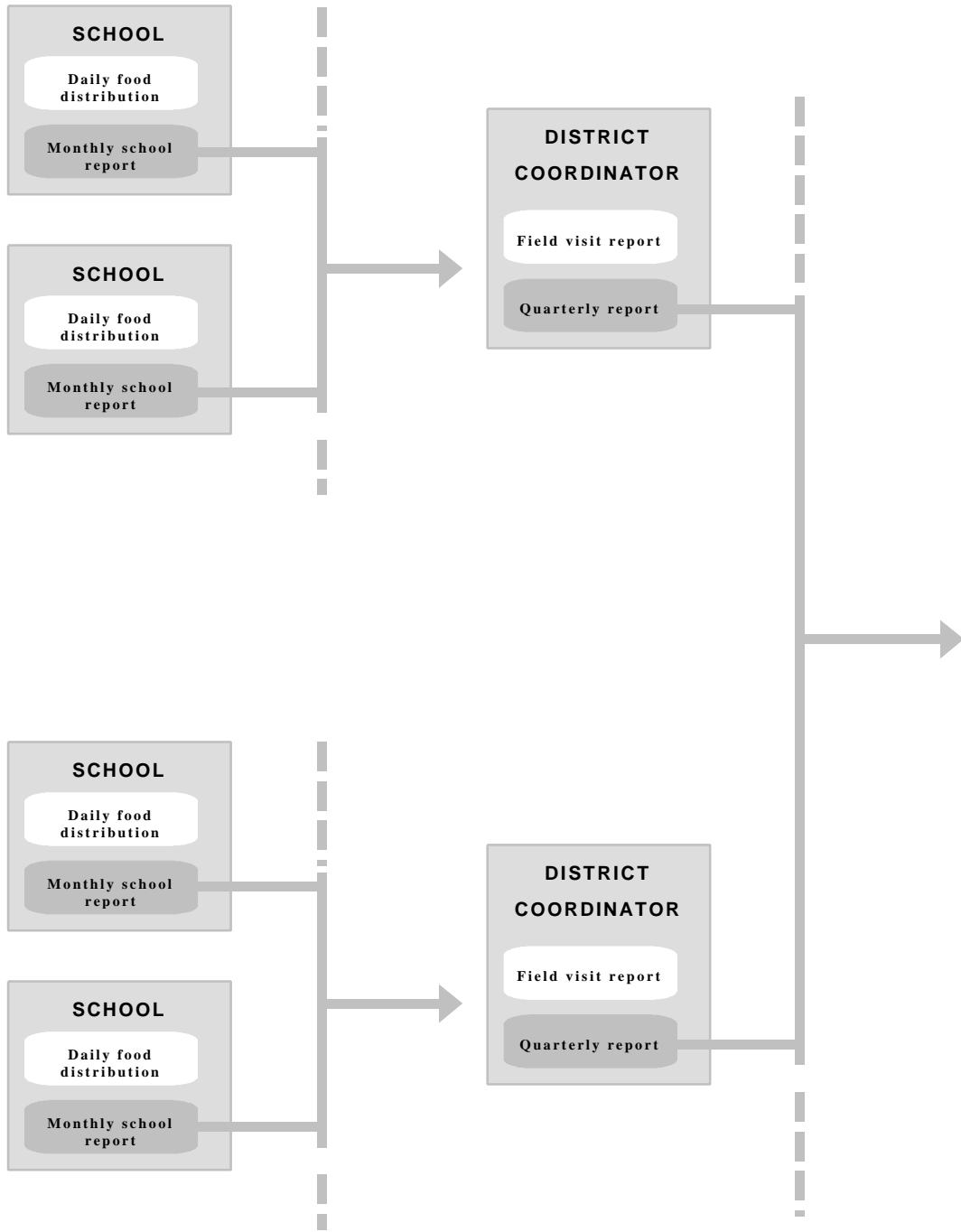
<b>BCM</b>	Beneficiary contact monitoring
<b>COPR</b>	Country Office Project Report
<b>CSB</b>	Corn/soy blend
<b>ITAD</b>	Information, Technology and Agricultural Development Ltd., UK
<b>LTSH</b>	Land transport, storage and handling
<b>MAR</b>	Average Monthly Attendance Rate
<b>M&amp;E</b>	Monitoring and evaluation
<b>MFR</b>	Monthly Feeding Rate
<b>MOE</b>	Ministry of Education
<b>NGO</b>	Non-governmental organization
<b>PIR</b>	Project Implementation Report
<b>PRA</b>	Participatory rural appraisal
<b>PTA</b>	Parents-Teachers Association
<b>RRA</b>	Rapid rural appraisal
<b>SFP</b>	School feeding project
<b>QPR</b>	Quarterly progress report
<b>UNV</b>	United Nations Volunteer

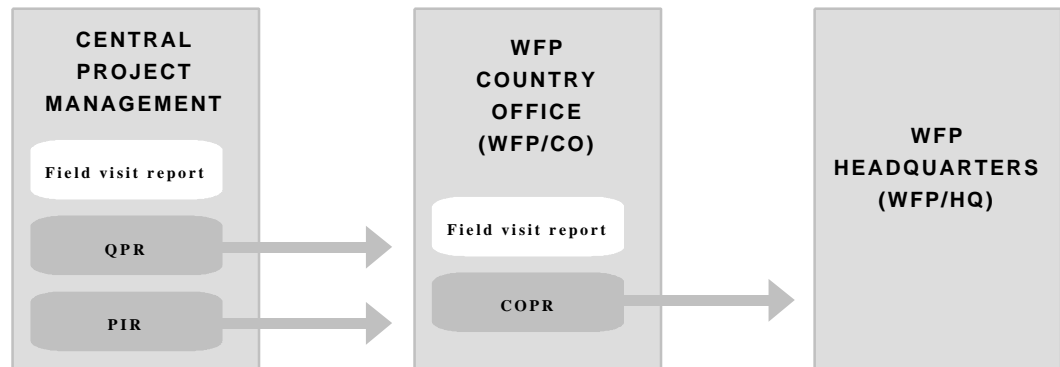
*Note:* The terms "Guidelines" and "Operational Guidelines" in this document refer to the "Operational Guidelines for WFP Assistance to Education through School Feeding".

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## Reporting chain

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## Model reporting forms

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This section gives examples of possible reporting forms to be used for project monitoring and evaluation.

↪ **These model forms are examples and need to be adapted to the situation in each individual country and project!**

↪ **Remember that reporting forms should be designed only for such information which is not yet available elsewhere, or can easily be obtained by expanding an already existing form.**

↪ **The model forms included below as section 1 and section 2 reflect the core information needed for monitoring of one of the most common immediate objectives, namely "contribute to stabilizing attendance, preventing drop-out of girls and boys" (see above Annex 5, section 2). It is assumed that the ration distributed consists of oil, rice and CSB.**

↪ **The model field visit checklist (section 3) is of a more general nature and reflects information pertaining to monitoring of immediate objectives as well as to monitoring of project implementation milestones.**

When designing a reporting form, the first step should be to decide on the information which is to be included (e.g. school identification, commodities distributed, number of beneficiaries) and on the way it should be presented (provide boxes which the user can fill in; leave blank space to write information; precode open-ended questions, such as "reasons why the canteen did not function", thus making it easier to analyze the replies; include on the form indications on how to fill in certain questions; etc.). The next step is to take the draft form and pretest it with potential users: do they understand the questions? is the language clear enough and adapted to local vocabulary? does the form leave sufficient space to fill in the information? Pretesting also gives valuable information on possible M&E training needs. On the basis of these pretests reporting forms are revised, finalized and eventually distributed to all those who are expected to use them (schools, district project coordinators, WFP Country office, central project management, etc.). Remember to

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make reporting forms available on time and in sufficient numbers at all levels of the reporting chain and to provide for "file" copies to be kept by those who prepare the report (e.g. school, district coordinator).

### 1. "DAILY FOOD DISTRIBUTION SHEET FOR USE BY SCHOOLS" COMBINED WITH A "MONTHLY SCHOOL REPORT"

**This form serves both to record daily information (e.g. on attendance, amount of food distributed) and as a monthly report. By incorporating both aspects in one form, paperwork is reduced and district coordinators have the information needed to verify the accuracy of data reported by schools.**

**This report should reach the district coordinator before:**

\_\_\_\_\_ Day; \_\_\_\_\_ Month.

#### **A** School identification

**Adjust this part of the form to school identification found on other data collection forms used by the Ministry of Education (e.g. annual school census).**

Period covered by this report: \_\_\_\_\_ School year; \_\_\_\_\_ Month.

Name of school: \_\_\_\_\_

School identification number (if applicable): \_\_\_\_\_

Location: \_\_\_\_\_ District; \_\_\_\_\_ Zone.

Mode of operation of school: \_\_\_\_\_ Day; \_\_\_\_\_ Half-day.

Enrolment this month:

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

Enrolment at the beginning of the school year:

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

Number of students for whom the school receives food this month (beneficiaries):

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

Did the number of beneficiaries change since last month?      \_\_\_ Yes      \_\_\_ No

If yes, please indicate the reasons: \_\_\_\_\_



## B Daily food distribution and attendance register

Day of the month	School day	Feeding day	Number of students present (Daily attendance)			Amount of food distributed (in kg)		
	Y/N	Y/N	Boys	Girls	Total	Oil	Rice	CSB
1								
2								
3								
4								
5								
..								
..								
31								
Total								

The Totals in this table are calculated as follows:

- Number of school days: tick the box each day the school was open, then indicate the total number of "Yes" entries;
- Number of feeding days: tick the box each day the canteen functioned, then indicate the total number of "Yes" entries;
- Number of students present, by gender: mark each day how many are present, then add up all these figures for the month ("cumulative total");
- Amount of food distributed: note each day the amount distributed of each commodity, then add up all these figures for the month ("cumulative total").

### C Summary of food movements during the month

	<i>Oil (Kg)</i>	<i>Rice (Kg)</i>	<i>CSB (Kg)</i>
<i>Opening stock</i>			
<i>Deliveries received</i>			
<i>Total distributed (copy from table under B. above)</i>			
<i>Losses</i>			
<i>End stock</i>			

### D Reasons for possible irregular food distribution

**By pre-coding this question, i.e. by indicating possible reasons for not distributing food at the school, it becomes easier for the district coordinator to analyze and summarize the information; please think of the most likely factors which may affect food distribution at school.**

If the canteen did not function on each school day of this month, please indicate the reasons (you may tick more than one box):

- a) Lack of food:  Yes  No
- If yes: please indicate which commodities were missing:
- Oil:  Yes  No
- Rice:  Yes  No
- CSB:  Yes  No
- b) Lack of water  Yes  No
- c) Lack of fuel (wood)  Yes  No

d) Cooks absent  Yes  No

e) Other reasons (please specify): \_\_\_\_\_

f) Action proposed to solve problems: \_\_\_\_\_  
\_\_\_\_\_

g) How did you follow up on action proposed in last report: \_\_\_\_\_  
\_\_\_\_\_

## **E** Possible extended periods of non-feeding

Has the canteen in your school been closed for more than two weeks during this month?  Yes  No

If yes, please indicate the reasons:

a) Lack of food  Yes  No

If yes, please indicate which commodities were missing: \_\_\_\_\_  
\_\_\_\_\_

Why was food lacking (please specify): \_\_\_\_\_  
\_\_\_\_\_

b) School closed  Yes  No

If yes, please indicate the reasons: \_\_\_\_\_  
\_\_\_\_\_

c) Other reasons (please specify): \_\_\_\_\_  
\_\_\_\_\_

d) Action proposed to solve problems: \_\_\_\_\_  
\_\_\_\_\_

e) How did you follow up on action proposed in last report: \_\_\_\_\_  
\_\_\_\_\_

**F** Reasons for possible absenteeism, by gender

**By pre-coding this question, i.e. by indicating possible reasons for absenteeism, it becomes easier for the district coordinator to analyze and summarize the information; please think of the factors most likely to affect attendance of boys and girls.**

If some of the students at the school were absent during this month, please indicate the main reasons (there may be more than one reason):

**Boys**

- a) Sickness \_\_\_ Yes    \_\_\_ No
- b) Need to help parents at home \_\_\_ Yes    \_\_\_ No
- c) Bad weather \_\_\_ Yes    \_\_\_ No
- d) Other reasons (please specify): \_\_\_\_\_  
\_\_\_\_\_
- e) Action proposed to improve boys' attendance: \_\_\_\_\_  
\_\_\_\_\_
- f) Any action taken since last report: \_\_\_\_\_  
\_\_\_\_\_

**Girls**

- a) Sickness \_\_\_ Yes    \_\_\_ No
- b) Need to help parents at home \_\_\_ Yes    \_\_\_ No
- c) Bad weather \_\_\_ Yes    \_\_\_ No
- d) Other reasons (please specify): \_\_\_\_\_  
\_\_\_\_\_
- e) Action proposed to improve girls' attendance: \_\_\_\_\_  
\_\_\_\_\_
- f) Any action taken since last report: \_\_\_\_\_  
\_\_\_\_\_

## G Possible changes in targeting criteria

**You should list all the criteria which a school has to meet in order to be included in the project. Below are examples which are to be adapted to the specific context of each project. In particular, the percentages mentioned under items d) and f) will vary for each project. Item f) may not be included/used in each project.**

Does your school have the following:

- a) Regular water supply  Yes  No
- b) Parents/Teachers Association (PTA)  Yes  No
- c) PTA met at least once this month  Yes  No
- d) PTA has at least 50% female members  Yes  No
- e) Store room  Yes  No
- f) At least 40% of students are girls  Yes  No

- g) If you replied "No" to any of the above, please explain why your school does not meet this criterium and what action is proposed to solve the problem: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- h) How did you follow up on action proposed in last report: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**PART TO BE FILLED IN BY THE DISTRICT COORDINATOR:****K Average number of students present**

Divide the cumulative total of students present during the month (see the table under B above) by the total number of school days during this month (see the table under B above).

Boys: \_\_\_\_\_ Girls: \_\_\_\_\_ Total: \_\_\_\_\_

**L Average monthly attendance rate (MAR)**

Work out the "average number of students present" (see under K above) as percentage of the enrolment (see under A above).

Boys: \_\_\_\_\_ % Girls: \_\_\_\_\_ % Total: \_\_\_\_\_ %

**M Monthly feeding rate (MFR) \_\_\_\_\_ %**

Work out the total number of feeding days this month (see table under B above) as percentage of the total number of school days this month (see table under B above).

**2. QUARTERLY REPORT FROM THE DISTRICT COORDINATOR TO THE CENTRAL PROJECT MANAGEMENT**

**A Identification**

Period covered by this report: \_\_\_\_\_ School year  
 \_\_\_\_\_ (Month 1) to \_\_\_\_\_ (Month 3)

Name of district: \_\_\_\_\_

Number of schools in the district included in the project (possible breakdown by smaller geographical unit than "district" if such a unit was used during initial targeting of the project):

Pre-primary: \_\_\_\_\_

Primary: \_\_\_\_\_

Other type of school (please specify): \_\_\_\_\_

Total: \_\_\_\_\_

**B Total food movements in the district during the quarter**

Please add up figures contained in Monthly school reports!

	<i>CSB (Kg)</i>	<i>Rice (Kg)</i>	<i>Oil (Kg)</i>
<i>Opening stock</i>			
<i>Deliveries received</i>			
<i>Total distributed</i>			
<i>Losses</i>			
<i>End stock</i>			

---

**C Monthly feeding rate at schools in the district**

---

Please refer to Monthly feeding rates (MFR) included in Monthly school reports.

***Month 1***

number of schools where the MFR was 90-100% \_\_\_\_\_

number of schools where the MFR was 50-90% \_\_\_\_\_

number of schools where the MFR was below 50% \_\_\_\_\_

***Month 2***

number of schools where the MFR was 90-100% \_\_\_\_\_

number of schools where the MFR was 50-90% \_\_\_\_\_

number of schools where the MFR was below 50% \_\_\_\_\_

***Month 3***

number of schools where the MFR was 90-100% \_\_\_\_\_

number of schools where the MFR was 50-90% \_\_\_\_\_

number of schools where the MFR was below 50% \_\_\_\_\_

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**D** Summary of reasons for possible irregular food distribution at schools

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Please explain in particular those cases where the Monthly feeding rate was below 50%. Report the number of schools indicating particular reasons:

a) Lack of food:

Oil: \_\_\_\_\_

Rice: \_\_\_\_\_

CSB: \_\_\_\_\_

b) Lack of water: \_\_\_\_\_

c) Lack of (fuel) wood \_\_\_\_\_

d) Cooks absent \_\_\_\_\_

e) Other reasons (please specify): \_\_\_\_\_

f) Which action do schools propose to take in order to solve the problems (please summarize particularly for those schools where the MFR was below 50%): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

g) Which action did schools take on this issue since the last report (please summarize): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**E** Possible extended periods of non-feeding at schools  
in the district

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a) Did any schools in your district report that feeding was interrupted for more than two weeks in any month?

\_\_\_ Yes     \_\_\_ No

If yes, how many schools:

Pre-primary: \_\_\_\_\_

Primary: \_\_\_\_\_

Other (please specify): \_\_\_\_\_

Total: \_\_\_\_\_

b) What were the main reasons indicated (please copy from Monthly school reports): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c) Which action do schools propose to solve the problems (please summarize): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d) Which action did schools take since last report (please summarize): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**F Attendance**

a) Please refer to average monthly attendance rates (MAR), by gender, included in Monthly school reports.

**Boys**

*Month 1*

number of schools where MAR was 90% and above \_\_\_\_\_  
 number of schools where MAR was 70-90% \_\_\_\_\_  
 number of schools where MAR was below 70% \_\_\_\_\_

*Month 2*

number of schools where MAR was 90% and above \_\_\_\_\_  
 number of schools where MAR was 70-90% \_\_\_\_\_  
 number of schools where MAR was below 70% \_\_\_\_\_

*Month 3*

number of schools where MAR was 90% and above \_\_\_\_\_  
 number of schools where MAR was 70-90% \_\_\_\_\_  
 number of schools where MAR was below 70% \_\_\_\_\_

**Girls**

*Month 1*

number of schools where MAR was 90% and above \_\_\_\_\_  
 number of schools where MAR was 70-90% \_\_\_\_\_  
 number of schools where MAR was below 70% \_\_\_\_\_

*Month 2*

number of schools where MAR was 90% and above \_\_\_\_\_  
 number of schools where MAR was 70-90% \_\_\_\_\_  
 number of schools where MAR was below 70% \_\_\_\_\_

*Month 3*

number of schools where MAR was 90% and above \_\_\_\_\_  
 number of schools where MAR was 70-90% \_\_\_\_\_

number of schools where MAR was below 70%

\_\_\_\_\_

b) What were the main reasons indicated by schools for possible absenteeism (report the number of schools indicating particular reasons):

**Boys**

Sickness: \_\_\_\_\_

Need to help parents at home: \_\_\_\_\_

Bad weather: \_\_\_\_\_

Other reasons (please specify): \_\_\_\_\_

**Girls**

Sickness: \_\_\_\_\_

Need to help parents at home: \_\_\_\_\_

Bad weather: \_\_\_\_\_

Other reasons (please specify): \_\_\_\_\_

c) What action do schools propose to improve:

Attendance of boys: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Attendance of girls: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d) What action was taken since the least report:

For boys' attendance/education in general: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

For girls' attendance/education in general: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**G Possible changes in targeting criteria met by schools**

Please indicate the number of schools having reported changes in the following criteria and the reasons indicated for these changes:

a) Existence of regular water supply \_\_\_\_\_  
\_\_\_\_\_

b) Existence of Parents-Teacher Association (PTA) \_\_\_\_\_  
\_\_\_\_\_

c) PTA having met at least once per month \_\_\_\_\_  
\_\_\_\_\_

d) PTA has at least 50% female members \_\_\_\_\_  
\_\_\_\_\_

e) Existence of store room \_\_\_\_\_  
\_\_\_\_\_

f) At least 40% of enrolment are girls \_\_\_\_\_  
\_\_\_\_\_

g) What action is proposed to solve the problems (please summarize):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

h) What action was taken since last report (please summarize):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**H Monthly average number of beneficiaries, by gender**

*(possible breakdown by smaller geographical unit than "district" if such a unit was used during initial targeting of the project):*

Please add up beneficiary numbers for all individual months of the reporting period (refer to Monthly school reports), then divide by the number of months.

*Pre-primary schools:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

*Primary schools:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

*Other type of school:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

If these figures changed significantly since the least report, please indicate the reasons (copy from Monthly school reports):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**K Monthly average enrolment by gender**

*(possible breakdown by smaller geographical unit than "district" if such a unit was used during initial targeting of the project):*

Please add up enrolment for all individual months of the reporting period (refer to monthly school reports), then divide by the number of months.

*Pre-primary schools:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

*Primary schools:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

*Other type of school:*



**L** Other comments:

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Report prepared by (district coordinator):

Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

### 3. FIELD VISIT CHECKLIST/REPORT

This checklist should include all information/data needed to verify, explain and complement information coming in through the regular reporting chain. It should be standardized and used by all those carrying out school visits, whether WFP, government or other staff. The checklist is a dynamic monitoring tool which should be reviewed and, possibly, updated during the course of the project. A well completed checklist replaces lengthy, unstructured narrative field visit reports. The list below is a model which needs to be adapted to the specific context of each project. Take the completed checklist from the last visit along for reference.

Date of this visit: \_\_\_\_\_ Day \_\_\_\_\_ Month \_\_\_\_\_ School year \_\_\_\_\_

Person visiting (name, function): \_\_\_\_\_

#### A Basic school information

1. \_\_\_\_\_ Province: \_\_\_\_\_ District: \_\_\_\_\_

Zone: \_\_\_\_\_ Village: \_\_\_\_\_

2. \_\_\_\_\_ Name of school: \_\_\_\_\_

3. \_\_\_\_\_ School identification number (if applicable): \_\_\_\_\_

4. \_\_\_\_\_ Type of school: \_\_\_\_\_ Pre-primary Primary  
 \_\_\_\_\_ Other (please specify)

5. \_\_\_\_\_ Mode of operation of school: \_\_\_\_\_ Day Half-day

6. \_\_\_\_\_ Enrolment: \_\_\_\_\_

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
<b>At present</b>			
<b>At the beginning of this school year</b>			
<b>Last school year</b>			
<b>The year before</b>			

7. Does the school have boarding students?  Yes  No

If yes:

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

Total number of available boarding places:

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

8. \_\_\_\_\_ Number of students for whom the school receives food (number of beneficiaries):

*Day students:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

*Boarders:*

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

9. If the number of beneficiaries (see above A.8) is smaller than the actual enrolment (see above A.6), how does the school cope with this discrepancy:

a) Beneficiaries are selected within the school:  Yes  No

If yes, please explain selection criteria and who selects: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) Available food is "stretched":  Yes  No

If yes, please indicate details under B.4 below.

## B Food management

### 1. Food movements (in kg):

The table below may refer to one or more months.

Please copy the information from the daily food distribution sheets/monthly reports of the school (copies kept at school); compare to actual stocks.

	<i>Oil</i>	<i>Rice</i>	<i>CSB</i>
<i>Opening stock at</i> ___ Day ___ Month ___ Year			
<i>Total deliveries received</i>			
<i>Total distributed</i>			
<i>Total losses</i>			
<i>End stock at</i> ___ Day ___ Month ___ Year			

Is there a significant difference between data included in school reports and actual stocks?

\_\_\_ Yes \_\_\_ No

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2. Food deliveries:**

a) When was the last delivery to the school:  
\_\_\_\_\_ Day \_\_\_\_\_ Month \_\_\_\_\_ School year

b) Have deliveries during the last year been regular and complete?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, please explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**3. Regularity of feeding:**

a) Monthly feeding rate during the last three months (please copy from Monthly school report):  
\_\_\_\_\_ Month 1 \_\_\_\_\_ Month 2 \_\_\_\_\_ Month 3

If the monthly feeding rate was below 50%, please explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) Has the school had to interrupt feeding for any extended periods of time during the last year?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, when and for how long: \_\_\_\_\_  
Reasons: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. Adequacy of ration**

To assess this issue you should watch out for possible dilution of rations due to insufficient food allocations to the school (see above A.9), interview school personnel, students and cooks and compare the total amounts of food distributed to the number of beneficiaries.

Does the school follow the official ration scale?                      \_\_\_ Yes            \_\_\_ No

If no, what are the reasons (lack of information, lack of food, lack of measuring devices, ration inappropriate/difficult to prepare, etc.):

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Which ration(s) are given (please explain):

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## C

**Possible changes in targeting criteria and state of school infrastructure, availability of non-food items**

Please indicate the state of the following and, particularly, any changes having occurred since the last visit:

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| 1. Is the kitchen adequate?                    | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is the store room adequate?                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is water supply adequate?                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Is cooking fuel available?                  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Are cooking and eating utensils sufficient? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Are classrooms overcrowded?                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Does the school have a PTA?                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Are at least 50% of PTA members women?      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Are at least 40% of the enrolment female?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## D Verification of immediate objectives

**This part of the checklist includes issues listed in Annex 5 to verify and, partly, explain attainment of immediate objectives; it should be adapted to the context of each individual project (add or delete items, change their presentation on the form).**

### 1. Enrolment:

- a) Compared to two years ago, has enrolment at the school:

Boys: \_\_\_\_\_ Dropped \_\_\_\_\_ Increased

Girls: \_\_\_\_\_ Dropped \_\_\_\_\_ Increased

Total: \_\_\_\_\_ Dropped \_\_\_\_\_ Increased

(Please refer to figures included in A.6 above.)

What are the main reasons for these developments (school feeding programme, student transfers to another school, significant improvements in quality of school infrastructure or learning environment, emergency such as drought, etc.; please check with school staff, parents, students, including for possible gender differences):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b) Is school feeding perceived as particularly affecting girls' enrolment?

\_\_\_ Yes \_\_\_ No

If yes, please explain how: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2. Attendance, drop-out:**

- a) Number of students present on the day of the visit:

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

Attendance rate on the day of the visit (today's attendance as percentage of enrolment - please refer to A.6 above):

\_\_\_\_\_ % Boys; \_\_\_\_\_ % Girls; \_\_\_\_\_ % Total.

- b) Main reasons for absenteeism (please check separately for boys and girls):

Today: \_\_\_\_\_

On other days: \_\_\_\_\_

- c) How many students have dropped out since the beginning of the school year (please copy from A.6 above):

\_\_\_\_\_ Boys; \_\_\_\_\_ Girls; \_\_\_\_\_ Total.

- d) Main reasons for dropping out (please check separately for boys and girls): \_\_\_\_\_

\_\_\_\_\_

- e) Is SFP perceived as particularly affecting the attendance and/or drop-out of girls?

\_\_\_ Yes \_\_\_ No

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- f) Is there any incidence of children returning home right after eating at school?

\_\_\_ Yes \_\_\_ No

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- g) If feeding was irregular or interrupted for an extended period of time (see above B.3), did this affect attendance/drop-out:

\_\_\_ Yes \_\_\_ No

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 3. *Short-term hunger:*

- a) Do day students eat before coming to school?    \_\_\_ Yes    \_\_\_ No

If yes, what do they eat: \_\_\_\_\_

Average distance between home and school:

\_\_\_\_\_ Distance \_\_\_\_\_ Walking time

Maximum distance between home and school:

\_\_\_\_\_ Distance \_\_\_\_\_ Walking time

- b) Do boys and girls eat the same at home?    \_\_\_ Yes    \_\_\_ No

If no, what do girls eat: \_\_\_\_\_

\_\_\_\_\_

What do boys eat: \_\_\_\_\_

\_\_\_\_\_

- c) Does school feeding have any positive/negative effects on children's behaviour in class/learning capacity (please interview teachers, community members and students themselves):

\_\_\_\_\_

\_\_\_\_\_

- d) Is there any evidence that SFP has a particular effect on learning capacity/class behaviour of girls?

\_\_\_ Yes    \_\_\_ No

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- e) When is the school meal served:

For the morning shift: \_\_\_\_\_ hrs

For the afternoon shift: \_\_\_\_\_ hrs

At full-day schools: \_\_\_\_\_ hrs

- f) If meal are served very late, hwat are the reasons: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**4. Boarding students:**

- a) Does the boarding school operate at full capacity (please refer to figures under A.7 above) \_\_\_ Yes \_\_\_ No

If no, please indicate reasons: \_\_\_\_\_

\_\_\_\_\_

- b) Do parents pay boarding fees? \_\_\_ Yes \_\_\_ No

If yes, specify amount per month: \_\_\_\_\_

What was that amount last year \_\_\_\_\_

What was that amount before introduction of WFP assistance (if information available): \_\_\_\_\_

\_\_\_\_\_

Do all boarders pay fees? \_\_\_ Yes \_\_\_ No

If no, how many don't pay at present: \_\_\_\_\_

How are exemptions handled (criteria, who decides, etc.) \_\_\_\_\_

\_\_\_\_\_

- c) Of which socio-economic origin are boarding students (please interview school staff and students): \_\_\_\_\_

How far away do their parents live (average): \_\_\_\_\_

- d) Availability of food stuffs other than from WFP:

From MOE feeding budget: \_\_\_ Yes \_\_\_ No

If yes, amount of that budget this year: \_\_\_\_\_

Amount of that budget last year: \_\_\_\_\_

How is it used (type and quantity of products purchased during a year/during a month):

\_\_\_\_\_

From parents' contribution: \_\_\_ Yes \_\_\_ No

\_\_\_\_\_

If yes, what is contributed (type and quantities; during a year/month):

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From school production:  Yes  No

If yes, what is available (type and quantities; during a year/month; watch out for seasonality):

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## **E** Verification of project implementation milestones

**This part of the checklist includes issues listed in Annex 4 as likely affecting the sound implementation and, eventually, results of the project; it should be adapted to the context of each individual project.**

### **1. Role of parents/community:**

a) Do parents pay a feeding fee?  Yes  No

If yes, specify amount per month: \_\_\_\_\_

What was that amount last year: \_\_\_\_\_

Do all parents usually pay the fees?  Yes  No

If no, how many did not pay last month: \_\_\_\_\_

Reasons for not paying: \_\_\_\_\_

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Are in-kind contributions accepted?  Yes  No

If yes, what is typically contributed (types and quantities of products):

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b) Does the school have a Parents' Committee? \_\_\_ Yes \_\_\_ No

If yes, composition of Committee: \_\_\_ Women \_\_\_ Men \_\_\_\_\_ Total

How were Committee members selected:

Appointed (by whom?) \_\_\_\_\_

Elected (by whom?) \_\_\_\_\_

Which criteria were used for appointment/election: \_\_\_\_\_

\_\_\_\_\_

How often does the Committee meet on average: \_\_\_\_\_

\_\_\_\_\_

When was the last meeting: \_\_\_\_\_

\_\_\_\_\_

What is usually discussed during meetings: \_\_\_\_\_

\_\_\_\_\_

c) Is the Committee involved in operation of the school canteen? \_\_\_ Yes \_\_\_ No

If yes, please explain how (oversees food deliveries to schools; co-signs school reports; parents responsible for food preparation at school; parents construct e.g. store room; etc.):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Does the Committee adequately meet these responsibilities?

\_\_\_ Yes \_\_\_ No

If no, please explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What could be done to overcome these problems: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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- d) Is the issue of girls' education discussed during meetings of the Parents' Committee?  
 Yes  No

If no, please explain reasons: \_\_\_\_\_  
 \_\_\_\_\_

Has the Committee taken any initiatives, since the last school visit, to improve the education of girls and women in the community?

Yes  No

If no, please explain reasons: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

If yes, please explain what was done: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## 2. *Complementation of WFP assistance:*

- a) Since the last school visit, did any activities take place at the school/community to complement/enhance the impact of WFP assistance (e.g. school health activities, improvement of school infrastructure, teacher training courses, adult literacy course)?

Yes  No

If yes, please provide details (type of activity, who carried it out, etc.):  
 \_\_\_\_\_  
 \_\_\_\_\_

- b) Does the school have any productive activities, or raise funds, for provision of additional food stuffs?

Yes  No

If yes, please provide details: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**3. Training carried out as part of the project:**

Did any member of the school staff or community participate in a project training course during the last year?

\_\_\_ Yes \_\_\_ No

If yes, what type of course(s): \_\_\_\_\_

Number of participants: \_\_\_\_\_ Women \_\_\_\_\_ Men \_\_\_\_\_ Total

"Position" of participants (teachers, parents, etc.): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Date and duration of course(s): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Course contents: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Did the course(s) include a discussion of gender issues (e.g. participation of women in Parents' Committee, education of girls)

\_\_\_ Yes \_\_\_ No

If no, please explain reasons: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

What are the participants' views on this training (please ask women and men separately: \_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Any other suggestions regarding training: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

#### 4. *Effects of possible withdrawal of WFP assistance:*

**In the case of a gradual withdrawal of WFP support, it may be worthwhile to continue monitoring of phased-out schools for some more time in order to obtain information on the effects of such withdrawal.**

- a) Does feeding continue without WFP support?  Yes  No

If yes, who provides the food (e.g. parents, government, other donor):

\_\_\_\_\_

\_\_\_\_\_

What type of ration is provided: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Frequency/regularity of feeding: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b) Have there been any negative effects after withdrawal of food aid?  Yes  No

If yes, please explain (e.g. drop-outs, lower attendance, protest by parents, poor discipline of students, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**5. Positive action within the school/community regarding education of women and girls:**

Since the last school visit, was any special activity undertaken at the school or within the community regarding information/awareness raising/advocacy on the subject of women's and girls' education, or their position in the community in general?

\_\_\_ Yes      \_\_\_ No

If yes, please describe what was done (discussion session with community members; distribution of information materials; discussion/special event with students regarding gender relations at school; school contest regarding e.g. how gender relations at school can be improved, what girls and boys like/dislike about the school; etc.):

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If no, please give reasons: \_\_\_\_\_

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## F Follow up to last school visit

**To ensure continuity and follow-up to field visits, schools should keep a register to be filled in during each visit (note date of visit, name of person visiting, follow-up action agreed upon, any special comments, etc.).**

1. \_\_\_\_\_ When was the school last visited:  
 \_\_\_\_\_ Day \_\_\_\_\_ Month \_\_\_\_\_ School year  
 By whom (name, function): \_\_\_\_\_  
 \_\_\_\_\_
2. \_\_\_\_\_ Which follow-up had been agreed upon during this visit:
  - a) By the school: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  - By the project management/WFP: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
3. \_\_\_\_\_ What action has actually been taken since then:
  - a) By the school: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  - b) By the project management/WFP: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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**G Follow-up agreed upon during this school visit**

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a) By the school: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) By the project management/WFP: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**H Any other comments**

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## K Promoting gender issues

**A school visit provides a good opportunity to discuss with school staff, parents and other community members, as well as students, the situation of women and girls in the community and their access to education. Please refer back to Section III and Annex 3 for guidance on the type of issues to be discussed and how to raise them. Please make sure to discuss with people of different gender, age and position in the community and be attentive to the differences in their replies.**

### 1. Education of girls

- a) Is there a significant gender gap at the school (girls representing less than 40 percent of the enrolment; significant gender differences in attendance, drop-out, repetition etc.)

\_\_\_ Yes     \_\_\_ No

- b) If yes, please discuss with school personnel, parents and students the reasons for these gaps - why do fewer girls enrol at school, why do they drop out/repeat more easily, etc. (socio-cultural reasons, traditional beliefs and practices, school not suited to girls' needs, etc.). Please summarize the replies here:

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- c) What could be done to address these problems, both by the community/parents themselves and by WFP/government/other agency. Please summarize the replies here:

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**2. Education of women**

a) Are there any women in the community who attended adult education, skills training, literacy classes? \_\_\_ Yes     \_\_\_ No

b) If no, what are the reasons (no such classes available or too much demand; women have no time; negative pressure from family or community; etc.):

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c) If yes, do these women value the skills acquired and how do they use them:

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**3. Participation by women in school affairs**

a) Do women participate in Parents' Association, School Feeding Committee or other local committees/bodies? \_\_\_ Yes     \_\_\_ No

b) If yes, what is their role/position (e.g. do they make proposals and take decisions):

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c) If no, please discuss the reasons:

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d) What could be done to improve this situation:

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**4. General context**

Since the last school visit, were there any significant activities or developments which affected, positively or negatively, the access of girls and women to education and/or their status in the community in general?

\_\_\_ Yes      \_\_\_ No

If yes, please provide details:

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**5. Proposals for action**

Please give here any suggestions regarding concrete activities which could be undertaken as part of this project (whether by the community themselves, government or WFP) to improve the education, and status in general, of girls and women in this community:

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## How to use the Health and Nutrition Manual:

- In the first chapter, read carefully sections 1 through 3 which provide basic information on the food basket and the guiding principles for selecting rations (i.e. pages 9 to 28)
- Then consult the table of contents to select among sections 4 to 6 of chapter I (i.e pages 29 to 105) the section or sub-sections relevant to the country/project you are examining (section 4.2 for day primary schools, section 5.1 for half-day pre-primary schools or day-care centers).
- Each of these sections contains:
  - a brief description of general principles which should be followed when designing a new ration or evaluating an existing one;
  - an illustration of these principles through a few examples of different types of rations.
- Read carefully chapters II and III which will help you ascertain conditions for the safe storage and preparation of food, and the water supply and sanitation situation in schools.
- Read carefully chapter IV on deworming if a high prevalence of intestinal parasitic infections among school-age children is suspected/ confirmed.
- Consult annexes as required; your attention is drawn to annex 8 "Sample recording form for examining health and nutrition issues during school visits" which you may adapt to the specific conditions of the projects/country being examined.

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## 1. Objectives of School Feeding Programmes and Role of Food Aid

The principles guiding the formulation of WFP-assisted School Feeding Programmes (SFPs) are explained in great detail in the "Operational Guidelines for WFP Assistance to Education" [1](#). Below is a brief reminder of the most common immediate objectives and functions of food aid in WFP-assisted SFPs.

### *Immediate Objectives*

As food alone cannot be expected to address the full range of factors affecting school enrolment and attendance as well as children's scholastic performance, WFP-assisted SFPs can contribute only to:

- a. improvements in school enrolment and attendance rates;
- b. improvements in the children's capacity to concentrate and assimilate information by alleviating short-term hunger; and
- c. a reduction in the prevalence of some micronutrient deficiencies through the provision of fortified foods.

In the case of boarding schools, WFP's assistance contributes to increasing enrolment of specific target groups (e.g. children of nomadic families, or girls) by allowing those schools to operate at full capacity throughout the entire year.

### *Role of Food Aid*

In addition to its role **as an incentive** for parents to enrol/maintain their children - particularly girls - in school, food aid has the following nutrition-related role and functions:

**Nutritional supplement** for school children coming from households in targeted areas.

**Alleviation of short-term hunger** in countries where the majority of children have inadequate or no breakfast and/or have to walk long distances to reach the school.

**Vehicle for micronutrients** in countries where micronutrient deficiencies are a significant public health problem and school children are affected and/or at high risk of developing micronutrient deficiencies, providing an opportunity for improving the intake of micronutrients through the provision of fortified food commodities.

## **2. Food Aid Basket for School Feeding Programmes**

The choice of food aid commodities should be determined primarily by: 1) the acceptability of the food to beneficiaries; and 2) their cost, with a view toward ensuring sustainability of SFPs, i.e. their take-over by Governments and/or communities after the phasing out of WFP's assistance.

Updated information on available commodities and their cost should be obtained from WFP headquarters at the time of project formulation or appraisal (an example of such a list drawn in 1996 is included in [Annex 1](#)). The availability of some commodities for food aid - such as dried skimmed milk (DSM) and canned meat, which are very expensive - has declined dramatically. However, subject to availability, DSM could be exceptionally included in the food ration for SFPs targeted to children of nomadic origin. Commodities not available from donors can be locally purchased, provided their price is competitive.

The food commodities available to WFP normally include [2](#):

- cereals: maize (whole or meal), wheat flour, bulgur wheat, sorghum or rice
- pulses: beans, lentils or peas
- canned fish or meat
- vegetable oil
- sugar
- fortified blended foods (BF) such as Corn Soy Blend (CSB)
- fortified biscuits.

The above food items are either delivered to beneficiary schools as received, locally processed before their delivery (e.g. donated wheat flour delivered to schools in the form of bread), or exchanged for locally produced foods (e.g. donated wheat or vegetable oil "exchanged" for locally produced rice). In the latter case, the above food items as well as other foods such as 'dried salted fish' can be locally procured through monetization or commodity exchange mechanisms.[3](#)

**Bread.** The supply of bread by local bakeries is not always feasible, and if schools are situated in remote areas without the appropriate infrastructure, this option should not be chosen. Nevertheless, it could be suitable in peri-urban areas where bakeries can provide the bread and guarantee its regular delivery to the schools.

**BF.** A variety of BF, such as CSB or Wheat Soy Blend (WSB), are made available by donors. However, in order for WFP's assistance to contribute to national capacity building and sustainability of SFPs, local processing of foods should be encouraged where feasible. Locally manufactured BF include: FAMIX (Ethiopia), HEPS (Zambia), INDIAMIX (India), Likuni Phala (Malawi), UNIMIX (Kenya) and UNILITO (Nepal). Ingredients used in the preparation of locally processed BF can be either directly provided by WFP or locally procured from cash resources, through monetization or commodity exchange.

All BF are practically interchangeable, as they have approximately the same nutritional value (with the protein content varying between 15 and 18%). BF have a micronutrient content which meets at least two-thirds of the daily requirements of older infants/young children.

**Fortified Biscuits.** The ingredients used in making the biscuits are usually locally procured through cash resources, monetization or commodity exchange. [Annex 2](#) lists examples of locally manufactured biscuits in WFP-assisted SFPs. The average cost of fortified biscuits is about US \$ 1250 per metric ton. As biscuits are locally produced, the size of each biscuit can be decided on a case-by-case basis (in ongoing SFPs: from 20 to 40 grams).

Biscuits should be fortified with Vitamin A, folate, iron and iodine (and sometimes 'B-Vitamins') at a level of about two-thirds of requirements per serving. However, the range of micronutrients and the level of fortification remain variable in practice. On average, 100 grams of biscuits provide 450 Kcal and 12 grams of protein.

**Food items not provided by WFP.** These include locally produced fresh vegetables and fruits and condiments and are essential to ensure diversity and palatability of school meals. These essential foods should be locally procured through funds provided by government and/or communities, and/or through in-kind donations by parent/teacher associations (PTAs). The source and estimated cost of local foods should be clearly determined at the appraisal stage of a SFP.

Fresh foods and condiments, which are indispensable for meal diversity and palatability, are not provided by WFP and should be locally procured through Government funds and/or PTAS

### 3. Guiding Principles for Selecting Food Rations For SFPs

The composition of rations should be determined primarily by local food habits and preferences, contingent on the range and quantities of foods provided by donors and on the cash resources available to WFP for local

purchases. Within this broad context, more specific guiding principles and criteria, ranging from nutritional to budgetary considerations, should direct the choice of rations for SFPs as described below.

### 3.1 Ages of Target Groups

As nutrient requirements vary with age (see Table 2), it is important to determine the age range of the target group in order to choose the appropriate range of nutritive value of the ration.

Pre-primary schools or day-care centres cater to the 3 to 5 years age group. Primary schools normally include classes from first to sixth grade, grouping children 6 to 12 years of age. However primary schools frequently include older children due to late school entry or repetition. Countries in which the age distribution of children is known to be skewed (i.e. abnormally high proportion of children over 12 years of age) should be identified since the nutrient requirements of older children, particularly adolescent girls, are higher and ration sizes should be adjusted accordingly.

**Determine the age range of the target group**

### 3.2 Number and Timing of Meals

Bearing in mind the role of food aid as *nutritional supplement* (and not substitute), the timing of meals is very important. The number of school sessions should be determined in order to decide on the number and timing of meals (e.g. breakfast and mid-morning meal? or breakfast and lunch?). For planning purposes, in this manual pre-primary and primary schools are grouped into three categories:

*Half-day schools* normally operate in the morning with children returning home for lunch; sometimes school sessions can also be held in the afternoon to avoid overcrowding due to an insufficient number of classrooms ("double shift system").

*Day schools* have sessions in the morning and afternoon. In such schools, children living far often stay on school premises and miss lunch or return home and skip the afternoon session; those living closer by, who often go home for lunch, are also likely to skip afternoon sessions.

*Boarding schools* generally keep the children for the entire school year (occasionally students return home during breaks in between school terms). These schools cater to children living too far from school to commute daily and who thus need to receive all their needs at school.

Pre-primary schools/day-care centres, which can be either non-formal community-based or form part of the formal education sector, usually operate on a half-day or day basis.

**The number and timing of meals should be decided bearing in mind the justification for an SFP as well as the number and duration of school sessions**

In half-day schools, two light meals - a snack before classes begin and one meal at mid-morning - are recommended in the majority of cases. <sup>4</sup> However, when preparation and serving of the snack is not practicable before classes start, for reasons such as the time required to fetch water and fuel, the snack should be served as early as possible at the start of classes. A snack (served at the start of classes) and lunch are recommended for day schools, and three meals for boarding schools.

**Table 1**

Number and Timing of Meals

<i>Type of school</i>	<i>N° of meals</i>	<i>Timing of meals</i>
Half-day school	2	At the start of classes and at mid-morning
Day school	2	At the start of classes (or mid-morning meal) & lunch
Boarding school	3	Breakfast, lunch and dinner

### 3.3 Daily Nutrient Requirements of Children

#### 3.3.1 Energy and Protein

Both energy and protein are needed to support maintenance and growth of children, and should not be seen in isolation. In fact, adequate energy intake is indispensable for the efficient utilization of dietary protein.

The following average daily requirements - in terms of energy and protein - for pre-school and primary school-age children (sexes combined) will be used for planning purposes:

**Table 2**

Mean Daily Per Capita Energy Requirement and Safe Protein Intake for Primary and Pre-primary School Children <sup>5</sup>

	<b>Primary School Children 6 - 12 years</b>	<b>Pre-Primary Children 3 - 5 years</b>
Energy (Kcal)	2000	1600
Protein (grams) <sup>a</sup>	40	32

<sup>a</sup> Average protein from a rural diet with a digestibility of 85%

Individual nutrient requirements are influenced by various factors such as the sex, age, activity level, and health/nutritional status of children. The above figures are averages and do not reflect these differences. It is assumed that at the time of meal distribution, serving portions will be adapted to the children's ages, with younger children (such as those in grade 1) receiving smaller serving sizes than their older peers (see *section 3.1*).

SFPs will cover a varying proportion of the above average nutritional requirements. For planning purposes, and for the sake of consistency, acceptable ranges of nutritive values are proposed in Table 3 for the three categories of schools described under section 3.2.

**Table 3**

Recommended Nutritive Value of Rations  
for Primary Schools

<b>School type</b>	<b>Acceptable range of ration's nutritive value (children 6-12 years)</b>		
	<b>Energy (kcal)</b>	<b>Protein (gram)</b>	<b>Fat (gram)<sup>a</sup></b>
Half-day school	600 - 900 (30-45%)	16 - 24 (40-60%)	7 - 11
Day school	1200 - 1500 (60-75%)	28 - 36 (70-90%)	14 - 17

Boarding school	up to 2000 (up to 100%)	at least 40 g (up to 100%)	> 23
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<sup>a</sup> At least 10% of energy intake to be supplied from fat

As far as boarding schools are concerned, the portion of requirements to be covered by WFP's assistance will be determined in accordance with the budgets they receive from governments and/or communities for local food purchases. The level of WFP's food assistance to boarding schools is therefore variable, in some cases covering up to 100% of nutrient requirements and in others two out of the three daily meals. On the other hand, some projects include phasing out strategies, i.e. gradual scaling down of WFP's food assistance, with proportionately increasing government and community contributions. For these reasons, the examples of rations for boarding schools (see *section 4.3*) are given at three levels (100%, 80-85% and 65-70% of nutrient requirements), the last one being roughly equivalent to two meals a day.

**For boarding schools, the ration size should be determined in accordance with the schools' budget for local food purchases**

As shown in Table 3, the acceptable ranges of nutritive values for each category are wide (e.g. from 600 to 900 Kcal of energy for half-day schools). The choice of nutritive value should be guided by the prevailing nutrition situation, such as the magnitude of Protein Energy Malnutrition (PEM) in the areas where the SFP is to be implemented, and by local dietary habits. For example, where the local diet is known to be poor in protein, the selected food ration should provide the upper range of the energy and protein values. Low protein diets are common where roots and tubers (e.g. cassava, yam and taro) are the staple diet. For more details on consumption patterns, see [Annex 3](#).

**To determine the optimal levels of energy and protein in the ration, check dietary patterns and prevalence of PEM among children**

### 3.3.2 Micronutrients

Micronutrient deficiencies that have been shown to affect school attendance and performance include: iron deficiency anaemia, vitamin A deficiency (VAD) and iodine deficiency disorders (IDD) (see paragraphs 25 and 26 of the "Operational Guidelines for WFP Assistance to Education"). The recommended levels of intake of these micronutrients for 3 - to 12- year old children is given in table 4:

Table4

Recommended Mean Daily Intakes  
for Vitamin A, Iron and Iodine <sup>6</sup>

<b>Age group</b>	<b>Vitamin A (mg retinol)</b>	<b>Iron <sup>a</sup> (mg)</b>	<b>Iodine (mg)</b>
Pre-primary (3 - 5 years)	400	9	90
Primary (6 - 12 years)	400-500	16	120

<sup>a</sup> Low bioavailability diet: a simple monotonous diet containing cereals, roots and/or tubers and negligible quantities of meat, fish and/or vitamin C-rich foods. Such diets are predominant in many developing countries, particularly among lower socioeconomic groups.

As mentioned in *section 1*, in countries where the local diet is known to be poor in micronutrients and where micronutrient deficiencies are a problem of public health significance, SFPs can contribute to the reduction of micronutrient deficiencies. It is therefore important to establish the composition of rations bearing in mind prevailing micronutrient deficiencies among the target groups. Micronutrient-rich foods include pulses, vegetables and their leaves, fresh fruits and obviously micronutrient-fortified blended foods (BF). The vitamin A and iron content of a cereal flour, beans, BF and a fresh green leaf (the equivalent of one tablespoon of parsley) are given in the following table.

		Vitamin A (mg)	Iron (mg)
Maize meal	100 g	-	2.5
Beans	30 g	-	2.5
CSB	100 g	510	18.0

Parsley	4 g	102	0.2
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If vitamin A deficiency and iron deficiency anaemia are a problem of public health significance, preference should be given to fortified foods such as fortified blended foods (donated or preferably locally processed and procured) or locally manufactured fortified biscuits

**To decide whether or not fortified foods should be included in the ration:**

- Check available data on the prevalence of micronutrient deficiencies
- Check access of schools to micronutrient-rich local foods

As far as iodine is concerned, 3 to 6 grams of iodized salt per day (providing on average 40 mg of iodine per 1 g of salt) should be included in the daily ration when: 1) the prevalence of goitre among school-age children is above 5%; and 2) salt iodization, which is the preferred approach for iodine supplementation, is not in place or is not yet fully operative.

**To decide whether or not iodized salt should be included in the ration:**

- Check available data on the prevalence of goitre among school-age children
- Check access of population to iodized salt

In SFPs for **boarding schools**, where WFP's food aid provides a high proportion (if not 100%) of average daily requirements, specific attention should be given to the adequate supply of micronutrients.

It must be noted that in addition to standard BF such as CSB, other commodities can be enriched or fortified, such as Vitamin A-fortified vegetable oil. In addition, some donors add varying amounts of calcium, iron, vitamin A, thiamine, riboflavin and niacin to bulgur wheat and maize meal.

**Check whether donated commodities are fortified**

The amount of foods which can be consumed by children in one meal varies with their age. For example, at three years a child can consume about one-half and at six years about two-thirds of the amount an adult consumes. Moreover, food intake should be spread in a balanced manner over the day, with breakfast usually providing between 25 to 33% of the daily food and lunch at least about one third of the daily dietary needs of

children.

While one should aim at reaching the recommended ranges of nutrient requirements (Table 3), excessive quantities of foods in one meal should be avoided. When increments in the amounts of the dry ration size are considered in order to increase its nutritive or income transfer value, the bulkiness of cooked items should be born in mind. For example, the volume of rice could increase almost three-fold upon cooking (100 grams of dry rice provides 230-250 grams of cooked rice, or 300 ml in volume); on the other hand, maize meal prepared into a soft porridge could increase 4.5 times in volume (100 grams of dry maize meal provides about 500-600 grams of soft porridge, or 440-460 ml in volume). An example of the volume of dry and cooked foods is presented in [Annex 5](#).

**When deciding on the amounts of food items, remember that the weight and volume of dry food items increase upon cooking**

### 3.5 Choice of Commodities

#### 3.5.1 Local Dietary Habits

The food ration should be adapted to local food consumption patterns, respecting, to the extent possible, traditional food preferences and taboos. This applies to the entire range of commodities, such as cereals and pulses, and with specific attention to canned food items, such as fish (not recommended if children are from pastoralist families) and meat (pork or beef avoidances among some population groups).

**When choosing the ration's composition, check local dietary habits**

Various options for food rations for the different types of SFPs are presented and discussed (*sections 4, 5 and 6*). For the sake of consistency and comparability of rations in terms of nutritive value and cost, the same food items have been used throughout the manual:

- Cereal flour: maize meal
- Whole grain cereal: rice
- Pulses: precooked split peas for half-day  
day and boarding schools and beans for schools
- Canned food: fish in oil
- BF: CSB

However, when designing a ration for a particular country, the food items used in the examples can be substituted by other foods which are better adapted to local food consumption patterns (for example, sorghum instead of maize meal, bulgur wheat instead of rice, and meat instead of fish). These foods vary in nutrient

composition, as can be seen in [Annexes 1](#) and [4](#). For instance, if you replace 100 grams, of rice by the same quantity of bulgur wheat, the cost of the ration will decrease (by 0.55 US cents per 100 grams or 55 US \$ per tonne), and the nutritive value of the ration will also change: energy (-10 Kcal), fat (+1 g), iron (+6.6 mg) and protein (+4 g). The increase in protein content is deceiving, as the quality of bulgur wheat is in fact lower than that of rice. On the other hand, if you replace 20 g of beans by the same quantity of peas, the nutritive value will change only slightly while the cost will substantially decrease (by 0.25 US cents per 20 grams, or 125 US \$ per tonne). Main differences in nutrient composition are highlighted below using the most common ration size for each type of commodity:

		<b>Energy (Kcal)</b>	<b>Protein (g)</b>	<b>Fat (g)</b>	<b>Vitamin A (mg)</b>	<b>Iron (mg)</b>
100 g	Maize meal	360	9.0	3.5	-	2.5
	Sorghum	335	11.0	3.0	-	4.5
100 g	Rice	360	7.0	0.5	-	1.2
	Bulgur wheat	350	11.0	1.5	-	7.8
20 g	Beans	67	4.0	0.2	-	1.6
	Peas	67	4.4	0.3	-	1.0
20 g	Canned fish in oil	61	4.4	4.8	11.6	0.5
	Canned meat	44	4.2	3.0	-	0.8

### 3.5.2 Food Preparation and Cooking

*Cooking time and fuel efficiency.* Food commodities should be easy to prepare with a minimum use of fuel; for example BF or cereal flours are easier and quicker to prepare than unmilled whole grain cereals. The ease of preparation is especially important when meals have to be served before classes start or during the mid-morning break, as in half-day schools.

**Choose easy-to-prepare commodities especially for early and mid-morning meals**

*Infrastructure.* Even if a recipe is appropriate in terms of short cooking time, the preparation time can be quite

long if one considers the time needed to fetch water (if the school does not have its own water supply) or to fetch wood. Both can be time-consuming and might interfere with the timely preparation of meals.

**When assessing ease of preparation of meals, determine fuel and water availability**

*Meal diversity.* Meal diversity is particularly important in day and boarding schools.

While it is understood that diversity in meal preparation is primarily the responsibility of PTAs (see section 2), some of the food aid commodities lend themselves to a wider range of cooking possibilities than others.

For example, maize meal and sorghum flour can be prepared in the form of porridge (sour, sweetened, soft or stiff), dough (dumplings or fritters) or other dishes adapted to local food habits.

On the other hand, rice and bulgur wheat have more limited cooking possibilities, the variety in meal preparation depending on diversity of accompanying sauces.

[Annex 6](#) summarizes some of the traditional cooking possibilities which are feasible with food aid commodities.<sup>7</sup>

**Involvement of PTAs in menu planning and food supply and preparation is essential for meal diversity**

### 3.6 Administrative and Logistical Considerations

To be nutritionally well-balanced and palatable, meals should be prepared with a food basket of varied composition. For example, including two types of cereals (e.g. maize and rice) in the ration for boarding schools would be preferable to only one. However, the greater the number of commodities, the more complex and expensive will be their transport, storage and accounting. The number of commodities should be as minimal as possible, particularly for projects in which the main role of food assistance is to relieve short-term hunger, such as in half-day schools.

**To facilitate food management, keep the number of commodities to an acceptable minimum**

- Most recent enrolment figures by type of school/beneficiaries .
- Projections of future enrolment trends: expected increase in enrolment based on the enrolment trends over the last five years, bearing in mind the anticipated incremental effect of a SFP on enrolment (see below).

Future enrolment trends should be estimated in consultation with the Ministry of Education and donors, bearing in mind the following factors:

Past enrolment trends

- Demographic trends
- Expected investments in the education sector (e.g. rehabilitation and/or expansion of school infrastructure)
- Expected effect of school feeding on enrolment.

### 3.8 Cost-effectiveness

The cost of the ration is important in relation to: 1) coverage of a SFP and 2) its sustainability beyond WFP's assistance (i.e. its eventual take-over by national authorities): the more costly, the narrower the coverage; and the more costly, the less likely its take-over by the government and/or communities.

The unit cost of a SFP ration will vary with its composition and size. Indeed WFP commodities cover a wide range of prices: for example, from US \$ 200 <sup>8</sup> per tonne for maize or soya-fortified sorghum grits, to US \$ 325 for CSB, and up to US \$ 2400 for canned fish (see [Annex 1](#)). The cost of commodities should be born in mind particularly if the commodities have to be purchased. Some expensive commodities (e.g. canned fish) might be available due to major donations to WFP and should be utilized; however, the use of cheaper alternatives of comparable nutritive value should be foreseen.

In the following sections, the cost of various examples of food rations is computed using 1996 prices and should be recalculated at the time of project formulation using an updated version of [Annex 1](#). It must be noted that the cost of iodized salt, which is negligible (0.0006 and 0.0012 US cents for 3 and 6 g of salt respectively), has not been included in the various examples.

Compute the cost of the ration / child / per day and per school year bearing in mind the government / communities' capacity to take over

### 3.9 Summary of Guiding Principles

To facilitate the task of choosing a food ration or evaluating an existing one, a 'checklist' has been developed and should be utilized for ration planning (see [Annex 7](#)). Some of the information required, such as nutritive value and cost of the ration, can be easily computed and analyzed by consulting the respective annexes (for the cost of the ration and its content in terms of energy, protein and fat, an updated version of [Annex 1](#) should be used; for micronutrients use [Annex 4](#)).

Additional information, however, will need to be gathered in the field through direct observation. This would include hygiene criteria and the real time required for food preparation. For information regarding local food habits, partial answers are supplied in the quick reference sheet on food consumption patterns in [Annex 3](#). Since regional differences exist in most countries, and are reflected in different food habits, this information

should be checked in the field.

#### SUMMARY OF GUIDING PRINCIPLES

- \* determine the age range of the target group
- \* determine the number and duration of school sessions
- \* ascertain schools' budget for local food purchases
- \* check dietary patterns and prevalence of PEM among children
- \* check available data on the prevalence of micronutrient deficiencies
- \* check access of schools to micronutrient-rich local foods
- \* consider that weight and volume of dry food items increase upon cooking
- \* choose easy-to-prepare commodities especially for breakfast/early meals
- \* determine fuel and water availability
- \* ensure involvement of PTAs in menu planning and food preparation
- \* keep the number of commodities to an acceptable minimum
- \* compute the cost of the ration/child/per day and per school year

In addition to the above principles for selecting food rations for SFPs, other factors should be considered when designing an SFP. These are discussed in Chapters II, III and IV, and are reflected in the Sample Checklist for Examination of Health and Nutrition Issues during School Visits presented in [Annex 8](#).

## 4. Rations for Primary Schools

### 4.1 Half-Day Schools

#### 4.1.1 General Comments

This ration will supply food at the start of classes and/or during mid-morning school break.

#### *Nutritive Value*

- **Two light meals (most frequent case):** the total food ration should supply energy, protein and fat in the acceptable range as indicated below:

**Energy:** 600-900 kcal (30-45 % of daily requirement)

**Protein:** 16-24 g (40-60% of daily requirement)

**Fat:** 7-11 g (at least 10% of energy intake from fat)

- **One mid-morning light meal (occasional case):** the food ration should supply an average of energy, protein and fat as indicated below:

**Energy:** about 500 kcal (approximately 25 % of daily requirement)

**Protein:** about 13 g (approximately 33% of daily requirement)

**Fat:** about 6 g (at least 10% of energy intake from fat)

- **One light meal and lunch (exceptional case):** see recommended nutritive value and examples of rations for day schools in *section 4.2*

#### *Ration Composition*

The ration should include a combination of food items selected among the following:

- *Whole grain cereal* (e.g. rice) or *cereal flour* (e.g. maize meal prepared in schools as porridge or wheat flour prepared in bakeries as bread)
- *Pulses:* to accompany the whole grain cereal
- *Canned food:* to be served with the bread
- *Vegetable oil:* to prepare soft porridge or sauces
- *Sugar:* to sweeten beverage or porridge
- *Fortified biscuits*
- *BF:* such as CSB prepared as a beverage or porridge.

*Beans and lentils* have not been included in the preparation of 'light meals' since they would need substantial preparation and cooking time. However, "precooked yellow split peas", which require about only 20 minutes cooking time, may be available from donors and could be included in the ration.

#### *Number of Commodities*

In half-day schools, the total number of commodities should preferably not exceed four (not including iodized salt).

*Type of Meals and their Timing*

Food assistance in half-day schools is not intended to cater to substantial meals such as lunch, but to be consumed in the form of *properly timed "light meals"* which should be easy and quick to prepare, not bulky, not expensive, and adapted to local food consumption habits. The *"light meals"* are grouped into two categories: 1) *early morning light meals (i.e. at the start of classes)* which require minimal cooking time (e.g. a BF beverage) or no preparation at all (e.g. biscuits) at the school level; and 2) *mid-morning light meals* such as a porridge (stiff or soft), whole grain cereal with pulses (e.g. rice with precooked yellow split peas), or a sandwich.

1) *Early-morning meals (EM)*

*BF beverage* is a standard preparation (i.e. 25 grams of the dry BF and 10 grams of sugar for a 200 ml glass) and requires minimal cooking time (i.e. pouring boiled safe water over dry mixture while stirring).

*Fortified biscuits* offer some advantages, especially for half-day schools, since they are ready-made, provide additional micronutrients and are liked by the children. Since local production varies slightly from country to country in terms of ingredients and the level and type of fortification, one example has been chosen and is listed in Table 5. For detailed information on locally produced biscuits, see [Annex 2](#).

In view of the more geographically limited production and use of fortified biscuits in SFPs, the BF beverage has been chosen in this manual as the main *EM*. It is understood that, where feasible, *fortified biscuits* can replace the BF beverage. The major differences in nutrient content between the standard *BF beverage* and a *fortified biscuit* are summarized below (based on an example of a *fortified biscuit* from an on-going WFP-assisted SFP):

<i>Early-morning meal</i>	<i>Quantity (g)</i>	<i>Nutrient Composition</i>					
		<i>Energy (Kcal)</i>	<i>Protein (g)</i>	<i>Fat (g)</i>	<i>Vitamin A (mg)</i>	<i>Iron (mg)</i>	<i>Iodine (mg)</i>
<b>BF beverage:</b>							
CSB	25	95	5	2	125	4.5	12.5
Sugar	10	40	-	-	-	-	-
<b>Total</b>	<b>35</b>	<b>135</b>	<b>5</b>	<b>2</b>	<b>125</b>	<b>4.5</b>	<b>12.5</b>
<b>Fortified biscuits</b>	28	<b>130</b>	<b>2</b>	<b>6</b>	<b>150</b>	<b>8.0</b>	*

\* Level of fortification with iodine depends on country situations as regards the prevalence of goitre and the government's strategy to prevent and control IDD (in this particular case, there is a national strategy to fortify salt with iodine; therefore the biscuit is not fortified with iodine).

## 2) *Mid-morning meals (MM)*

The *cereal flour* (maize or sorghum) can be prepared in different ways depending on local food habits and preferences: porridge (stiff, soft, sweetened or sour) accompanied by a sauce, or in other forms as described in [Annex 6](#). Traditional sauces, which accompany the porridge or rice, can be prepared using donated vegetable oil and local ingredients. These local ingredients can include fresh or dried vegetables, leaves, onions, tomatoes and various local condiments, depending on seasonal availability. Sauces play an important role not only for taste and palatability, but also for additional micronutrient supply. Certain vegetable leaves provide substantial amounts of Vitamin A. Groundnuts are a nutritious and frequently used ingredient in sauces and could be provided locally by PTAs. Groundnuts are a good source of energy, protein, calcium and particularly niacin. As regards meal preparation, the shortest preparation and cooking time should be opted for, since the supply of fuel can be a major problem.

The *sandwich* represents a widespread, culturally accepted alternative to cooked light meals and is therefore included in SFPs despite the fact that a ration consisting of BF beverage and sandwich (option 4) provides slightly less energy than the recommended energy value for half-day school rations (bread supplies 260 kcal per 100 g). The sandwich listed in Table 5 represents a french-type 'baguette bread' [9](#) (to find out how much flour is needed to make a given amount of bread, the weight of bread is divided by 1.3 [10](#)). In many instances, arrangements can be made with bakers for the payment of bread-making in the form of wheat flour. The exchange rate will depend on local prices of wheat flour and bread. In general, wheat flour is provided in the order of 1.5 times the weight of bread.

Table 5 gives examples of light meals, fortified biscuits and a beverage. While the BF beverage is a standard recipe (25 g of BF and 10 g of sugar), the composition of light meals is more variable. Several alternatives are possible, bearing in mind the various considerations discussed in the previous sections, namely nutritive value, palatability, serving size and cost.

### 4.1.2 *Afternoon Half-day Schools*

Most half-day school sessions take place in the morning, but in rare cases afternoon sessions are held to avoid overcrowding due to an insufficient number of classrooms. The same principles described under *section 4.1.1* apply to half-day schools operating in the afternoon.

The various options presented in *section 4.1.3* apply to both morning and afternoon half-day schools. The main difference is the *timing of meals* (e.g. the BF beverage before classes start and the porridge in the mid-afternoon).

### 4.1.3 *Examples of Rations*

The "light meals" proposed in Table 5 can be combined in different ways while keeping to the following

maximum amounts per child and per day:

<b>Maximum Amounts of Commodities/Child/Day for Half-day Primary Schools</b>	<b>(grams)</b>
Cereal/BF	130/150
Pulses/Canned fish in oil (one or the other not both)	20/25
Vegetable oil	10
Sugar	20

Examples of food rations for half-day schools are presented in Table 6, followed by a detailed "fact sheet" for each option.

<b>Early morning meal</b>	<b>Mid-morning meal</b>	<b>Option</b>
BF beverage (or biscuit)	maize meal + sugar + vegetable oil	1
	rice + peas + vegetable oil	2
	BF + sugar + vegetable oil	3
	bread + canned fish	4

It must be emphasized that these options are not exhaustive but are given as typical examples. In all the examples given in Table 6, the light meal to be served before classes consists of a BF beverage, which is easy and quick to prepare. In countries where fortified biscuits are locally produced, the BF beverage can be replaced by the biscuits as indicated above.

Table 5

## Different Types of Light Meals for Primary Schools

<i>Type of commodity</i>	<i>BF drink</i>	<i>BF porridge</i>		<i>Maize porridge</i>		<i>Rice dish</i>		<i>Sandwich</i>		<i>Biscuits</i>	
<b>CSB</b> (grams)	25	120	120								
<b>Fortified biscuits</b> (grams)										40	60
<b>Cereal :</b>											
maize meal (grams)				120	120	100					
rice (grams)							100				
bread (grams)								130	120		
<b>Pulses :</b>											
peas (grams)							20				
<b>Canned fish in oil</b> (grams)								25	20		
<b>Vegetable oil</b> (grams)		10		10			10				
<b>Sugar</b> (grams)	10	10	15	10	15	10					17
<b>Iodized salt</b> (grams)				3			3				
<b>Cost (FOB Price)</b> (US cents)	1.2	5.2	4.6	4.4	3.7	3.0	4.5	11.8	10.1	5.0	7.5
<b>Nutritive value :</b>											
Energy (Kcal)	135	585	516	561	492	400	516	416	374	195	293

2.1 Ration Composition and Size

Protein (grams)	5	22	22	11	11	9	11	16	14	4	6
Fat (grams)	2	17	7	14	4	4	11	9	7	12	18

**Maize porridge:** the first choice, which has the highest nutritive value, is suitable as a mid-morning meal in half-day schools, while the other two are appropriate as early morning meal in day and boarding schools. The provision of oil and sugar in the first one allows meal variety (sweetened soft porridge or stiff porridge with sauce).

**Pulses:** precooked yellow split peas should be chosen as they require about only 20 minutes' cooking time.

**Bread:** since in most cases payment of bread baking is made in the form of wheat flour, a conversion factor of 1.5 is used for calculating the amount of wheat flour needed and the cost of the ration (i.e. cost of 120 g bread = cost of 180 g [120 g x 1.5] of wheat flour).

**Biscuits:** valid in countries where biscuits can be locally processed; cost should not exceed US\$ 1250/metric ton (i.e. about US cents 5.0 for 40 grams and 7.5 for 60 grams).

**Iodized salt:** should be added if goitre is a significant problem (see section 3.3.2).

Table 6

Examples of Food Rations for Primary Half-Day Schools:  
a Quick Reference

	<b>Option 1</b>		<b>Option 2</b>		<b>Option 3</b>		<b>Option 4</b>	
<b>Type of commodity</b>	<b>BF beverage &amp; porridge</b>		<b>BF beverage &amp; cereal dish</b>		<b>BF beverage &amp; BF porridge</b>		<b>BF beverage &amp; sandwich</b>	
	<b>EM<sup>a</sup></b>	<b>MM</b>	<b>EM</b>	<b>MM</b>	<b>EM</b>	<b>MM</b>	<b>EM</b>	<b>MM</b>
<b>CSB</b> (grams)	25		25		25	120	25	
<b>Cereal :</b>								
Maize meal (grams)		120						
Rice (grams)			;	100				

## 2.1 Ration Composition and Size

Bread (grams)								130
<b>Pulses :</b>								
Peas (grams)				20				
<b>Canned fish in oil</b> (grams)								25
<b>Vegetable oil</b> (grams)		10		10		10		
<b>Sugar</b> (grams)	10	10	10		10	10	10	
<b>N° commodities<sup>b,c</sup></b> (without salt)	Reasonable (4)		High (5)		Reasonable (3)		Reasonable (4)	
<b>Cost per ration<sup>d</sup></b> (US cents)	Reasonable (5.6)		Reasonable (5.7)		Reasonable (6.4)		Expensive (12.5)	
<b>Energy &amp; protein content within range</b>	Yes		Yes		Yes		No <sup>e</sup>	
<b>Vitamin A &amp; iron content<sup>f</sup></b>	Acceptable		Acceptable		Good		Acceptable	

<b>Comments :</b> <b>Iodized salt</b> should be added to the rations if goitre prevalence exceeds 5% among school-age children and the ration does not include an iodine-fortified commodity (e.g. biscuits).	<b>Comments :</b> Option lies at the lower end of recommended protein when maize is provided.	<b>Comments :</b> Option lies at the lower end of recommended protein rice is provided.	<b>Comments :</b> Option would be suitable in countries where micronutrient deficiencies are known to prevail.	<b>Comments :</b> Option is applicable where local bakeries guarantee production and regular delivery of bread.
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<sup>a</sup> **EM** = Early-morning meal;  
**MM** = Mid-morning meal.

<sup>b</sup> **Reasonable** = N° of commodities (without salt) up to four;  
**High** = N° of commodities (without salt) greater than four (see [Annex 7](#)).

<sup>c</sup> The number of commodities in this case refers to those received at the school level. If, for example, the BF beverage (which requires two commodities: BF and sugar) is replaced by fortified biscuits (counted as one commodity), the number of commodities for options 1, 2, 3 and 4 would be as follows: 4, 4, 4 and 3, respectively. Commodities used for making the biscuits are not included.

<sup>d</sup> At 1996 prices:

**Reasonable** = Cost less or equal to 7 US cents/ration/day;  
**Expensive** = Cost greater than 7 US cents/ration/day (see [Annex 7](#)).

<sup>e</sup> Option is 50 kcal too low in energy but falls within the recommended nutritive value for protein and fat. Despite its low energy supply, this option is presented since the consumption of bread is widely spread and culturally accepted.

<sup>f</sup> **Poor** = less than a quarter of requirements;

**Acceptable** = between 25% and 50% of requirements;

**Good** = above 50% of requirements (see [Annex 7](#)).

In cases where provision of a light meal before classes start is not required, the mid-morning meal proposed in options 1, 2 or 3 would be adequate, whereas the mid-morning light meal under option 4 (sandwich with fish) falls below the recommended mean energy value of 500 Kcal.

**When only a mid-morning light meal is required, you may choose one of the light mid-morning meals proposed under options 1, 2 and 3.**

\* Option 1: BF beverage and maize porridge \*

<b>Type of commodity</b>	<b>EM</b>	<b>MM</b>	<b>Total ration per day</b>
<b>CSB (grams)</b>	25		<b>25</b>
<b>Cereal :</b>			
Maize meal (grams)		120	<b>120</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10	10	<b>20</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	1.2	4.4	<b>5.6</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	561	<b>696</b>
Protein (grams)	5	11	<b>16</b>
Fat (grams)	2	14	<b>16</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Lies at the lower end of recommended protein value and should be avoided when the local diet is poor in protein (e.g. where the staple diet is cassava). *If maize meal is replaced by the same quantity of sorghum, the total energy value decreases by 30 Kcal while the protein content increases by 2 g. If biscuits (40 g) are given as EM instead of BF beverage, the total energy value increases by 60 kcal, protein decreases by 1 gram and fat increases by 10 grams.*

\* **Micronutrients:** Supplies about 125 micrograms of Vitamin A (i.e. about one quarter of daily requirement) and about 8 mg of iron (i.e. about half of daily requirement). *If fortified biscuits replace the BF beverage, iron supply would increase by 8.5 mg, and Vitamin A supply would double.*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable.

\* **Choice of commodities:** Suitable where maize is commonly consumed; provision of vegetable oil and sugar allows diversification in preparation of maize porridge (see below). Although BF might not be known to the local population, children are likely to accept it if it is prepared into a sweetened beverage.

\* **Food preparation:** Preparation of BF drink is easy (pouring boiling water over the BF while stirring).

Maize porridge can be prepared following local customs as stiff or soft porridge. The stiff porridge needs to be dipped into a sauce (otherwise difficult to swallow), and the provided vegetable oil would be used to prepare a sauce using locally produced ingredients. The soft porridge is eaten as such and can be sweetened if desired; if vegetable oil is added to the porridge, the porridge stays soft even after cooling down.

\* **Meal diversity:** Can be achieved with the provided food aid commodities, provided the cooks of school canteens take initiatives and PTAs support the SFP.

Variety in the weekly or monthly school menu will depend on community initiatives

\* Option 2: BF beverage and rice dish \*

<i>Type of commodity</i>	<i>EM</i>	<i>MM</i>	<i>Total ration per day</i>
CSB (grams)	25		<b>25</b>
<b>Cereal :</b>			
Rice (grams)		100	<b>100</b>
<b>Pulses :</b>			
Precooked split peas (grams)		20	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>

<b>Sugar</b> (grams)	10		<b>10</b>
<b>Iodized salt</b> <sup>a</sup> (grams)		3	<b>3</b>
<b>Cost (FOB Price)</b> (US cents)	1.2	4.6	<b>5.8</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	516	<b>651</b>
Protein (grams)	5	11	<b>16</b>
Fat (grams)	2	11	<b>13</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Lies at the lower end of recommended protein value and should be avoided when the local diet is poor in protein (e.g. where the staple diet is cassava). *If rice is replaced by the same quantity of bulgur wheat, this ration would be well within the accepted range as the protein content would increase by 4 g. If biscuits (40 g) are given as EM instead of BF beverage, the total energy value increases by 60 kcal, protein decreases by 1 gram and fat increases by 10 grams.*

\* **Micronutrients:** Supplies about 125 micrograms of Vitamin A (i.e. about one quarter of daily requirement) and about 7 mg of iron (i.e. slightly less than half of daily requirement). *If rice is replaced by the same quantity of bulgur wheat, the iron supply increases to 12 mg (or about three quarters of iron requirement). If fortified biscuits replace the BF beverage, iron supply increases by 8.5 mg and Vitamin A supply is doubled.*

\* **Number of commodities:** High.

\* **Cost of food ration:** Reasonable.

\* **Choice of commodities:** Suitable where rice is commonly consumed; provision of vegetable oil allows preparation of sauces. Although BF might not be known to the local population, children are likely to accept it if it is prepared into a sweetened beverage.

\* **Food preparation:** Preparation of BF drink is easy (pouring boiling water over the BF while stirring). Rice is accompanied by a sauce with pulses. By adding local ingredients, flavours and seasonings, different sauces can be prepared.

\* **Meal diversity:** Can be achieved with the food aid commodities, provided the cooks of school canteens take

initiatives and PTAs support the SFP.

**Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice**

\* Option 3: BF beverage and BF porridge \*

<i>Type of commodity</i>	<i>EM</i>	<i>MM</i>	<i>Total ration per day</i>
<b>CSB</b> (grams)	25	120	<b>145</b>
<b>Vegetable oil</b> (grams)		10	<b>10</b>
<b>Sugar</b> (grams)	10	10	<b>20</b>
<b>Cost (FOB Price)</b> (US cents)	1.2	5.2	<b>6.4</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	585	<b>720</b>
Protein (grams)	5	22	<b>27</b>
Fat (grams)	2	17	<b>19</b>

\* **Energy and protein:** Lies within the recommended range for energy and at the lower end of recommended fat, but is over the upper limit for protein.

\* **Micronutrients:** The BF supplies substantial amounts of micronutrients: daily Vitamin A and iron requirements of primary school children are covered. About 60% of daily iodine requirement is also supplied by BF. *This food ration should be chosen when the local diet is known to be poor in micronutrients and where micronutrient deficiencies are a problem of public health significance.*

\* **Number of commodities:** Minimal (three commodities) and therefore advantageous in terms of food management and transport, but poor in terms of meal variety.

\* **Cost of food ration:** Reasonable.

\* **Choice of commodities:** BF might not be known to the local population, but its acceptance by children can be achieved if it is prepared into a porridge and served with traditional sauces. The latter would be prepared using the donated vegetable oil and locally procured ingredients. Locally produced BF is preferable to donated BF, where feasible and cost-effective.

\* **Food preparation:** Preparation of BF drink and porridge is easy.

\* **Meal diversity:** The risk of monotony is greater than with staple cereal flours. However, the BF may be prepared following local customs as stiff or soft porridge (see comments under option 1), provided communities contribute ingredients for the preparation of sauces.

Variety in the weekly or monthly school menu will depend on community initiatives

\* Option 4: BF beverage and sandwich \*

<i>Type of commodity</i>	<i>EM</i>	<i>MM</i>	<i>Total ration per day</i>
CSB (grams)	25		<b>25</b>
<b>Cereal :</b>			
Bread (grams)		130	<b>130</b>
<b>Canned fish in oil (grams)</b>		25	<b>25</b>
<b>Sugar (grams)</b>	10		<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	1.2	11.8 <sup>a</sup>	<b>12.5</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	416	<b>551</b>

Protein (grams)	5	16	<b>21</b>
Fat (grams)	2	9	<b>11</b>

<sup>a</sup> Cost of bread = cost of 195 g wheat flour (see Table 5).

**Energy and protein:** Falls below the recommended nutritive value for energy (the nutritive value has been calculated on the basis of bread and not wheat flour). *If the BF beverage is replaced by 40 g of fortified biscuits, the energy supply will fall within the recommended nutritive value (total energy 611 kcal).*

\* **Micronutrients:** Supplies about 140 micrograms of Vitamin A (i.e. about one quarter of daily requirement), about 8 mg of iron (i.e. about half of daily requirement) and slightly over 10% of iodine requirement, mostly from the BF drink. Canned fish provides a negligible amount of iodine. <sup>11</sup> *If the BF beverage is replaced by fortified biscuits (40 g), Vitamin A and iron supply would almost double.*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Expensive (about double the cost of rations 1, 2 and 3).

\* **Choice of commodities:** The sandwich represents an alternative to cooked light meals and is commonly consumed by children; since bread baking (by local bakeries) is not always feasible, this food ration should be chosen only where an appropriate infrastructure exists; this is more likely to be the case in urban and peri-urban areas where bakeries can guarantee regular bread delivery to the schools. Canned fish is used as spread but can be replaced by canned meat; for all canned items, acceptability by the population should be guaranteed as discussed in *section 3.5.1*.

\* **Food preparation:** Preparation of the BF drink is quick and easy. With bread, fuel consumption and preparation time in the schools are minimal compared with the other options.

\* **Meal diversity:** None possible.

**Main disadvantage is monotony unless two types of canned foods are provided; community involvement is hence of utmost importance to ensure diversification**

## 4.2 Day Schools

### 4.2.1 General Comments

This food ration will allow the preparation of two meals: a light meal to be served before classes start or at mid-morning, and lunch.

### *Nutritive Value*

The food ration for day schools should supply energy, protein and fat in the acceptable range as indicated below:

**Energy:** 1200-1500 kcal (60-75 % of daily requirement)

**Protein:** 28-36 g (70-90% of daily requirement)

**Fat:** 13-17 g (at least 10% of energy intake from fat)

The "light meal" should supply approximately 400-600 Kcal and lunch 700-900 kcal.

### *Ration Composition*

The ration would be composed of nearly the same food aid items as for the half-day schools, with the exclusion of fortified biscuits and the addition of other pulses such as lentils or beans.

The ration would include a combination of food items selected among the following:

- *Whole grain cereal* (e.g. rice) or *cereal flour* (e.g. maize meal prepared as porridge).
- *Pulses:* peas, lentils or beans to accompany the cereal.
- *Canned food:* to accompany the cereal or bread.
- *Vegetable oil:* to prepare soft porridge or sauces to accompany the stiff porridge or cereal meal at lunch.
- *Sugar:* to sweeten porridge.
- *BF* (e.g. CSB) prepared as a porridge.

### *Number of Commodities*

Since in day schools children consume more than half of their daily meals in school, *meal variation* is important, and therefore more food items are used than in half-day schools. In day schools, the total number of commodities should preferably not exceed five (not including iodized salt).

### *Type of Meals and their Timing*

Food in day schools is to be prepared into a light meal (early morning or mid-morning) and lunch. Lunch consists of a cereal which may be boiled, as is the case with rice and bulgur wheat, or, if in the form of a flour, can be prepared following different traditional recipes, as a stiff or soft porridge, or in dough/paste form. Pulses and canned food (fish or meat) accompany the cereal, with the vegetable oil being used to prepare a sauce.

Even though lunch requires more food preparation time than breakfast, recipes should be chosen with the shortest preparation and cooking time to guarantee minimum fuel use. The early morning meal would consist of one of the light meals already discussed under *section 4.1.1*. The meals in day schools are as follows:

- **Light meal served before classes start or at mid-morning:**

A porridge or sandwich.

- **Lunch:**

Cereal accompanied by canned food and/or pulses with a sauce.

*Biscuits* have not been included in the 'light meals' since their use would entail an increase in cost and total number of commodities.

As previously discussed, some food aid commodities such as canned foods are expensive and their availability might be limited. To allow for different budgets, different choices in lunch composition and quantities are proposed in Table 7.

#### 4.2.2 Examples of Rations

The "lunches" proposed in Table 7 can be combined in different ways with the "light meals" from Table 5 in *section 4.1.1*, while keeping to the following maximum amounts per child and per day:

Maximum Amounts of Commodities/Child/Day for Day Primary Schools (grams)

Cereal (and/or BF) *	300
Pulses	30
Canned fish in oil	25
Vegetable oil	15
Sugar	15

\* Note that in options 7a and 7b the total cereal is within the limit of 300 g (100 g of wheat flour needed to bake 130 g of bread)

Six examples of food rations for day schools are presented in Table 8, followed by a detailed "fact sheet" for each option. It must be emphasized that the options given are not exhaustive but are given as typical examples.

As discussed previously and summarized in [Annex 6](#), different recipes can be used in preparing the various

cereal flours. This is particularly important for day schools, where lunch should not be monotonous but guarantee a minimum meal variation. For rice and bulgur wheat, which have limited cooking possibilities, meal variety lies in the accompanying sauce.

<i>EM or MM</i>	<i>Lunch</i>	<i>Option</i>
BF porridge	maize meal + beans + vegetable oil rice + beans + fish + vegetable oil	5a 5b
Maize meal porridge	maize meal + fish + vegetable oil rice + beans + vegetable oil	6a 6b
Bread with fish	maize meal + beans + vegetable oil rice + beans + vegetable oil	7a 7b

**Table 7**

Different Types of Lunch or Dinner for Primary Schools

<i>Type of commodity</i>	<i>Type I</i>	<i>Type II</i>	<i>Type III</i>	<i>Type IV</i>	<i>Type V</i>	<i>Type VI</i>	<i>Type VII</i>
<b>Cereal :</b>							
maize meal (grams)	150	150	150	150	150	150	150
<b>Pulses :</b>							
beans (grams)	20	20	30	30			20
<b>Canned fish in oil (grams)</b>					20	25	20
<b>Vegetable oil (grams)</b>	10	15	10	15	10	10	10
<b>Iodized salt (grams)</b>	3	3	3	3	3	3	3
<b>Cost (FOB Price) (US cents)</b>	5.7	6.1	6.2	6.6	9.5	10.7	10.4
<b>Nutritive value :</b>							

Energy (Kcal)	696	740	729	773	690	705	727
Protein (grams)	18	18	20	20	18	19	22
Fat (grams)	16	21	16	22	20	21	20

**Comments on the choice of commodities:**

Ration VII is the preferred option in terms of meal diversity and nutritional adequacy.

By substituting maize meal by another cereal (sorghum, rice or bulgur wheat) or a blended food, the nutritive value and cost will change. For example, if 150 g of sorghum are provided instead of 150 g of maize meal, the nutritive value and cost will change as follows: energy (-38 Kcal), protein (+3 g), fat (-1 g) and cost (-0.1 US cents)

Sorghum and bulgur wheat are cheaper, have a lower energy and fat content, but a higher protein content than maize meal. Rice, which is the most expensive of the four cereals, is similar to maize meal in terms of energy, but is poorer in protein and fat.

BF is the most expensive, but has a higher energy value per 100 grams than any of the four cereals and double the protein content of maize meal. While BF has the drawback of not being a traditional staple cereal like maize, sorghum or rice, it is advantageous in terms of nutritive value, particularly micronutrients (see [Annex 4](#)).

*Iodized salt* should be added, subject to justification of goitre being a problem (see *section 3.3.2*)

**Table 8**  
Examples of Food Rations for Primary Day Schools:a Quick Reference

	<b>Options 5a &amp; 5b BF porridge &amp; cereal (maize or rice) dish</b>		<b>Options 6a &amp; 6b Maize porridge &amp; cereal (maize or rice) dish</b>				<b>Options 7a &amp; 7b Sandwich &amp; cereal (maize or rice) dish</b>				
<b>Type of commodity</b>	<b>EM or</b>	<b>Lunch</b>		<b>6a</b>		<b>6b</b>		<b>7a</b>		<b>7b</b>	
	<b>MM<sup>a</sup></b>	<b>5a (type IV)</b>	<b>5b (type VII)</b>	<b>EM or MM</b>	<b>Lunch (type VI)</b>	<b>EM or MM</b>	<b>Lunch (type IV)</b>	<b>EM or MM</b>	<b>Lunch (type I)</b>	<b>EM or MM</b>	<b>Lunch (type I)</b>
<b>CBS (grams)</b>	120										

## 2.1 Ration Composition and Size

<b>Cereal :</b>											
maize meal (grams)		150		100	200	120			200		
rice (grams)			150				150				200
bread (grams)								130		120	
<b>Pulses :</b>											
beans (grams)		30	20				30		20		20
<b>Canned fish in oil</b> (grams)			20		25			25		20	
<b>Vegetable oil</b> (grams)		15	10		10		15		10		10
<b>Sugar</b> (grams)	15			10		15					26
<b>N° commodities</b> b,c (without salt)	5a: reasonable (5); 5b: high (6)			Reasonable (4)	Reasonable (5)	Reasonable (5)	Reasonable (5)	Reasonable (5)			
<b>Cost per ration<sup>d</sup></b> (US cents)	11.2 and 15.5			14.9	10.8	18.8	17.7				
<b>Energy &amp; protein contents within range</b>	Yes			Yes	Yes	Yes	Yes	Yes			
<b>Vitamin A &amp; iron content<sup>e</sup></b>	Good			Poor <sup>f</sup>	Poor <sup>f</sup>	Poor <sup>f</sup>	Poor <sup>f</sup>	Poor <sup>f</sup>			

2.1 Ration Composition and Size

<p><b>Comments:</b> Iodized salt should be added to the rations if goitre prevalence exceeds 5% among school-age children and the ration does not include an iodine-fortified commodity (e.g. biscuits).</p>	<p><b>Comments:</b> Both options are balanced in terms of energy, protein and micronutrients (from BF) composition. Option 5b is more expensive as it includes canned fish.</p>	<p><b>Comments:</b> Ration 6b is below the recommended protein. Both rations, particularly 6b, are not advisable where Vitamin A deficiency disorders are a problem of public health significance.</p>	<p><b>Comments:</b> Both options applicable where local bakeries guarantee production and regular delivery of bread.</p>
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<sup>a</sup> **EM** = Early-morning meal;  
**MM** = Mid-morning meal.

<sup>b</sup> **Reasonable** = N° of commodities (without salt) up to five;  
**High** = N° of commodities (without salt) greater than five (see [Annex 7](#)).

<sup>c</sup> The number of commodities in this case refers to those received at the school level.

<sup>d</sup> At 1996 prices:  
**Reasonable** = Cost less or equal to 14 US cents/ration/day;  
**Expensive** = Cost greater than 14 US cents/ration/day (see [Annex 7](#)).

<sup>e</sup> **Poor** = less than a quarter of requirements;  
**Acceptable** = between 25% and 50% of requirements;  
**Good** = above 50% of requirements (see [Annex 7](#)).

<sup>f</sup> Poor for Vitamin A, but for iron it is acceptable (options 6b and 7b) to good (options 6a and 7a).

**\* Option 5a**  
BF porridge and maize meal dish \*

<i>Type of commodity</i>	<i>EM or MM</i>	<i>Lunch</i>	<i>Total ration per day</i>

## 2.1 Ration Composition and Size

<b>CSB (grams)</b>	120		<b>120</b>
<b>Cereal :</b>			
Maize meal (grams)		150	<b>150</b>
<b>Pulses :</b>			
Beans (grams)		30	<b>30</b>
<b>Vegetable oil (grams)</b>		15	<b>15</b>
<b>Sugar (grams)</b>	15		<b>15</b>
<b>Iodized salt</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	4.6	6.6	<b>11.2</b>
<b>Nutritive value :</b>			
Energy (Kcal)	516	776	<b>1292</b>
Protein (grams)	22	20	<b>42</b>
Fat (grams)	7	21	<b>28</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Falls within the recommended nutritive value for energy and protein.

\* **Micronutrients:** The BF supplies substantial amounts of micronutrients: daily Vitamin A and iron requirements of primary school children are covered. About half the daily iodine requirement is also supplied by the BF. *However, if goitre is a problem of public health significance, iodized salt should be provided in the ration. This ration should be chosen in countries where the local diet is known to be poor in micronutrients and protein, or where micronutrient deficiencies are a problem of public health significance.*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable.

\* **Choice of commodities:** Suitable where maize meal is commonly consumed. BF might not be known to the local population, but its acceptance by children can be achieved if it is prepared into a sweetened porridge.

\* **Food preparation:** Preparation of BF porridge is easy, but it is important not to exceed cooking time since some micronutrients, specifically Vitamin C, are sensitive to heat. Maize meal porridge can be prepared following local customs as stiff or soft porridge served with beans and different sauces.

\* **Meal diversity:** Can be achieved, since maize meal can be prepared in different consistencies and tastes, provided the cooks of school canteens take initiatives and are supported by the local community through the provision of local ingredients for the sauces.

Variety in the weekly or monthly school menu will depend on community initiatives

\* **Option 5b:**  
BF porridge and rice dish \*

<i>Type of commodity</i>	<i>EM or MM</i>	<i>Lunch</i>	<i>Total ration per day</i>
CSB (grams)	120		<b>120</b>
<b>Cereal :</b>			
Rice (grams)		150	<b>150</b>
<b>Pulses :</b>			
Beans (grams)		20	<b>20</b>
<b>Canned fish in oil (grams)</b>		20	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	15		<b>15</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>

<b>Cost (FOB Price) (US cents)</b>	4.6	10.9	<b>15.5</b>
<b>Nutritive value :</b>			
Energy (Kcal)	516	757	<b>1273</b>
Protein (grams)	22	19	<b>38</b>
Fat (grams)	7	16	<b>22</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Falls within the recommended nutritive value for energy and protein.

\* **Micronutrients:** The BF supplies substantial amounts of micronutrients: daily Vitamin A and iron requirements of primary school children are covered. About half the daily iodine requirement is also supplied by the BF. *However, if goitre is a problem of public health significance, iodized salt should be provided in the ration. This ration should be chosen in countries where the local diet is known to be poor in micronutrients and protein, or where micronutrient deficiencies are a problem of public health significance.*

\* **Number of commodities:** High since six commodities are used.

\* **Cost of food ration:** Expensive.

\* **Choice of commodities:** Suitable where rice and fish are commonly consumed (rice could be replaced by bulgur wheat). BF might not be known to the local population, but its acceptance by children can be achieved if it is prepared into a sweetened porridge.

\* **Food preparation:** Preparation of BF porridge is easy. Rice is accompanied by a fish sauce with pulses. By adding local ingredients, flavours and seasonings, diversity of sauce can be achieved.

\* **Meal diversity:** Can be achieved, provided communities contribute ingredients for the preparation of sauces.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

**\* Option 6a:**

Maize meal porridge and maize meal dish \*

<b>Type of commodity</b>	<b>EM or MM</b>	<b>Lunch</b>	<b>Total ration per day</b>

<b>Cereal :</b>			
Maize meal (grams)	100	200	<b>300</b>
<b>Canned fish in oil</b> (grams)		25	<b>25</b>
<b>Vegetable oil</b> (grams)		10	<b>10</b>
<b>Sugar</b> (grams)	10		<b>10</b>
<b>Iodized salt</b> <sup>a</sup> (grams)		3	<b>3</b>
<b>Cost (FOB Price)</b> (US cents)	3.0	11.9	<b>14.9</b>
<b>Nutritive value :</b>			
Energy (Kcal)	400	885	<b>1285</b>
Protein (grams)	9	24	<b>33</b>
Fat (grams)	4	23	<b>27</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Falls within the recommended nutritive value for energy and protein. *If maize meal is replaced by the same quantity of sorghum, the total energy value decreases by 75 Kcal, but protein increases by 6 g.*

\* **Micronutrients:** Supplies slightly over half of daily iron requirement (mostly from maize meal) but less than 5% of daily Vitamin A requirement. The supply of Vitamin A would depend mostly on local ingredients added to the sauce (e.g. dried or fresh vegetable leaves).

\* **Number of commodities:** Reasonable (four).

\* **Cost of food ration:** Expensive.

\* **Choice of commodities:** Suitable where maize meal and fish are commonly consumed.

\* **Food preparation:** Maize porridge can be prepared following local customs as stiff or soft porridge. The stiff porridge needs to be dipped into a sauce (otherwise difficult to swallow), and the provided vegetable oil would be used to prepare a sauce using locally produced ingredients. The soft porridge is eaten as such and can be sweetened if desired; if vegetable oil is added to the porridge, the porridge stays soft even after cooling down.

\* **Meal diversity:** Can be achieved with the food aid items since maize meal can be prepared in different

consistencies and tastes. Variety in meals will depend largely on initiatives taken by the cooks of school canteens and by active PTAs.

**Variety in the weekly or monthly school menu will depend on community initiatives**

**\* Option 6b:**  
Maize meal porridge and rice dish \*

<i>Type of commodity</i>	<i>EM or MM</i>	<i>Lunch</i>	<i>Total ration per day</i>
<b>Cereal :</b>			
Maize meal (grams)	120		<b>120</b>
Rice (grams)		150	<b>150</b>
<b>Pulses :</b>			
Beans (grams)		30	<b>30</b>
<b>Vegetable oil</b> (grams)		15	<b>15</b>
<b>Sugar</b> (grams)	15		<b>15</b>
<b>Iodized salt</b> <sup>a</sup> (grams)		3	<b>3</b>
<b>Cost (FOB Price)</b> (US cents)	3.7	7.1	<b>10.8</b>
<b>Nutritive value :</b>			
Energy (Kcal)	492	774	<b>1266</b>
Protein (grams)	11	17	<b>28</b>
Fat (grams)	4	18	<b>22</b>

## a If goitre is a significant problem

\* **Energy and protein:** Falls within the recommended nutritive value for energy and protein. *If rice is replaced by the same quantity of bulgur wheat, the protein content would increase by 6 g.*

\* **Micronutrients:** Supplies about half of daily iron requirement and no Vitamin A. The supply of Vitamin A would therefore depend on local ingredients added to the sauce (eg. dried or fresh vegetable leaves). *However, if Vitamin A enriched maize meal or vegetable oil are used in the ration, the supply of Vitamin A can be substantial (coverage of daily requirement depends on level of fortification).*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable.

\* **Choice of commodities:** Suitable where maize and rice are commonly consumed.

\* **Food preparation:** Maize porridge can be prepared following local customs (stiff, soft, sweet or sour). Rice is accompanied by pulses. By adding local ingredients, flavours and seasonings, diversity of sauce can be achieved.

\* **Meal diversity:** Can be achieved since maize can be prepared in different consistencies and tastes; variety of meals will depend largely on the initiatives taken by the cooks of school canteens and on active PTAs.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

\* **Option 7a:**  
Sandwich and maize meal dish \*

Type of commodity	EM or MM	Lunch	Total ration per day
<b>Cereal :</b>			
Bread (grams)	130		<b>130</b>
Maize meal (grams)		200	<b>200</b>
<b>Pulses :</b>			

Beans (grams)		20	<b>20</b>
<b>Canned fish in oil</b> (grams)	25		<b>25</b>
<b>Vegetable oil</b> (grams)		10	<b>10</b>
<b>Iodized salt <sup>a</sup></b> (grams)		3	<b>3</b>
<b>Cost (FOB Price)</b> (US cents)	11.8	7.0	<b>18.8</b>
<b>Nutritive value :</b>			
Energy (Kcal)	416	877	<b>1293</b>
Protein (grams)	16	23	<b>39</b>
Fat (grams)	9	18	<b>27</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Falls within the recommended nutritive value for energy and protein. *If maize meal is replaced by the same quantity of sorghum, the protein content would increase by 4 g.*

\* **Micronutrients:** Supplies slightly over half of daily iron requirement but less than 5% of daily Vitamin A requirement. The supply of Vitamin A would therefore depend on local ingredients added to the sauce (e.g. dried or fresh vegetable leaves). *However, if Vitamin A enriched maize meal is used in the ration, the supply of Vitamin A can be substantial (coverage of daily requirement depends on level of fortification).*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Expensive.

\* **Choice of commodities:** The sandwich represents an alternative to cooked light meals and is commonly consumed by children; since bread baking (by local bakeries) is not always feasible, this food ration should be chosen only where an appropriate infrastructure exists; this is more likely to be the case in urban and peri-urban areas where bakeries can guarantee regular bread delivery to the schools. Canned fish is used as spread but can be replaced by canned meat; for all canned items, acceptability by the population should be guaranteed as discussed in *section 3.5.1*. Suitable where maize is commonly consumed.

\* **Food preparation:** Maize porridge can be prepared following local customs (stiff, soft, sweet or sour); the necessary accompanying sauce can be prepared with the vegetable oil and pulses.

\* **Meal diversity:** Can be achieved since maize can be prepared in different consistencies and tastes; variety of meals will depend largely on the initiatives taken by the cooks of school canteens and on active PTAs.

Variety in the weekly or monthly school menu will depend on community initiatives

\* **Option 7b:**  
Sandwich and rice dish \*

<i>Type of commodity</i>	<i>EM or MM</i>	<i>Lunch</i>	<i>Total ration per day</i>
<b>Cereal :</b>			
Bread (grams)	120		<b>120</b>
Rice (grams)		200	<b>200</b>
<b>Pulses :</b>			
Beans (grams)		20	<b>20</b>
<b>Canned fish in oil (grams)</b>	20		<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	10.1	7.6	<b>17.7</b>
<b>Nutritive value :</b>			
Energy (Kcal)	374	876	<b>1250</b>
Protein (grams)	14	18	<b>32</b>
Fat (grams)	7	11	<b>18</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Falls within the recommended nutritive value for energy and protein. *If rice is replaced by the same quantity of bulgur wheat, the protein content would increase by 8 g.*

\* **Micronutrients:** Supplies slightly less than half of daily iron requirement and less than 5% of daily Vitamin A requirement. The supply of Vitamin A would therefore depend on local ingredients added to the sauce (e.g. dried or fresh vegetable leaves). *However, if Vitamin A enriched maize meal is used in the ration, the supply of Vitamin A can be substantial (coverage of daily requirement depends on level of fortification).*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Expensive.

\* **Choice of commodities:** The sandwich represents an alternative to cooked light meals and is commonly consumed by children; since bread baking (by local bakeries) is not always feasible, this food ration should be chosen only where an appropriate infrastructure exists; this is more likely to be the case in urban and peri-urban areas where bakeries can guarantee regular bread delivery to the schools. Canned fish is used as spread but can be replaced by canned meat; for all canned items, acceptability by the population should be guaranteed as discussed in *section 3.5.1*. Suitable where rice is commonly consumed.

\* **Food preparation:** Rice is accompanied by pulses. By adding local ingredients, flavours and seasonings, diversity of sauce can be achieved.

\* **Meal diversity:** Can be achieved with the provided food aid commodities if the cooks of school canteens take initiatives and PTAs support the SFP.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

## 4.3 Boarding schools

### 4.3.1 General Comments

WFP supports boarding schools serving clearly identified poor populations which would otherwise not have access to education (for example, schools in nomadic zones or in regions with high HIV/AIDS prevalence, girls' hostels and orphanages). The proportion of daily food intake to be supplied by WFP in boarding schools will depend largely on the budgets the schools receive from Governments and/or communities for local purchases (see *section 3.3.1*). Not in all cases will WFP's assistance to boarding schools cover all daily nutrient requirements.

### Nutritive Value

Since the amount of food aid supplied by WFP will be determined on the basis of local school budgets, no range for the ration's nutritive value is given. Nevertheless, if WFP's assistance is planned to supply total daily food intake for primary boarding SFPs, the nutritive value of the ration should reach the acceptable level of energy, protein and fat supply as indicated below:

<b>Energy:</b>	up to 2000 kcal (up to 100 % of daily requirement)
<b>Protein:</b>	at least 40 g (at least 100% of daily requirement)
<b>Fat:</b>	> 23 grams (at least 10% of energy intake from fat)

Breakfast should supply about 400-600 kcal, while lunch and dinner should supply between 700-900 kcal each.

In *section 4.3.2*, six examples of rations are proposed. Since WFP's assistance will be determined by local school budgets, each option is presented at three levels: a) 100% of daily energy and protein requirements, b) 80-85% of daily energy requirement and at least 70% of daily protein requirement, and c) 65-70% of daily energy requirement and at least 70% of daily protein requirement.

#### *Ration Composition*

The ration would include a combination of food items selected among the list presented for day schools in *section 4.2.1*. As has been already emphasized, the addition of BF is advantageous in terms of micronutrients supply and short preparation and cooking time.

**In boarding schools, where children eat up to 100% of their daily food intake, donated or locally processed BF is an important source of micronutrients**

***It is important that local foods such as vegetables, leaves and fruits, or local pulses such as groundnuts, be obtained through the schools' budget and/or communities.***

Not only are these ingredients important for palatability and taste, they are also an important source of micronutrients. For example, 10 grams of groundnuts added to the daily ration give additional supply of energy (e.g. 10 g groundnuts supply approximately as much energy as 20 g canned fish) and micronutrients (e.g. 10 g groundnuts supply approximately as much niacin as 60 g of sorghum). The same applies to fresh fruits which should be added once a week to the school menu (e.g. 100 g of fresh mango supply all of the daily Vitamin A requirement).

#### *Number of Commodities*

In boarding schools, the total number of commodities should preferably not exceed six (not including iodized

salt).

To avoid monotony, the provision of two cereals could be considered, bearing in mind that this entails an additional burden in terms of transport and accounting. However, the second cereal could be procured through local purchases. In the proposed rations, the number of cereals varies from one (for all three meals) to two.

#### *Type of Meals and their Timing*

Three meals are served in boarding schools. Dinner and lunch are based on a cereal accompanied by selected sauces, pulses and canned food (see *sections 4.2.1 and 4.2.2* for further comments).

The meals in boarding schools are as follows:

- **Breakfast (indicated as "B" in the tables pertaining to options 8a to 10b):**

Light meal: porridge (made with BF or cereal) or sandwich.

- **Lunch and dinner:**

Cereal accompanied by a sauce with pulses and/or canned food.

Due to budgetary considerations, canned food (meat or fish) will be included in only one meal, either lunch or dinner. **Nevertheless, it is up to the school canteen managers to decide on how the provided food items will be used for the weekly and/or monthly menu.** For example, the provided canned food can be given every other day in both meals instead of every day in one meal and hence daily variety in taste would be achieved.

The different cereals (maize meal, sorghum, bulgur wheat and rice) proposed for the meals can be used interchangeably, bearing in mind that some cereals lend themselves to more meal variety than others (see comments in *section 3.5*).

For details on breakfast or "light meals", see Table 5 in *section 4.1.1*. The examples of lunches/dinners in boarding schools are based on the examples listed in Table 7 for day schools.

#### *4.3.2 Examples of Rations*

Six examples of rations for SFPs in primary boarding schools are presented with a detailed "fact sheet" for each option. The ration covering 100% of daily nutrient requirements is commented upon.

In designing the examples of rations for boarding schools, the following maximum amounts per child and per day have been adhered to:

#### Maximum Amounts of Commodities/Child/Day for Primary Boarding Schools

(grams)

Cereal (and BF)	450
Pulses	50
Canned fish in oil	25
Vegetable oil	25
Sugar	20

\* Note that in options 10a and 10b the total cereal is within the limit of 450 g (100 g of wheat flour needed to bake 130 g of bread).

As can be observed in the following fact sheets:

- The six options for boarding schools have been built upon those presented for day schools (e.g. in option 8a, breakfast and lunch are the same as the early morning meal and lunch of option 5a). In each fact sheet, the relevant day school option is indicated.
- Reducing the ration from about 100% of energy requirement to 80-85% and 65-70% can be achieved through different means: reducing amounts while keeping the number of commodities unchanged (e.g. option 8a and first alternative under option 9a), and/or reducing the number of commodities (all other options).

The level of WFP's assistance has to be decided on a case-by-case basis. As shown in option 9a, the energy and protein values of the two rations representing about 85% of the daily energy requirement are very similar: 1665 Kcal and 41 g protein in the first alternative, and 1724 Kcal and 40 g protein in the second. However, they vary in terms of cost: the second alternative, which does not include canned fish, costs 13.4 US cents as compared with 18.5 US cents for the first alternative.

**\* Option 8a:**  
BF porridge and maize meal dishes \*

<i>Type of commodity</i>	<i>B &amp; lunch</i>	<i>Dinner</i>	<i>Total ration per day</i>		
			<i>Option 5a</i>	<i>100%</i>	<i>80-85%</i>
<b>CSB (grams)</b>	120		<b>120</b>	<b>120</b>	<b>120</b>
<b>Cereal :</b>					
Maize meal (grams)	150	150	<b>300</b>	<b>250</b>	<b>200</b>
<b>Pulses :</b>					

Beans (grams)	30	20	<b>50</b>	<b>30</b>	<b>20</b>
<b>Vegetable oil</b> (grams)	15	10	<b>25</b>	<b>20</b>	<b>10</b>
<b>Sugar</b> (grams)	15		<b>15</b>	<b>15</b>	<b>15</b>
<b>Iodized salt</b> <sup>a</sup> (grams)	3	3	<b>6</b>	<b>6</b>	<b>6</b>
<b>Cost (FOB Price)</b> (US cents)	11.2	5.7	<b>16.9</b>	<b>14.2</b>	<b>11.5</b>
<b>N° commodities</b> (without salt)			<b>5</b>	<b>5</b>	<b>5</b>
<b>Nutritive value :</b>					
Energy (Kcal)	1289	696	<b>1985</b>	<b>1694</b>	<b>1392</b>
Protein (grams)	42	18	<b>60</b>	<b>50</b>	<b>44</b>
Fat (grams)	29	16	<b>45</b>	<b>38</b>	<b>24</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Adequate.

\* **Micronutrients:** The BF supplies substantial amounts of micronutrients: daily Vitamin A and iron requirements of primary school children are covered. About half the daily iodine requirement is also supplied by the BF. *However, if goitre is problem of public health significance, iodized salt should be provided in the ration. This ration should be chosen in countries where the local diet is known to be poor in micronutrients and protein, or where micronutrient deficiencies are a problem of public health significance.*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable (less than 22 US cents/ration).

\* **Choice of commodities:** Suitable where maize meal is commonly consumed. BF might not be known to the local population, but its acceptance by children can be achieved if it is prepared into a sweetened porridge.

\* **Food preparation:** Preparation of BF porridge is easy, but it is important not to exceed cooking time since some micronutrients, specifically Vitamin C, are sensitive to heat. Maize meal porridge can be prepared following local customs as stiff or soft porridge served with beans and different sauces.

**\* Meal diversity:** Can be achieved, since maize meal can be prepared in different consistencies and tastes provided the cooks of school canteens take initiatives and are supported by the local community through the provision of local ingredients for the sauces.

Variety in the weekly or monthly school menu will depend on community initiatives

**\* Option 8b:**  
BF porridge and rice dishes \*

<i>Type of commodity</i>	<i>B &amp; lunch</i>	<i>Dinner</i>	<i>Total ration per day</i>		
			<i>Option 5b</i>	<i>100%</i>	<i>80-85%</i>
<b>CSB (grams)</b>	120		<b>120</b>	<b>120</b>	<b>120</b>
<b>Cereal :</b>					
Rice (grams)	150	150	<b>300</b>	<b>250</b>	<b>200</b>
<b>Pulses :</b>					
Beans (grams)	20	20	<b>40</b>	<b>20</b>	<b>20</b>
<b>Canned fish in oil (grams)</b>	20		<b>20</b>	<b>20</b>	
<b>Vegetable oil (grams)</b>	10	15	<b>25</b>	<b>20</b>	<b>15</b>
<b>Sugar (grams)</b>	15		<b>15</b>	<b>15</b>	<b>15</b>
<b>Iodized salt <sup>a</sup> (grams)</b>	3	3	<b>6</b>	<b>6</b>	<b>6</b>
<b>Cost (FOB Price) (US cents)</b>	15.5	6.6	<b>22.1</b>	<b>19.2</b>	<b>12.6</b>
<b>N° commodities (without salt)</b>			<b>6</b>	<b>6</b>	<b>5</b>
<b>Nutritive value :</b>					
Energy (Kcal)	1273	740	<b>2013</b>	<b>1721</b>	<b>1436</b>
Protein (grams)	41	15	<b>56</b>	<b>48</b>	<b>40</b>
Fat (grams)	23	16	<b>39</b>	<b>34</b>	<b>23</b>

a If goitre is a significant problem

\* **Energy and protein:** Adequate.

\* **Micronutrients:** The BF supplies substantial amounts of micronutrients: daily Vitamin A and iron requirements of primary school children are covered. About half the daily iodine requirement is also supplied by the BF. *However, if goitre is a problem of public health significance, iodized salt should be provided in the ration. This ration should be chosen in countries where the local diet is known to be poor in micronutrients and protein, or where micronutrient deficiencies are a problem of public health significance.*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable (less than 22 US cents/ration).

\* **Choice of commodities:** Suitable where rice and fish are commonly consumed (rice could be replaced by bulgur wheat). BF might not be known to the local population, but its acceptance by children can be achieved if it is prepared into a sweetened porridge.

\* **Food preparation:** Preparation of BF porridge is easy, but it is important not to exceed cooking time since some micronutrients, specifically Vitamin C, are sensitive to heat. Rice is accompanied by a fish sauce with pulses. By adding local ingredients, flavours and seasonings, diversity of sauce can be achieved.

\* **Meal diversity:** Can be achieved, provided communities contribute ingredients for the preparation of sauces.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

\* **Option 9a:**

Maize meal porridge and maize meal dishes \*

Type of commodity	B & lunch	Dinner	Total ration per day				
			Option 6a	Alternative 1		Alternative 2	
			100%	80-85%	65-70%	80-85%	65-70%
<b>Cereal :</b>							
Maize meal (grams)	300	150	450	350	250	400	300

<b>Pulses :</b>							
Beans (grams)		20	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
<b>Canned fish in oil (grams)</b>	25		<b>25</b>	<b>25</b>	<b>25</b>		
<b>Vegetable oil (grams)</b>		15					<b>15</b>
<b>Sugar (grams)</b>	10		<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>	3	3	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Cost (FOB Price) (US cents)</b>	14.9	6.1	<b>21.0</b>	<b>18.5</b>	<b>15.9</b>	<b>13.4</b>	<b>10.8</b>
<b>N° commodities (without salt)</b>			<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>
<b>Nutritive value :</b>							
Energy (Kcal)	1285	740	<b>2025</b>	<b>1665</b>	<b>1305</b>	<b>1724</b>	<b>1364</b>
Protein (grams)	33	18	<b>51</b>	<b>41</b>	<b>32</b>	<b>40</b>	<b>31</b>
Fat (grams)	27	21	<b>48</b>	<b>44</b>	<b>40</b>	<b>34</b>	<b>31</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Adequate. *If maize meal is replaced by the same quantity of sorghum, the total energy value decreases by 113 Kcal but protein increases by 9 g.*

\* **Micronutrients:** Supplies slightly less than half of daily iron requirement (mostly from maize meal) but less than 5% of daily Vitamin A requirement. The supply of vitamin A would mostly depend on local ingredients added to the sauce (i.e. dried or fresh vegetable leaves).

\* **Number of commodities:** Reasonable (four).

\* **Cost of food ration:** Reasonable (less than 22 US cents/ration).

\* **Choice of commodities:** Suitable where maize meal and fish are commonly consumed.

\* **Food preparation:** Maize porridge can be prepared following local customs as stiff or soft porridge. The stiff porridge needs to be dipped into a sauce (otherwise difficult to swallow) and the provided vegetable oil would be

used to prepare a sauce using locally produced ingredients. The soft porridge is eaten as such and can be sweetened if desired; if vegetable oil is added to the porridge, the porridge stays soft even after cooling down.

\* **Meal diversity:** Can be achieved with the provided food aid items since maize meal can be prepared in different consistencies and taste. Variety in meals will largely depend on initiatives taken by the cooks of school canteens and by active PTAs.

Variety in the weekly or monthly school menu will depend on community initiatives

\* **Option 9b:**  
Maize meal porridge and rice dishes \*

<i>Type of commodity</i>	<i>B &amp; lunch</i>	<i>Dinner</i>	<i>Total ration per day</i>		
	<i>Option 6b</i>		<i>100%</i>	<i>80-85%</i>	<i>65-70%</i>
<b>Cereal :</b>					
Maize meal (grams)	120		<b>120</b>	<b>50</b>	
Rice (grams)	150	150	<b>300</b>	<b>300</b>	<b>300</b>
<b>Pulses :</b>					
Beans (grams)	30	20	<b>50</b>	<b>50</b>	<b>50</b>
<b>Vegetable oil</b> (grams)	15	10	<b>25</b>	<b>25</b>	<b>20</b>
<b>Sugar</b> (grams)	15		<b>15</b>	<b>10</b>	
<b>Iodized salt</b> <sup>a</sup> (grams)	3	3	<b>6</b>	<b>6</b>	<b>6</b>
<b>Cost (FOB Price)</b> (US cents)	10.8	6.1	<b>16.9</b>	<b>14.9</b>	<b>12.7</b>
<b>N° commodities</b> (without salt)			<b>5</b>	<b>5</b>	<b>3</b>

<b>Nutritive value :</b>					
Energy (Kcal)	1266	696	<b>1962</b>	<b>1689</b>	<b>1425</b>
Protein (grams)	28	15	<b>43</b>	<b>36</b>	<b>31</b>
Fat (grams)	22	11	<b>33</b>	<b>29</b>	<b>22</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Slightly below the recommended energy value. *If rice is replaced by the same quantity of bulgur wheat, the protein content would increase by 12 g.*

\* **Micronutrients:** Supplies more than half of daily iron requirement and no vitamin A. The supply of Vitamin A would therefore depend on local ingredients added to the sauce (i.e. dried or fresh vegetable leaves). *However, if Vitamin A enriched maize meal or vegetable oil are used in the ration, the supply of Vitamin A can be substantial (coverage of daily requirement depends on level of fortification).*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable (less than 22 US cents/ration).

\* **Choice of commodities:** Suitable where maize and rice are commonly consumed.

\* **Food preparation:** Maize porridge can be prepared following local customs (stiff, soft, sweet or sour). Rice is accompanied by pulses. By adding local ingredients, flavours and seasonings, diversity of sauce can be achieved.

\* **Meal diversity:** Can be achieved since maize can be prepared in different consistencies and taste; variety of meals will depend largely on the initiatives taken by the cooks of school canteens and on active PTAs.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

\* **Option 10a:**

Sandwich and maize meal dishes \*

<b>Type of commodity</b>	<b>B &amp; lunch</b>	<b>Dinner</b>	<b>Total ration per day</b>		
	<b>Option 7a</b>		<b>100%</b>	<b>80-85%</b>	<b>65-70%</b>
<b>Cereal :</b>					

Bread (grams)	130		<b>130</b>	<b>130</b>	
Maize meal (grams)	200	150	<b>350</b>	<b>300</b>	<b>300</b>
<b>Pulses :</b>					
Beans (grams)	20	20	<b>40</b>	<b>30</b>	<b>30</b>
<b>Canned fish in oil (grams)</b>	25		<b>25</b>	<b>25</b>	
<b>Vegetable oil (grams)</b>	10	15	<b>25</b>	<b>15</b>	<b>15</b>
<b>Iodized salt <sup>a</sup> (grams)</b>	3	3	<b>6</b>	<b>6</b>	<b>6</b>
<b>Cost (FOB Price) (US cents)</b>	18.8	6.1	<b>24.9</b>	<b>22.2</b>	<b>10.4</b>
<b>N° commodities (without salt)</b>			<b>5</b>	<b>5</b>	<b>3</b>
<b>Nutritive value :</b>					
Energy (Kcal)	1292	740	<b>2032</b>	<b>1730</b>	<b>1313</b>
Protein (grams)	38	18	<b>56</b>	<b>50</b>	<b>33</b>
Fat (grams)	26	21	<b>47</b>	<b>35</b>	<b>27</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Adequate.

\* **Micronutrients:** Supplies almost all daily iron requirement (mostly from maize meal) but less than 5% of daily Vitamin A requirement (mostly from canned fish). The supply of Vitamin A would therefore depend on local ingredients added to the sauce (i.e. dried or fresh vegetable leaves). *However, if Vitamin A enriched maize meal is used in the ration, the supply of Vitamin A can be substantial (coverage of daily requirement depends on level of fortification).*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Expensive.

\* **Choice of commodities:** The sandwich represents an alternative to cooked light meals and is commonly

consumed by children; since bread baking (by local bakeries) is not always feasible, this food ration should be chosen only where an appropriate infrastructure exists; this is more likely to be the case in urban and peri-urban areas where bakeries can guarantee regular bread delivery to the schools. Canned fish is used as spread but can be replaced by canned meat; for all canned items, acceptability by the population should be guaranteed as discussed in *section 3.5.1*. Suitable where maize is commonly consumed.

\* **Food preparation:** Maize porridge can be prepared following local customs (stiff, soft, sweet or sour); the necessary accompanying sauce can be prepared with the provided vegetable oil and pulses.

\* **Meal diversity:** Can be achieved since maize can be prepared in different consistencies and taste; variety of meals will depend largely on the initiatives taken by the cooks of school canteens and on active PTAs.

Variety in the weekly or monthly school menu will depend on community initiatives

\* **Option 10b:**  
Sandwich and rice dishes \*

<i>Type of commodity</i>	<i>B &amp; lunch</i>	<i>Dinner</i>	<i>Total ration per day</i>		
			<i>Option 7b</i>	<i>100%</i>	<i>80-85%</i>
<b>Cereal :</b>					
Bread (grams)	120		<b>120</b>	<b>120</b>	
Rice (grams)	200	150	<b>350</b>	<b>300</b>	<b>300</b>
<b>Pulses :</b>					
Beans (grams)	20	20	<b>40</b>	<b>20</b>	<b>20</b>
<b>Canned fish in oil</b> (grams)	20		<b>20</b>	<b>20</b>	<b>20</b>
<b>Vegetable oil</b> (grams)	10	15	<b>25</b>	<b>15</b>	<b>15</b>
<b>Iodized salt <sup>a</sup></b> (grams)	3	3	<b>6</b>	<b>6</b>	<b>6</b>
<b>Cost (FOB Price)</b> (US cents)	17.7	6.6	<b>24.3</b>	<b>21.0</b>	<b>17.1</b>

<b>N° commodities</b> (without salt)			<b>5</b>	<b>5</b>	<b>4</b>
<b>Nutritive value :</b>					
Energy (Kcal)	1250	740	<b>1991</b>	<b>1654</b>	<b>1341</b>
Protein (grams)	32	15	<b>47</b>	<b>42</b>	<b>33</b>
Fat (grams)	18	16	<b>34</b>	<b>22</b>	<b>20</b>

<sup>a</sup> If goitre is a significant problem

\* **Energy and protein:** Adequate.

\* **Micronutrients:** Supplies about two-thirds of daily iron requirement but less than 5% of daily Vitamin A requirement (mostly from canned fish). The supply of Vitamin A would therefore depend on local ingredients added to the sauce (i.e. dried or fresh vegetable leaves). *However, if Vitamin A enriched maize meal is used in the ration, the supply of Vitamin A can be substantial (coverage of daily requirement depends on level of fortification).*

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Expensive.

\* **Choice of commodities:** The sandwich represents an alternative to cooked light meals and is commonly consumed by children; since bread baking (by local bakeries) is not always feasible, this food ration should be chosen only where an appropriate infrastructure exists; this is more likely to be the case in urban and peri-urban areas where bakeries can guarantee regular bread delivery to the schools. Canned fish is used as spread but can be replaced by canned meat; for all canned items, acceptability by the population should be guaranteed as discussed in *section 3.5.1*. Suitable where rice is commonly consumed.

\* **Food preparation:** Rice is accompanied by pulses. By adding local ingredients, flavours and seasonings, diversity of sauce can be achieved.

\* **Meal diversity:** Can be achieved with the provided food aid commodities provided the cooks of school canteens take initiatives and PTAs support the SFP.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

## 5. Rations for Pre-Primary Schools/Day-Care Centres

The previous discussions in sections: 1) the objectives of school feeding programmes and role of food aid; 2) the food aid basket for school feeding programmes; and 3) the guiding principles for establishing food rations, also apply to pre-primary school feeding programmes.

The main difference between primary and pre-primary school feeding rations is the recommended range of nutritive value. For preschool children, nutritional requirements are: 1600 kcal in energy and 32 grams in protein (for micronutrients see Table 4, *section 3.3.2*).

### 5.1 Half-Day Schools

#### 5.1.1 General Comments

This ration will supply food before classes start and/or during mid-morning school break.

#### Nutritive Value

The selected food rations for pre-primary half-day SFPs have to be **in the acceptable range of the recommended nutritive value** as indicated in table 9.

**Table 9**  
Recommended Nutritive Value of Rations for Pre-Primary Schools

	<b>Acceptable range of ration's nutritive value (children 3-6 years)</b>		
<b>School type</b>	<b>Energy (kcal)</b>	<b>Protein (gram)</b>	<b>Fat <sup>a</sup> (gram)</b>
Half-day school	480 - 720 (30-45%)	13 - 19 (40-60%)	6 - 8
Day school	960 - 1200 (60-75%)	22 - 29 (70-90%)	11 - 14

<sup>a</sup> At least 10% of energy intake to be supplied from fat intake

#### Ration Composition

The ration would include a combination of the same food items selected for half-day primary schools covered under the same SFP (*section 4.1.3*) with the exception of bread which is too bulky for young children.

### *Number of Commodities*

As in primary half-day schools, the total number of commodities used in pre-primary half-day schools should preferably not exceed four (not including iodized salt).

### *Type of Meals and their Timing*

Food assistance in pre-primary half-day schools is not intended to cater to substantial meals such as lunch but to be consumed in the form of properly timed "light meals": 1) *a light meal at the start of classes*, which requires minimal cooking time (e.g. a BF beverage) or no preparation at all at the school level (e.g. biscuits); and 2) *a mid-morning light meal* such as a porridge (stiff or soft) or whole grain cereal with pulses (e.g. rice with precooked yellow split peas). Since children in the pre-primary age group have a limited digestion capacity, the rations should not be bulky, and should be easy to digest.

As discussed already under *section 4.1.1*, the BF drink is a standard preparation, whereas the cereal flour (maize or sorghum) can be prepared in different ways depending on local food habits and preferences (see [Annex 6](#) and *section 3.5.2*).

Table 10 gives examples of light meals and drinks which can be prepared with the ration. The commodities for pre-primary schools should be the same as those for primary schools. The proposed options are therefore the same as those for primary schools, with the exclusion of the 'sandwich' and a reduction in quantities of cereal flour for porridges.

**Table 10**  
Different Types of Light Meals for Pre-primary Schools

<b>Type of commodity</b>	<b>BF drink</b>	<b>BF porridge</b>		<b>Maize porridge</b>	<b>Rice dish</b>	<b>Biscuits</b>
<b>CSB</b> (grams)	25	100	100			
<b>Fortified biscuits</b> (grams)						40
<b>Cereal :</b>						

maize meal (grams)				100		
rice (grams)					80	
<b>Pulses :</b>						
peas (grams)					20	
<b>Vegetable oil</b> (grams)			10	10	10	
<b>Sugar</b> (grams)	10	10	10	10		
<b>Iodized salt</b> (grams)				3	3	
<b>Cost (FOB Price)</b> (US cents)	1.2	3.7	4.6	3.9	3.9	5.0
<b>Nutritive value :</b>						
Energy (Kcal)	135	420	509	489	444	195
Protein (grams)	5	18	18	9	10	4
Fat (grams)	2	6	16	14	11	12

**Fortified biscuit:** only valid in countries where local processing is feasible; for the above Table, an example from a WFP assisted project has been chosen; see comments under sections 2 and 4.1.1.

*Iodized salt* should be added if of goitre is a significant problem

### 5.1.2 Examples of Rations

The "light meals" presented in Table 10 can be combined in different ways. Three types of food rations for pre-primary half-day SFPs are presented in Table 11, followed by brief notes on 'Energy and protein' and 'Micronutrients'. As regards the 'Number of commodities', 'Cost of food ration', 'Choice of commodities', 'Food preparation' and 'Meal diversity', the reader is referred to the relevant options for primary SFPs.

**Table 11**  
Examples of Food Rations for Pre-primary Half-day Schools:  
a Quick reference

<i>Type of commodity</i>	<i>Option 11 BF beverage &amp; maize porridge</i>		<i>Option 12 BF beverage &amp; cereal dish</i>		<i>Option 13 BF beverage &amp; BF porridge</i>	
	<i>EM<sup>a</sup></i>	<i>MM</i>	<i>EM</i>	<i>MM</i>	<i>EM</i>	<i>MM</i>
<b>CBS</b> (grams)	25		25		25	100
<b>Cereal :</b>						
maize meal (grams)		100				
rice (grams)				80		
<b>Pulses :</b>						
peas (grams)				20		
<b>Canned fish in oil</b> (grams)						

<b>Vegetable oil</b> (grams)		10		10		10
<b>Sugar</b> (grams)	10	10	10		10	10
<b>N° commodities</b> <sup>b,c</sup> (without salt)	Reasonable (4)		High (5)		44 Reasonable (3)	
<b>Cost per ration</b> <sup>d</sup> (US cents)	Reasonable (5.1)		Reasonable (5.1)		Reasonable (5.8)	
<b>Energy &amp; protein contents within range</b>	Yes		Yes		Yes	
<b>Vitamin A &amp; iron content</b> <sup>e</sup>	Acceptable <sup>f</sup>		Acceptable <sup>f</sup>		Good	
<b>Comments:</b> Iodized salt should be added to the rations if goitre prevalence exceeds 5% among school-age children and the ration does not include an iodine-fortified commodity (e.g. biscuits).	<b>Comments:</b> Option is within the recommended range for energy and protein.		<b>Comments:</b> Option is within the recommended range for energy and protein.		<b>Comments:</b> Option would be suitable in countries where micronutrient deficiencies are known to prevail.	

<sup>a</sup> **EM** = Meal served early-morning or at the start of classes;  
**MM** = Mid-morning meal.

<sup>b</sup> **Reasonable** = N° of commodities (without salt) up to four;  
**High** = N° of commodities (without salt) greater than four (see [Annex 7](#)).

## 2.1 Ration Composition and Size

c The number of commodities in this case refers to those received at the school level. If, for example, the BF beverage (which requires two commodities: BF and sugar) is replaced by fortified biscuits (counted as one commodity), the number of commodities for options 11, 12 and 13 would be 4. Commodities used for making the biscuits are not included.

d At 1996 prices:

**Reasonable** = Cost less or equal to 6 US cents/ration/day;

**Expensive** = Cost greater than 6 US cents/ration/day (see [Annex 7](#)).

e **Poor** = less than a quarter of requirements;

**Acceptable** = between 25% and 50% of requirements;

**Good** = above 50% of requirements (see [Annex 7](#)).

f Good for iron.

\* Option 11:  
BF beverage and maize porridge \*

<i>Type of commodity</i>	<i>EM</i>	<i>MM</i>	<i>Total ration per day</i>
<b>CSB (grams)</b>	25		<b>25</b>
<b>Cereal :</b>			
Maize meal (grams)		100	<b>100</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10	10	<b>20</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	1.2	3.9	<b>5.1</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	489	<b>624</b>
Protein (grams)	5	9	<b>14</b>
Fat (grams)	2	14	<b>16</b>

<sup>a</sup> If goitre is a significant problem  
(for detailed comments see Option 1 in *section 4.1.3*)

**\* Option 12:**  
BF beverage and rice dish \*

<b>Type of commodity</b>	<b>EM</b>	<b>MM</b>	<b>Total ration per day</b>
<b>CSB (grams)</b>	25		<b>25</b>
<b>Cereal :</b>			
Rice (grams)		80	<b>80</b>
<b>Pulses :</b>			
Precooked split peas (grams)		20	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10		<b>10</b>
<b>Iodized salt (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	1.2	3.9	<b>5.1</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	444	<b>579</b>
Protein (grams)	5	10	<b>15</b>
Fat (grams)	2	11	<b>13</b>

(for detailed comments see Option 2 in *section 4.1.3*).

**\* Energy and protein:** Both rations fall within the recommended nutritive value for energy and protein.

**\* Micronutrients:** Both rations supply about 125 micrograms of Vitamin A (i.e. slightly more than a quarter of

daily requirement). Both also provide substantial amounts of iron (about three-quarters of requirement for option 12 and close to 90% for option 11).

**\* Option 13:**  
BF beverage and BF porridge \*

<b>Type of commodity</b>	<b>EM</b>	<b>MM</b>	<b>Total ration per day</b>
<b>CSB (grams)</b>	25	100	<b>125</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10	10	<b>20</b>
<b>Cost (FOB Price) (US cents)</b>	1.2	4.6	<b>5.8</b>
<b>Nutritive value :</b>			
Energy (Kcal)	135	509	<b>664</b>
Protein (grams)	5	18	<b>23</b>
Fat (grams)	2	16	<b>18</b>

(for detailed comments see Option 3 in *section 4.1.3*).

**\* Energy and protein:** Falls within the recommended nutritive value for energy and protein.

**\* Micronutrients:** Covers all daily requirements for almost all vitamins (in particular Vitamins A and C), daily requirement for iron and about 70% of daily requirement for iodine.

Variety in the weekly or monthly school menu will depend on community initiatives

## 5.2 Day Schools

### 5.2.1 General Comments

This food ration will allow the preparation of two meals: a light meal to be served before classes start or at mid-morning, and lunch.

#### *Nutritive Value*

The selected food rations provided in pre-primary day schools have to be **in the acceptable range of the recommended nutritive value** as indicated in Table 9.

#### *Ration Composition*

The ration would be composed of nearly the same food aid items as for pre-primary half-day schools, with the exclusion of biscuits and the addition of canned fish and pulses such as lentils or beans.

#### *Number of commodities*

In pre-primary day schools, the total number of commodities should preferably not exceed five (not including iodized salt).

#### *Type of Meals and their Timing*

Food in day schools is to be prepared into a light meal (early morning or mid-morning) and lunch. The composition of the meals in pre-primary day schools is the same as the one in primary day schools (see *section 4.2*) except for smaller quantities of the food aid items to account for the lower age and digestive capacity of younger children.

Lunch also consists of a cereal which can be prepared following local food habits (see *section 4.2.1*), accompanied by a sauce prepared with vegetable oil, canned food and pulses. The light meal to be served before classes start or at mid-morning will consist of one of the light meals presented in Table 10.

Since similar considerations (budgetary restrictions, limited availability of food aid items, etc.) to those of primary SFPs apply to pre-primary SFPs, different types and quantities of food items can be chosen for pre-primary school lunches, as follows:

<b><i>Lunch type I</i></b>	<b><i>Lunch type II</i></b>
120 g cereal	150 g cereal
20-30 g beans/lentils	30 g beans/lentils
20 g canned food	-
10 g - 15 g vegetable oil	10 g - 15 g vegetable oil

## 5.2.2 Examples of Rations

Table 12 presents four different types of food rations for day pre-primary SFPs, followed by separate tables for each option. These tables will be accompanied by brief notes on 'Energy and protein' and 'Micronutrients'. As regards the 'Number of commodities', 'Cost of food ration', 'Choice of commodities', 'Food preparation' and 'Meal diversity', the reader is referred to the relevant options for primary SFPs.

**Table 12**  
Examples of Food Rations for Pre-primary Day Schools:  
a Quick Reference

<i>Type of commodity</i>	<i>Options 14a &amp; 14b BF porridge &amp; cereal (maize or rice) dish</i>		<i>Options 15a &amp; 15b Maize porridge &amp; cereal (maize or rice) dish</i>		
	<i>EM or MM<sup>a</sup></i>	<i>Lunch</i>		<i>EM or MM</i>	<i>Lunch</i>
		<i>14a</i>	<i>14b</i>		
<b>CBS</b> (grams)	100			100	
<b>Cereal :</b>					
maize meal (grams)		120		150	
rice (grams)			120		150
<b>Pulses :</b>					
beans (grams)		20	20		30

<b>Canned fish in oil</b> (grams)			20		20	
<b>Vegetable oil</b> (grams)		10	10		10	10
<b>Sugar</b> (grams)	10			10		
<b>N° commodities<sup>b</sup></b> (without salt)	14a: Reasonable (4); 14b: High (6)			48 Reasonable (3)		
<b>Cost per ration<sup>c</sup></b> (US cents)	8.6 and 13.7			12.5 and 8.8		
<b>Energy &amp; protein contents within range</b>	Yes			Yes		
<b>Vitamin A &amp; iron content<sup>d</sup></b>	Good			Good for iron but poor for Vitamin A		
<b>Comments:</b> Iodized salt should be added to the rations if goitre prevalence exceeds 5% among school-age children and the ration does not include an iodine-fortified commodity (e.g. biscuits).	<b>Comments:</b> Both options are balanced in terms of energy, protein and micronutrients (from BF) composition. Option 14b is more expensive as it includes canned fish.			<b>Comments:</b> Option 15a is more expensive as it includes canned fish. Both rations are not advisable where Vitamin A deficiency is a problem of public health significance.		

<sup>a</sup> **EM** = Early-morning meal;  
**MM** = Mid-morning meal.

<sup>b</sup> **Reasonable** = N° of commodities (without salt) up to five;  
**High** = N° of commodities (without salt) greater than five (see [Annex 7](#)).

## 2.1 Ration Composition and Size

c At 1996 prices:

**Reasonable** = Cost less than or equal to 12 US cents/ration/day;

**Expensive** = Cost greater than 12 US cents/ration/day (see [Annex 7](#)).

d **Poor** = less than a quarter of requirements;

**Acceptable** = between 25% and 50% of requirements;

**Good** = above 50% of requirements (see [Annex 7](#)).

### \* Option 14a:

BF porridge and maize meal dish \*

<b>Type of commodity</b>	<b>EM or MM</b>	<b>Lunch</b>	<b>Total ration per day</b>
<b>CSB (grams)</b>	100		<b>100</b>
<b>Cereal :</b>			
Maize meal (grams)		120	<b>120</b>
<b>Pulses :</b>			
Beans (grams)		20	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10		<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	3.7	4.9	<b>8.6</b>
<b>Nutritive value :</b>			
Energy (Kcal)	420	588	<b>1008</b>
Protein (grams)	18	15	<b>33</b>
Fat (grams)	6	14	<b>20</b>

<sup>a</sup> If goitre is a significant problem  
(for detailed comments see Option 5a in section 4.2.2).

**\* Option 14b:**  
BF porridge and rice dish \*

<i>Type of commodity</i>	<i>EM or MM</i>	<i>Lunch</i>	<i>Total ration per day</i>
<b>CSB (grams)</b>	100		<b>100</b>
<b>Cereal :</b>			
Rice (grams)		120	<b>120</b>
<b>Pulses :</b>			
Beans (grams)		20	<b>20</b>
<b>Canned fish in oil (grams)</b>		20	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>20</b>
<b>Sugar (grams)</b>	10		<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	3.7	10.0	<b>13.7</b>
<b>Nutritive value :</b>			
Energy (Kcal)	420	649	<b>1069</b>
Protein (grams)	18	17	<b>35</b>

Fat (grams)	6	16	<b>22</b>
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<sup>a</sup> If goitre is a significant problem  
(for detailed comments see Option 5b in *section 4.2.2*).

\* **Energy and protein:** Both rations fall within the recommended nutritive value for energy and protein.

\* **Micronutrients:** Both rations supply daily requirements of Vitamin A and iron (mostly from CSB).

Variety in the weekly or monthly school menu will depend on community initiatives

**\* Option 15a:**

Maize meal porridge and maize meal dish \*

<b>Type of commodity</b>	<b>EM or MM</b>	<b>Lunch</b>	<b>Total ration per day</b>
<b>Cereal :</b>			
Maize meal (grams)	100	150	<b>250</b>
<b>Canned fish in oil (grams)</b>		20	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10		<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	3.0	9.5	<b>12.5</b>
<b>Nutritive value :</b>			
Energy (Kcal)	400	690	<b>1090</b>
Protein (grams)	9	18	<b>27</b>

Fat (grams)	4	20	<b>24</b>
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<sup>a</sup> If goitre is a significant problem  
(for detailed comments see Option 6a in *section 4.2.2*).

**\* Option 15b:**  
Maize meal porridge and rice dish \*

<b>Type of commodity</b>	<b>EM or MM</b>	<b>Lunch</b>	<b>Total ration per day</b>
<b>Cereal :</b>			
Maize meal (grams)	100		<b>100</b>
Rice (grams)		120	<b>120</b>
<b>Pulses :</b>			
Beans (grams)		30	<b>20</b>
<b>Vegetable oil (grams)</b>		10	<b>10</b>
<b>Sugar (grams)</b>	10		<b>10</b>
<b>Iodized salt <sup>a</sup> (grams)</b>		3	<b>3</b>
<b>Cost (FOB Price) (US cents)</b>	3.0	5.8	<b>8.8</b>
<b>Nutritive value :</b>			
Energy (Kcal)	400	621	<b>1022</b>
Protein (grams)	9	14	<b>23</b>
Fat (grams)	4	11	<b>15</b>

<sup>a</sup> If goitre is a significant problem  
(for detailed comments see Option 6b in *section 4.2.2*).

\* **Energy and protein:** Both rations fall within the recommended nutritive value for energy and protein.

\* **Micronutrients:** Both rations provide two-thirds of daily iron requirement. Option 15b provides no vitamin A while option 15a provides less than 3% of daily Vitamin A requirement. The supply of Vitamin A would therefore rely on local ingredients added to the sauce (e.g. dried or fresh vegetable leaves).

Variety in the weekly or monthly school menu will depend on community initiatives

## 6. Rations for SFPS Covering Different Types of Schools

Options presented under sections 4.1.3 (half-day primary), 4.2.2 (day primary), 4.3.2 (boarding primary), 5.1.2 (Half-day pre-primary) and 5.2.2 (day pre-primary) can be combined in different ways depending on the types of schools existing in a given country. One example of a SFP covering three different types of schools is given below:

\* BF porridge and maize meal dishes \*

<i>Type of commodity</i>	<i>Day-Primary Ration/Day (5a)</i>	<i>Day-Boarding Ration/Day (8a)</i>	<i>Day-Pre-Primary Ration/Day (14a)</i>
<b>CSB (grams)</b>	120	120	100
<b>Cereal :</b>			
Maize meal (grams)	150	300	120
<b>Pulses :</b>			
Beans (grams)	30	50	20
<b>Vegetable oil (grams)</b>	15	20	10

<b>Sugar</b> (grams)	15	15	10
<b>Cost (FOB Price)</b> (US cents)	11.2	16.9	8.6
<b>Nutritive value :</b>			
Energy (Kcal)	1292	1985	1008
Protein (grams)	42	60	33
Fat (grams)	28	45	20

\* **Energy and protein:** Adequate.

\* **Micronutrients:** The BF supplies substantial amounts of micronutrients: daily Vitamin A and iron requirements of primary and pre-primary school children are covered. About half the daily iodine requirement of primary school-age children and about two-thirds of the daily iodine requirement of preschool-age children are covered through the BF. However, if goitre is a problem of public health significance, iodized salt should be provided in the ration.

\* **Number of commodities:** Reasonable.

\* **Cost of food ration:** Reasonable.

\* **Choice of commodities:** Suitable where maize meal is commonly consumed. BF might not be known to the local population, but its acceptance by children can be achieved if it is prepared into a sweetened porridge.

\* **Food preparation:** Preparation of BF porridge is easy but it is important not to exceed cooking time since some micronutrients, specifically Vitamin C, are sensitive to heat. Maize meal porridge can be prepared following local customs as stiff or soft porridge served with beans and different sauces.

\* **Meal diversity:** Can be achieved, since maize meal can be prepared in different consistencies and tastes provided the cooks of school canteens take initiatives and are supported by the local community through the provision of local ingredients for the sauces.

Variety will depend on community's support to canteens through the supply of local ingredients for preparing different sauces to accompany rice

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1) Document SCP 15/INF/3, released by WFP on 23 October 1995.

2) For a detailed description of the characteristics and uses of these foods, consult:  
Food and Nutrition in the Management of Group Feeding Programmes (Rev.1), Food and Agricultural Organization, Rome, 1993. (Chapter 2).

3) For details on monetization and commodity exchange, consult:

1) *WFP Project Design Manual*

2) *A Review of WFP and Bilateral Food Aid Commodity Exchange Arrangements (WFP/CFA:29/P/INF/2, released on 2 April 1990)*

3) *Management of Funds Generated from the Sale of Donated Commodities (Monetization). WFP Finance and Information Systems Directive, FS96/002, 1996.*

4) \* *Sometimes, only one mid-morning light meal may be necessary based on evidence that the majority of children eat before leaving home and do not have to walk very long distances to school.*

\* *A light meal (served before classes start) and lunch, which are proposed for day schools, may be exceptionally justified in half-day schools located in low-income food-deficit countries (LIFDCs), when there is a strong evidence of chronic household food insecurity (e.g. majority of households consuming not more than two meals a day). Children would eat lunch at school before returning home, on the assumption that they would not be given lunch at home*

5) *Energy and Protein Requirements. World Health Organization, Geneva, 1985 (WHO Technical Report Series N° 724).*

6) *Requirements of Vitamin A, Iron, Folate and Vitamin B<sub>12</sub>. Report of a joint FAO/WHO Expert Consultation. Food and Agricultural Organization, Rome, 1988.*

*Trace Elements in Human Nutrition and Health. World Health Organization, Geneva, 1996.*

7) *The following documents have been consulted:*

*Agbessi Dos-Santos H. & Damon M. Manuel de Nutrition Africaine. IPD-ACCT-Khartala, 1987.*

*Cuisine d'Afrique Noire. Une Encyclopédie en 5 Volumes, Librairie Intercontinentale, 1988.*

*Latham M.C. Human Nutrition in Tropical Africa. FAO Food and Nutrition Series N° 11 Rev. 1, Rome 1979.*

*L'Enfant en Milieu Tropical. Centre International de l'Enfance, Paris, 1984.*

*Les Merveilles de la Cuisine Africaine. Les Editions du Jaguar, Paris, 5<sup>ème</sup> édition, 1993.*

*Trèche S. et al. L'alimentation de Complément du Jeune Enfant. ORSTOM Editions, Paris, 1995.*

*Villiers A. & Delarozière M.-F. Cuisines d'Afrique. Edisud, Aix-en-Provence, 1995.*

- 8) "Free On Board (FOB)" prices as of July 1996, where  $FOB = \text{cost of the commodity} + \text{cost of its transport to the nearest harbour} + \text{cost of its loading}$ .
- 9) There are different ways of baking bread. While the french type-bread is frequently consumed in West Africa, flat bread (known as 'chapatti') is more common in East Africa and Asia (India, Pakistan, etc.). It is also made with wheat flour but baked at household level. [Cameron M and Hofvander Y. *Manual on Feeding Infants and Young Children*. Oxford University Press, Oxford, 1983, page 77].
- 10) *Food and Nutrition in the Management of Group Feeding Programmes (Rev.1)*, Food and Agricultural Organization, Rome, 1993 (Page 38).
- 11) Fresh sea fish, which is a very rich source of iodine, contains between 16 and 32 micrograms of iodine per 100 grams. Canned fish is likely to contain less, as cooking reduces iodine content by 20 to 50%.

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## Overview of Current Situation

Since antiquity, contaminated food and water have been known to cause illness in humans. The contaminants consist of a large variety of biological and chemical agents of disease, some of which can multiply in food, thus increasing the risk of foodborne diseases. Foodborne diseases remain a serious problem in all countries.

A great majority of foodborne diseases cause diarrhoea. Up to 70% of all diarrhoea episodes in infants and children may result from ingestion of contaminated food and water<sup>1</sup>

Sources of food contamination are diverse. They include polluted water, flies, pests, domestic animals, unclean utensils and pots, unclean food handlers (e.g. soiled hands), dust and dirt. Raw foods themselves are frequently the source of contaminants as some may naturally harbour pathogens or come from infected animals. During food preparation and storage, there is an added risk of cross-contamination as well as an opportunity for pathogenic bacteria to multiply.

Cooks may transfer pathogens that they are carrying in or on their body to the food they are handling. Such pathogens may survive and/or multiply and produce toxin in the food and subsequently cause disease in the consumers.

A careful analysis of foodborne diseases has shown that only a small number of errors in food preparation are responsible for foodborne diseases.

Improper cooking and storage of food can promote the survival and/or growth of pathogens to levels that cause disease; in particular:

- preparation of food several hours prior to consumption, combined with its storage at inadequate temperatures
- insufficient cooking or re-heating of food
- cross contamination
- handling of food by people with poor personal hygiene

Only dramatic episodes such as outbreaks of cholera and typhoid receive attention. However, foodborne diseases continue - more or less unnoticed - to cause morbidity, mortality and serious economic losses in both developed and developing countries.<sup>2</sup>

### **Importance of Food Safety in SFPS**

Verification, by government authorities and WFP, that foods are fit for human consumption - at the time of their arrival as well as during their storage in warehouses in the recipient country - is of course important. However, the fact that these foods are deemed fit for human consumption does not mean that they remain safe when stored or prepared under inadequate conditions in the schools. Ensuring knowledge of and minimal facilities for safe food storage and preparation at the school level should be considered an integral component of a food assistance programme.

Dry foodstuffs - including cereals, pulses and blended foods - when mixed with water may promote the growth of microorganisms

Educational and nutritional benefits of SFPs can be compromised by the transmission of food-borne disease. Children are often victims of foodborne diseases from foods prepared in school canteens, or bought from street food vendors. Several outbreaks of foodborne diseases involving hundreds of children due to consumption of street food have been reported from African countries.

A food safety training module should be routinely included in WFP-supported food management training seminars

Moreover, by using SFPs as an entry point for the practical education of children on food safety, SFPs can be an effective channel for improving food safety in the home as well as in the entire community.<sup>3</sup> Children play a crucial role in improving food safety knowledge and practices in the population:

- i. Many practices are deeply ingrained cultural habits, and their changes are more effectively achieved in the early years of life.
- ii. School children are an effective channel for communicating food safety messages to parents or other children.
- iii. Schools provide an effective forum for forming the future food handler.
- iv. In many countries, the older children who take care of their younger siblings when mothers are at work have to prepare food or feed infants or younger children.

### Rules for Safe Food Preparation

"The WHO Golden Rules for Safe Food Preparation" offer advice on how to reduce the risk of foodborne diseases. WHO recommends their adaptation to different cultural settings. The following "simplified and minimal" list of ten rules has been designed, bearing in mind the difficult conditions under which WFP-assisted SFPs are implemented. It can be used as a guide during supervision field visits as well as for making posters for distribution to schools benefitting from WFP-assisted SFPs.

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1) Motarjemi Y *et al.* Contaminated weaning food: a major risk factor for diarrhoea and associated malnutrition. *Bulletin of the World Health Organization*, 1993, 71: 79-92.

2) The role of food safety in health and development. Report of a Joint FAO/WHO Expert Committee on Food Safety, World Health Organization, Geneva, 1984. (WHO Technical Report Series N° 705.)

3) Selected References:

Williams T., Moon A. and Williams M. Environment and Health: A Guide for Primary School Teachers. World Health Organization, Geneva, 1990.  
WHO/UNICEF/UNESCO/ISECO. Teacher's Resource Book: Prototype Action-Oriented School Health Curriculum. WHO/EMRO, 1990.  
WHO/UNICEF/UNESCO. Comprehensive School Health Education, Suggested Guidelines for Action. (Unpublished document WHO/UNESCO/UNICEF/92.2), 1992.

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## [Safe Water Supply Sanitation](#)

### Safe Water Supply

#### 1.1 Overview of Current Situation

It is understood that SFPs cannot be expected to be implemented under optimal conditions in terms of infrastructure. However every effort should be made to ensure minimal water supply and sanitation standards, as both have an immediate bearing on the safe storage and preparation of food.

It is common knowledge that safe water and adequate sanitation are the bases for a sustainable solution to the threat of water-related diseases. A high incidence of intestinal diseases, associated with lack of safe drinking water and inappropriate means of excreta disposal, is characteristic of the disease picture, especially amongst schoolchildren in many developing countries of the world. Provision of safe drinking water and basic sanitation, coupled with adequate personal hygiene behaviour, can prevent *viral diseases* such as hepatitis A, *bacterial diseases* such as cholera and typhoid, and *worm infections* such as guinea-worm. For example, **school absenteeism dropped from 60% to 13%** following reductions in cases of guinea-worm disease.<sup>1</sup>

The construction of facilities to improve levels of coverage at schools may require large investments and some years to achieve. If national development policies do not give priority to this area, financial resources required for long-term solutions are likely to be lacking.

#### 1.2 Optimal Standards for Safe Water Supply at School <sup>2</sup>

*Water Source*

Sources of water for drinking fall into three broad categories: 1) *groundwater* (dug wells, boreholes and springs); 2) *rainwater collection*; and 3) *surface water* (rivers, streams, lakes and small dams). Groundwater sources are often of good quality and may only require protection (such as a well cover or spring protection box) and disinfection. Rainwater collection is most commonly used at household level, but can also be used at schools to provide supplementary drinking water, provided there is sufficient space for a storage tank and the system is properly maintained (e.g. regular cleaning of the water collection area). On the other hand, surface water sources, such as rivers, streams, ponds and lakes, are normally open to contamination and require extensive treatment before being used for drinking.

**Safe water supply should be available on the school premises at all times.**

**Ideally, water should be obtained where it exists from the local municipal system, or alternatively from a groundwater source with arrangements for systematic disinfection of the water**

### *Water Quantity*

The expected demand for safe water will vary considerably between countries depending on cultural hygiene-related habits and the type of water, sanitation and cooking amenities. As a general indication, the consumption of water under ideal conditions can reach 60 litres/day/student in day schools which have flushing toilets and cooking facilities. The following are optimal requirements for water supply facilities at schools:

- Hand washing basins: 1 per 50-100 students
- Showers: 1 per 20 students

**Expected water consumption varies from 15-30 litres/day/student in day schools and from 90-140 litres/day/student in boarding schools**

### *Water Quality*

Water quality is determined on the basis of an indicator of faecal contamination, namely the concentration of *Escherichia coli* (*E. coli*) <sup>3</sup>. The level of free residual chlorine at the point of water delivery is another indicator. Free residual chlorine should be kept at 0.2-0.5 mg/litre to reduce the risk of microbial regrowth. The detection of chlorine in this concentration range provides an indication of the absence of contamination.

## **1.3 Minimal Acceptable Standards**

While bearing in mind that action should be taken to ensure that the above optimal standards are met, the

following are the minimal acceptable standards.

**Water taken directly from river channels or lake shores without treatment is a major health hazard**

### *Water Quantity*

Everyone requires about two litres of water a day for basic physiological needs.

**As a minimum, school students would manage, under difficult conditions and for a limited period of time, with an amount of at least 5 litres of water/day/student for drinking and cooking**

### *Water Quality*

The water could be freed of pathogens (disease-causing microorganisms) by bringing it to a vigorous rolling boil for 1 minute. Boiling however, has, the following main disadvantages:

- fuel is required (about 1 kilogram of wood is needed to boil one litre of water);
- water can be contaminated again when it has cooled.

*Chlorine* is a very effective disinfectant. Water could be chlorinated at the school level (see [Annex 9](#)). About 4 grams of active chlorine are required for disinfecting one cubic meter (1000 litres) of water. As active chlorine costs approximately US \$ 7 per kilogram, the cost of disinfecting 1000 litres of water, which would cover the minimal acceptable drinking and cooking needs of about 200 students per day, would be about 3 US cents.

Turbidity (cloudiness) can be caused by silt, sand or mud as well as by some microorganisms. *Turbid water should be filtered before it is chlorinated.* There are various types of filters which would not only reduce turbidity but would also inactivate most pathogens present in the water. Where "commercial candle filters" are not available in the market, household filters could be prepared, as shown in [Annex 9](#).

**The water should be always disinfected.**

**Chlorination is preferable to other traditional methods as it is reliable and less expensive (about 3 US cents for disinfecting 1000 litres).**

**If chlorine compounds are lacking, the water could be boiled.**

If the water is stored, it is extremely important to protect it from contamination. The containers used for storing water should be kept clean and rinsed regularly with boiling water or washed out with a bleach solution (one part liquid bleach to five parts of water). After washing out with a bleach solution the surfaces should be rinsed with

safe water. Cleaning and disinfecting of tanks should be carried out at least once every six months. The containers should be provided with a tap and a cover to prevent insects, dust and other possible contaminants from entering.

## **Sanitation**

### **2.1 Overview of Current Situation**

High priority should be given to observing the principles of sanitary waste disposal. Human excreta always contain large numbers of microorganisms, some of which may cause diarrhoeal diseases such as cholera, typhoid and hepatitis A. When people defecate in the open air, there are numerous ways through which these microorganisms can get into food and water. Once in food, their numbers can increase rapidly in a few hours.

During the rainy season, excreta may be washed away by rain-water and can run into wells and streams. The microorganisms in the excreta will then be carried into the water which may be used for drinking or cooking.

Disposing of excreta safely, isolating it from flies and other insects, and preventing faecal contamination of water supplies would greatly reduce the spread of disease.

**Lack of good sanitation may lead to contamination of clean water sources and food**

In many cultures, it is believed that children's faeces are harmless and do not cause disease. This is not true. A child's faeces contain as many germs as an adult's, and it is very important to collect and dispose of children's faeces quickly and safely.

**Appropriate facilities for excreta disposal at primary schools is a basic need**

In the absence of such facilities, there is a high risk of diarrhoeal diseases through contamination of water and food. As part of the normal school curriculum, children should be taught how to use excreta disposal facilities, about the dangers of defecating on the ground and about the importance of thorough hand-washing with soap or ash after any contact with excreta.

### **2.2 Optimal Standards for Sanitation at School**

Excreta disposal facilities in schools need to be sufficient for the number of students and staff members. Separate blocks for male and female students should be provided. Separate facilities are also commonly built for male and female staff.

Sanitary urinals for boys should be provided separately, be independent of the toilet seats, and be designed for

more intensive use. Washing facilities should be available at these places.

**Optimal standards for sanitation at school:**

- **Girls: one toilet cubicle for 25 girls**
- **Boys: one toilet cubicle for 100 boys and one urinal for 40-60 boys**

There are a number of key points to be addressed when planning sanitation at schools.

- Hand washing basins with clean water and soap must be provided in each toilet block.
- Toilet facilities should be cleaned with soap or disinfectant at the end of every day. Cleaning duties can be the responsibility of the students, operating on a rotation basis. If this is done, then a member of staff should supervise the students to ensure that the toilets are cleaned properly and the students wash their hands properly when they are finished.
- Refuse must be disposed of safely. Bins with well-fitting lids or sacks are the most appropriate containers to prevent flies and vermin from being attracted to refuse. Refuse must be removed regularly and disposed of safely.

There are many different types of excreta disposal facilities. The needs of the users and the resources available should be carefully considered to ensure that the most appropriate type of sanitation is selected. These facilities can range from *ventilated improved pit (VIP) latrines* to modern flushing toilets (where sewerage systems are available).

Schools can be instrumental in promoting different types of sanitation. Students can be involved in the design and implementation of sanitation construction projects. They can also take part in health education by designing posters and notices to reinforce hygiene education messages. Where it is possible, health education classes should be held regularly for all students to make them aware of the risks of poor sanitation and hygiene, and to teach good hygiene practices.

### **2.3 Minimal Acceptable Standards**

If there is no municipal sewage system, and if the installation of a local wastewater system is not possible, pit-type latrines would be a suitable option. Open defecation fields should not be adopted as a means of excreta disposal.

The simple pit latrine is the cheapest and most basic form of improved sanitation, but has the disadvantage of producing unpleasant odours and allowing flies to breed easily. *Ventilated improved pit (VIP) latrines* are an improved type of pit latrine which help remove odours and prevent flies from breeding (see description below). A VIP latrine costs more to build and requires more maintenance than a simple pit latrine, but is still relatively low-cost.

**A single VIP latrine costs between US \$ 70-400.**

It is fundamental that schools are provided with appropriate excreta disposal facilities. It is very frustrating to children and teachers to study hygiene behaviour as part of the primary school curriculum but be unable to use appropriate excreta disposal facilities.

**A pit latrine should be at least 30 metres away from any water source**

A VIP consists basically of a pit a cover slab, with a squat hole and a vent pipe cast through the slab. A shelter is built, which must be kept semi-dark, and the vent pipe is raised to at least 0.5 metres above the top of the shelter. A durable fly screen should be placed on the top of the vent pipe. It is important that the latrine is well away from high buildings or trees to avoid shading on the ventilation pipe.

## **2.4 Inspections of School Water and Sanitation Facilities**

A sanitary inspection is an on-site inspection of the school facilities to identify actual and potential sources of contamination. The physical structure, the operation of the system and external environmental factors (such as latrine location) are evaluated. This information should be used to select appropriate remedial action to either protect the system or improve it.

*Inspections should be carried out by a suitably trained person* using a simple, clear reporting form. These forms consist of a set of questions structured so that, for example, "yes" answers indicate that there is a risk of contamination and "no" answers indicate that the particular risk is absent. The reporting forms can be pictorial to enable them to be easily understood. Such forms and guidelines for the interpretation of results should be established for each different context.

Some questions are proposed in this document for monitoring and evaluation visits (see [Annex 8](#)). The results of such preliminary inspections should be communicated to the authorities responsible for sanitary inspections in order to initiate remedial actions, including a more comprehensive survey.

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<sup>1)</sup> *The World Health Report 1996. Fighting Disease Fostering Development.* Report of the Director General, World Health Organization, Geneva, 1996.

2) World Health Organization. *Fact Sheets on Environmental Sanitation. Cholera and Other Epidemic Diarrhoeal Diseases Control*. Prepared by the Robens Institute University of Surrey, UK. Geneva, World Health Organization, 1996 (WHO/EOS/96.4).

3) World Health Organization. *Fact Sheets on Environmental Sanitation. Cholera and Other Epidemic Diarrhoeal Diseases Control*. Prepared by the Robens Institute University of Surrey, UK. Geneva, World Health Organization, 1996 (WHO/EOS/96.4).

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## Overview of Current Situation

High prevalence of intestinal parasitic infections is closely correlated with poverty and poor environmental hygiene, namely: a) lack of safe water supply, b) contamination of the environment by human excreta, c) lack of shoes, and d) poor environmental or personal hygiene. In the long run, worm infections increase susceptibility to other infections and diminish learning ability and growth in children.

Intestinal parasitic infections negatively affect the health status of a high proportion of school-age children in developing countries, giving rise to general discomfort and acute symptoms such as abdominal pain, nausea and coughing. These symptoms are closely correlated with the "intensity of intestinal parasitic infections" (commonly called "worm burden"): the greater the worm burden, the more severe are the symptoms. In addition, hookworm infections give rise to blood loss, as the worms suck blood from the intestinal wall. This may cause iron deficiency anaemia and a decrease in work capacity and fitness.

School-age children harbour the most intense round worm (*Ascaris lumbricoides*), hookworm and whipworm (*Trichuris trichiuria*) infections; treatment of this age group - which is easily accessible through the school system - achieves optimal improvements in health status and educational performance:

### *Health and nutritional status:*

- In Zanzibar, heavily infected school children living in high transmission areas were treated with mebendazole three times a year. The study found that a quarter of a litre of blood can be saved per child per year for as little as 15 US cents per child per year (i.e. 5 US cents per treatment including the cost of the tablet of about 3 US cents, and drug delivery, which amounts to about 2 US cents).

- Deworming of children can result in remarkable growth spurts. In one trial in Kenya, treated school-age children gained one centimetre more in height in the four months following treatment than did children who received a placebo. [1](#)

*Educational performance:*

Recent studies suggest that intestinal parasitic infections negatively affect [2](#) school children's cognitive functions. A study in Jamaica showed significant improvements in the auditory short-term memory of heavily infected children after nine weeks of treatment. [3](#)

## School-Based Deworming Programmes

WHO recommends chemotherapy for roundworm, whipworm and hookworm infections, targeted at school-age children as a feasible and cost-effective control strategy.

Periodic deworming treatment is a feasible and effective short-term measure for the control of morbidity due to intestinal parasites

Single oral dose treatment with mebendazole (500 mg) or albendazole (400 mg) is very effective, safe and inexpensive. The direct benefit of chemotherapy is that the worm burden is removed, which immediately alleviates symptoms and may reduce the rate of transmission. Furthermore, WHO recommends improved sanitation and safe water supply as well as health education on the prevention of intestinal parasitic infections as important control strategies.

Treatment without prior screening, which offers significant logistic and economic advantages, is recommended where surveys indicate a presence of intestinal parasites among school-age children of over 50%.

The interval of community treatment should be determined after consideration of epidemiological, pharmacological and socioeconomic factors. From the epidemiological standpoint, the key elements to be considered include **frequency and seasonal variation of reinfection**. Ideally, community treatment should be applied soon after an identified transmission season is over. The work undertaken by the Asian Parasite Control Organization (APCO) indicates that the appropriate intervals for the application of chemotherapy should be twice annually for prevalence rates below 50% and three times annually for prevalence rates exceeding 50%. It must be stressed that the decision about intervals between treatments must be taken after the local circumstances are considered. [4](#)

The frequency of chemotherapy should be three times annually for prevalence rates exceeding 50%, or less after consideration of local circumstances

## Integrating a School-Based Deworming Programme into SFPS

### 3.1 Strategy

If a high prevalence of intestinal parasitic infections among school-age children is confirmed, the following factors should be determined prior to developing a school-based deworming programme:

- What is the Government policy as regards school-based deworming and the involvement of teachers in drug delivery?
- Is there an operational National Intestinal Parasite Control Programme? If so, what are its objectives, strategy (treatment interval, drug used, channel - health centre-based and/or school-based?) and geographic coverage?
- What is the national institutional capacity for parasitological diagnosis? Are there trained laboratory technicians and are basic diagnostic tools available?

When should a school-based deworming component be included in a WFP-assisted SFP?

When the prevalence of intestinal parasites among school-age children is above 50%.

Minimal capacity for parasitological diagnosis is required even if the prevalence of intestinal parasites is above 50% and individual screening prior to treatment is not necessary. Changes in the intensity and prevalence of intestinal parasitic infections should be documented through periodic small-scale parasitological surveys in order to determine: a) whether the deworming intervention should continue, and b) whether the frequency of treatment should be modified (i.e. from twice to three times a year, or vice versa).

### 3.2 Objectives of a School-based Deworming Programme

By reducing the intensity and prevalence of intestinal parasitic infections in school children, deworming aims at strengthening the educational and nutritional benefits of school feeding.

### 3.3 Training Requirements

One-day training seminars should be conducted for selected staff from the Ministries of Health and Education. These training seminars should cover the following subjects: a) the negative effects of intestinal parasites on health and educational outcomes; b) justification for a school-based deworming programme; c) characteristics of the drug and treatment schedule; and d) prevention of intestinal parasitic infections through improvements in water and sanitation facilities as well as hygiene practices.

Staff could include: one teacher from each school (preferably the teacher in charge of health education), and one person from the health sector at the peripheral level. The health staff would serve as supervisors of the

distribution. The teachers trained in drug delivery would be responsible for holding health education sessions on treatment days.

### 3.4 Mechanism for Drug Delivery

The recommended deworming treatment intervals are two to three times a year with a single dose of a deworming drug; 400 mg albendazole, 500 mg mebendazole, pyrantel (250 mg chewable tablet, dosage 10 mg/kg single administration) or levamisole (40 mg chewable tablet, dosage 2.5 mg/kg single administration). Albendazole is the most effective against hookworm, which is an important contributing factor to anaemia. The deworming drugs can be stored and delivered through the WFP-assisted SFP. The drugs should be collected by the schools together with the food. The teachers would deliver the drugs to the children on specific treatment days. Other children who are present in the school on the day of delivery could also receive treatment.

The cost of one tablet of a deworming drug (e.g. albendazole) ranges between 3 and 5 US cents (including shipment)

### 3.5 Monitoring and Evaluation

Data on coverage of the deworming programme should be integrated into the SFP's M&E system. Changes in the prevalence and intensity of intestinal parasitic infections and other parameters (e.g. nutritional status) can be monitored by the Ministry of Health, with reports being sent for information to WFP for information purpose.

The reporting system should be management-oriented, allowing those involved to identify problems and initiate corrective measures. In each school covered by the programme, a record should be kept by the trained school teacher responsible for delivering the drugs to children (a sample reporting system is shown in [Annex 10](#)). For general guidance on M&E, please refer to Monitoring and Evaluation Manual of this Handbook

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1) Stephenson LS *et al.* Weight gain of Kenyan school children infected with hookworm, *Trichuris trichiura* and *Ascaris lumbricoides* is improved following once- or twice-yearly treatment with albendazole. *Journal of Nutrition*, 1993, 123: 1036-46.

2) Nokes C and Bundy DAP. Does helminth infection affect mental processing and educational achievements? *Parasitology Today*, 1994, 10 (1): 14-18.

3) Nokes C *et al.* Parasitic helminth infection and cognitive functions in school children. *Proceedings of the Royal Society of London*, 1992, 247: 77-81

4) Report of the Informal Consultation on the Use of Chemotherapy for the Control of Morbidity due to Soil-Transmitted Nematodes in Humans. World Health Organization, Geneva 29 April-1 May 1996, WHO/CTD/SIP/96.2 (in press)  
Savioli, L. *et al.* Intestinal Worms Beware: Developments in the Use of Anthelmintic Chemotherapy. *Parasitology Today*, 1997 (in press).

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## **Annex 1 - Prices, Approximate Nutritional Value And Unit Cost (For Project Costing And General Planning)**

	FOB Price*		Nutritional Value/100g <a href="#">1</a>		
	US \$ per tonne	US cents per 100g	Energy (Kcal)	Protein (g)	Fat (g)

Cereals					
Wheat	205	2.05	330	12.3	1.5
Rice	285	2.85	360	7.0	0.5
Sorghum/Millet	250	2.50	335	11.0	3.0
Maize	200	2.00	350	10.0	4.0
Cereals, General (EMOPs)	215	2.15	-	-	-
Processed cereals					
Maize meal	255	2.55	360	9.0	3.5
Wheat flour	300	3.00	350	11.5	1.5
Bulgur wheat	230	2.30	350	11.0	1.5
Blended foods					
Corn soya blend	325	3.25	380	18.0	6.0
Wheat soya blend	400	4.00	370	20.0	6.0
Soya-fortified bulgur wheat	250	2.50	350	17.0	1.5
Soya-fortified maize meal	250	2.50	390	13.0	1.5
Soya-fortified wheat flour	250	2.50	360	16.0	1.3
Soya-fortified sorghum grits	200	2.00	360	16.0	1.0

	FOB Price*	Nutritional Value/100g <a href="#">1</a>

	US \$ per tonne	US cents per 100g	Energy (Kcal)	Protein (g)	Fat (g)
Dairy products					
Dried skim milk (enriched)	2,050	20.50	360	36.0	1.0
Dried skim milk (plain)	2,000	20.00	360	36.0	1.0
Dried whole milk	2,400	24.00	500	27.0	25.0
Canned cheese	3,000	30.00	355	22.5	28.0
Meat and fish					
Canned meat	2,200	22.00	220	21.0	15.0
Dried salted fish	3,100	31.00	270	47.0	7.5
Stockfish	4,500	45.00	-	-	-
Canned fish	2,370	23.70	305	22.0	24.0
Oils and fats					
Vegetable oil	900	9.00	885	-	100.0
Butter oil	2,100	21.00	860	-	98.0
Edible fat	1,100	11.00	900	-	100.0
Pulses					
Beans	475	4.75	335	20.0	1.2
Peas	350	3.50	335	22.0	1.4
Lentils	375	3.75	340	20.0	0.6
Miscellaneous					
Sugar	440	4.40	400	-	-

Dried Fruit	1,200	12.00	270	4.0	0.5
Dates	1,900	9.00	245	2.0	0.5
Tea (black)	2,000	20.00	-	-	-
Iodized salt	210	2.10	-	-	-

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\* Updated by Budget Branch (FSB)

1 These are rounded figures. The energy and protein content of commodities vary depending on type, source and processing.

## Annex 2 - Examples Of Locally Manufactured Biscuits In WFP - Assisted School Feeding Projects

Type of commodity	El Salvador 1 biscuit = 28 grams	Guatemala 1 biscuit = 28 grams	Ecuador 1 biscuit = 20 grams	Nicaragua 1 biscuit = 40 grams
DSM			2.5% (0.5g)	
Maize flour	5.00	4.31		
Wheat flour	7.80	7.53	48% (9.6g)	9.68
Soya flour	2.20	1.88	10% (2.0g)	3.37
Rice flour				3.72
Edible fat	4.00	5.44	18% (3.6g)	4.98

Sugar	8.65	8.23	20% (4.0g)	7.44
(salt)	0.01	0.14		0.09
(flavours)				0.25
(baking powder)	0.40	0.42		0.15 (yeast)
Nutritional value per biscuit	(28g):	(28g):	(20g):	(40 g):
Energy:	@ 125 kcal	@ 130 kcal	91.2 kcal	195 kcal
Protein:	NA*	2.0 g	2.2 g	3.5 g
Fat:	NA*	6.0 g	3.6 g	11.5 g
N° biscuits per day	2 (60g)	1 (28g)	3 (60g)	1 (40 g)
Comment	Biscuit is fortified with iodine	Biscuit enriched with Vitamin A, iron, iodine and some B vitamins	Above composition provides 456 kcal and 11 g of protein per 100 grams of biscuit; enriched with iodine	Biscuit enriched with Vitamin A, iron, thiamin, riboflavin, niacin, folic acid and vitamin B12

\* NA = Not available.

### Annex 3 - Food Consumption Patterns In Africa: A Quick Reference<sup>1</sup>

<b>Country</b>	<b>Staple cereal</b>	<b>Staple pulses</b>	<b>Staple roots &amp; tubers</b>	<b>Staple meat/fish<sup>2</sup></b>	<b>Staple fat</b>	<b>Typical dishes<sup>3</sup></b>	<b>Hungry season<sup>4</sup></b>

Angola	maize, sorghum, millet	beans	cassava, plantain <sup>5</sup> , sweet potatoes	meat, poultry, fish	sesame oil, groundnut oil		December - March
Benin	maize, sorghum, millet, rice (i)	beans, groundnuts	cassava, yam & cocoyam, taro, sweet potatoes	fish, crab, smoked fish; meat (rare)	Shea (N), groundnut oil	Gari, Foutou, Acara, Tô, Obeyo	December -February
Botswana	maize, millet, sorghum	beans, cow peas	(-)	meat	groundnut oil		
Burkina Faso	millet, sorghum, maize, rice (S)	beans	yam, sweet potatoes	meat	Shea, groundnut oil	Gonré, Tô, Samsa, 'Haricots-Riz' (beans-rice)	January - March
Burundi	maize, sorghum	beans, peas, lentils	cassava, sweet potatoes, bananas	meat, fish	palm oil		August - September
Cameroon	maize, sorghum, millet	groundnuts	yam, cassava, plantain, banana	meat, fish	palm oil, groundnut oil	Chikwan-gues	March - April
Cape Verde	maize, rice (i), wheat (i)	beans, groundnuts	bananas, sweet potatoes				June - July
CAR	maize, millet, sorghum, rice	groundnuts	cassava	meat	groundnut oil	Chikwan-gues, Tô	January - February
Chad	millet, sorghum, rice, maize	groundnuts, peas (Niebe), beans	cassava (S), potatoes	fish, meat, milk (pastoralist)	groundnut oil	Boule	March - April

Comoros	rice	coconuts <sup>6</sup>	cassava, bananas, sweet potatoes, yam	fish	coconut and groundnut oil		September - October
Congo	maize, rice (irr.), wheat	groundnuts, beans	cassava, yam, plantain, potatoes	fish, meat	palm oil	Chikwan-gues, Tô	August - September
Cote D'Ivoire	millet, sorghum, maize, rice	groundnuts	cassava, yam, taro, banana plantain	fish, poultry	palm oil	Attiéké, Foutou, Aloco, Tô	May - June (N); March - April (S)
Djibouti	rice (i), sorghum	(i)	(i)	milk (pastoralist), goat, sheep	(i)		July - August
Eritria	millet, maize, wheat, sorghum, teff, barley	beans, lentils, chick peas	(-)	meat, poultry	(i)		December - January
Ethiopia	teff, sorghum, barley, maize, wheat	beans, lentils, peas, groundnuts (S)	ensete (false banana) (S)	meat, poultry	(i)	Injera	June - September
Equatorial Guinea	rice	beans, peas	cassava, yam, sweet potatoes, plantain, banana	meat, fish	palm oil, groundnut oil		January - February
Ghana	maize, sorghum, rice, millet	beans, groundnuts	plantain, cassava, cocoyam & yam	fish, snails, meat	shea butter, groundnut & palm oil	Foufou, Tô	January - March

Kenya	maize, sorghum, millet, wheat, rice	beans, groundnuts	cassava, potatoes	meat, dairy products, poultry	ghee, groundnut oil	Ugali, Irio	April - May
Lesotho	sorghum, maize, wheat	beans, peas	(-)	meat, beef, mutton	ghee	Papa, Lesheleshele, Motoho, Mahleu, Joala	September
Madagascar	rice, maize	beans, Bambara groundnut	cassava, sweet potatoes, banana	beef (centre), fish (coast)	lard, groundnut oil		September - October
Mali	millet, sorghum, maize, rice (irr.)	beans, peas, groundnuts	cassava (S), sweet potatoes (S)	milk (pastoralist), beef, mutton, goat	groundnut oil	Dégué, Lakh, Tô	January - March
Mauritania	millet, sorghum, rice (i), maize	groundnuts	potatoes	meat, milk (pastoralist); fish	groundnut oil	Ksour, Aïche	February - April
Mauritius	rice, wheat,	peas	potatoes	meat, mutton	soya oil, ghee		
Mozambique	maize, millet, sorghum, rice	groundnuts, beans	cassava	fish, poultry	palm oil, groundnut oil		August - September
Namibia	maize, millet, sorghum	beans	(-)	meat, sheep, mutton	(i)		September - October
Niger	sorghum, millet, rice (irr)	cow peas, green beans	(-)	meat, milk (pastoralist)	groundnut oil	Tô	January - March
Rwanda	sorghum, maize	beans, soya beans	plantain, sweet potatoes, cassava	goat, beef, poultry	sesame oil, groundnut oil		September

Sao Tome & Principe	rice, wheat, maize (l)	(l)	cassava	fish	palm oil		
Senegal	millet, sorghum, fonio, rice, maize	beans, groundnuts	cassava	fish, meat, milk (pastoralist)	groundnut oil	Tieb dien, N'galkh, Soupikandié, Mafé	March - May
Sierra Leone	rice, maize, sorghum		cassava, sweet potatoes	fish	palm oil	Anjeero, Mufo	February - April
Somalia	maize, sorghum, rice, wheat (pasta)	beans, lentils	bananas	milk (pastoralist), fish, meat	ghee		January - February; August - September
Sudan	millet, sorghum (durra), wheat	beans	cassava (S)	milk (pastoralist), fish	ghee	Kisra	May - July
Swaziland	maize, sorghum	beans, groundnuts	(-)	meat	ghee, vegetable oil	Pap	
Tanzania	maize, rice, wheat  sorghum, millet (less)	groundnuts, peas, beans	cassava, banana, plantain	fish, meat	ghee	Dagaa	October; February - March
Togo	maize, sorghum, rice, millet	beans, groundnuts	cassava, yam, taro	fish (S), meat (N)	palm & groundnut oil, Shea butter	Gali (=Gari), Foutou, Gangodoué	December - February
Uganda	millet, sorghum, maize	groundnuts, beans, peas	banana, cassava	fish, poultry	groundnut oil		October - December
Zaire	maize, rice	beans, groundnuts	cassava, plantain	meat	palm oil	Foufou, Chikwanges	October - December

Zambia	maize, rice, sorghum, millet, wheat	soya beans, groundnuts	(-)	fish	groundnut oil	Kapenta	September - November
Zimbabwe	maize, wheat	soya beans, groundnuts	(-)	fish, meat, milk	groundnut oil	Pap	August - October

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1 Key:

(i) = imported;  
(irr) = irrigated;  
(S) = South;  
(N) = North;  
(-) = no data available

2 Fish is generally not eaten by pastoralists.

3 See following annex for description.

4 Hungry season (as used here) describes the two months before the rainy season; in some countries there are two rainy seasons; some countries do not have a hungry season.

5 Plantains and bananas are listed exceptionally under the category of 'staple roots & tubers' since, from the nutritional point of view, they are more similar to starchy food.

6 Coconuts belong to the category of tree nuts.

#### Annex 4 - Micronutrient Content Of Selected Food Aid Items <sup>a</sup>

<i>Food</i>	<i>Micronutrients per 100 g edible portion</i>							
	<i>Calcium</i>	<i>Iron</i>	<i>Vit A</i>	<i>Thiamine</i>	<i>Riboflavin</i>	<i>Niacin</i>	<i>Folate</i>	<i>Vit C</i>
	<i>mg</i>	<i>mg</i>	<i>mg</i>	<i>mg</i>	<i>mg</i>	<i>mg</i>	<i>mg</i>	<i>mg</i>
<b>Cereals:</b>								
Wheat	36	4.0	0	0.30	0.07	5.0	51	0

Rice - parboiled	7	1.2	0	0.20	0.08	2.6	11	0
Sorghum	26	4.5	0	0.34	0.15	3.3	U	0
Millet - bulrush	22	3.0	0	0.30	0.22	1.7	U	0
Maize, whole (yellow)	13	4.9	0	0.32	0.12	1.7		0
Wheat flour - white	15	1.5	0	0.10	0.03	0.7	22	0
<b>Processed cereals:</b>								
Maize flour - whole	10	2.5	0	0.30	0.10	1.8	U	0
Wheat flour - medium extraction	29	3.7	0	0.28	0.14	4.5	U	0
Bulgur wheat	23	7.8	0	0.30	0.10	5.5	38	0
Bread - white	37	1.7	0	0.16	0.06	1.0	17	0
<b>Blended foods:</b>								
Corn soy blend	513	18.5	500	0.65	0.50	6.8	U	40
Wheat soy blend	750	20.8	498	1.50	0.60	9.1	U	40
Soy-fortified bulgur wheat	54	4.7	0	0.25	0.13	4.2	74	0
Soy-fortified cornmeal	178	4.8	228	0.70	0.30	3.1	U	0
Soy-fortified wheat flour (11-12% soy)	211	4.8	265	0.66	0.36	4.6	U	0
Soy-fortified sorghum grits	40	2.0	-	0.20	0.10	1.7	50	0
<b>Dairy products:</b>								
Dried skim milk	1257	1.0	1500c	0.42	1.55	1.0	50	0
Dried whole milk	912	0.5	280	0.28	1.21	0.6	37	9
Canned cheese	630	0.2	120	0.03	0.45	0.2	U	0

<b>Meat and fish:</b>								
Corned beef	14	4.1	0	0.20	0.23	3.2	2	0
Dried salted fish	343	2.8	0	0.07	0.11	8.6	U	0
Sardines canned in oil	330	2.7	0	0.40	0.30	6.5	16	0
<b>Oils and fats:</b>								
Vegetable oil (maize)	0	0	0	0	0	0	0	0
Butter oil	0	0	0	0	0	0	0	0
<b>Pulses:</b>								
Beans - kidney - dry	143	8.2	0	0.50	0.22	2.1	180	0
Peas (pigeon peas)	130	5.2	0	0.60	0.19	3.0	100	0
Lentils	51	9.0	0	0.50	0.25	2.6	U	0
<b>Miscellaneous:</b>								
Sugar	0	0	0	0	0	0	0	0
Dried dates	32	1.2	0	0.09	0.10	2.2	13	0

**a** Food and Nutrition in the Management of Group Feeding Programmes (Rev.1), Food and Agricultural Organization, Rome, 1993 (Annex 1, pages 149-154).  
For values on energy, protein and fat, the reader is referred to Annex 1.

**b** U = no value could be found for the micronutrient

**c** If fortified

### Annex 5 - Examples Of Changes In The Volume Of Foods After Cooking

While designing a ration, the increase in its volume after cooking must be considered:

#### Example 1: Soft maize porridge

Ingredients (in grams)		Volume after cooking (in millilitres)	'Factor' for increase in volume
---------------------------	--	--	------------------------------------

Maize flour	120 (g)	540 ml	4.5
Vegetable oil	10 (g)	10 ml	1
Sugar	10 (g)	-	0
Total:	140 (g)	550 ml	

### Example 2: Rice with split peas

Ingredients (in grams)		Volume after cooking (in millilitres)	'Factor' for increase in volume
Rice	150	450	3
Split peas	30	90	2.5 - 3
Vegetable oil	15	15	1
Total:	195	555	

[Source: Cameron, M and Hofvander, Y. "Manual on Infant Feeding and Young Children", Oxford University Press, 1983, p. 77]

These are examples and should be checked locally, since the amount of water absorbed by the food depends on length of cooking and amount of cooking water.

### Annex 6 - Examples Of Traditional African Dishes Prepared With Food Aid Commodities

<i>Type of food aid commodity</i>	<i>Type of dish</i>	<i>Examples of traditional dishes</i>
<b>Cereal flours:</b>		

<p>Maize, Sorghum/millet, Rice and wheat (less frequent)</p>	<p><b>Porridge</b></p> <p>Various types of porridge which differ in terms of:</p> <ul style="list-style-type: none"> <li>• taste (sweet, sour or other traditional flavours)</li> <li>• consistency (liquid, soft or stiff).</li> </ul> <p>The liquid and soft porridges are eaten as such or accompanied by yoghurt, curdled fermented milk, and/or a sauce.</p> <p>The stiff porridges are eaten accompanied by a sauce.</p>	<p><i>Lakh</i>: millet-based soft porridge (Senegal and all Africa)</p> <p><i>Papa</i>: maize-based stiff porridge (particularly Southern Africa and all Africa)</p> <p><i>Lesheleshele</i>: maize-based soft porridge (Lesotho and all Africa)</p> <p><i>Motoho or Mahleu</i>: maize-based liquid sour porridge (Swaziland, Lesotho and Southern Africa)</p> <p><i>Aïche</i>: wheat, millet and barley-based soft porridge (Mauritania)</p> <p><i>Ugali</i>: stiff porridge (Kenya and East Africa)</p>
<p>Maize, sorghum, millet and rice flour (less frequent)</p>	<p><b>Dough/paste</b></p> <p>The cereal flour is cooked to form a thick paste which is then shaped into different forms (e.g. balls); this basic cereal dish is eaten as such or accompanied by a sauce or meat.</p> <p>The dough/paste can also be used to make fritters, pancakes and dumplings.</p>	<p><i>Tô</i>: all Africa (particularly Togo, Benin, Mali, Burkina Faso, Central African Republic)</p> <p><i>Kissar, Kisra or Ksour</i>: millet-based pancakes (Chad, Sudan)</p> <p><i>Gangodoué</i>: maize fritters</p>

Wheat flour	<b>Baked products</b> Bread (mainly in bakeries), biscuits and cakes.	
<b>Whole grain cereals:</b>		
Rice, bulgur wheat and sorghum grits	<b>Cereal dish</b> The cereal (rice or bulgur wheat) is boiled and served with a vegetable stew or sauce.	<i>Haricots-riz</i> : a mix of rice and beans with peanut oil (Burkina Faso)
<b>Pulses:</b>		
Beans, peas and lentils	<b>Vegetable mixtures</b> Dried pulses are soaked (if necessary) and cooked to accompany a cereal dish.	
Bean flour	<b>Fritters</b> Bean flour is made into different forms (such as balls or sticks) and then fried in oil.	<i>Samsas</i> : bean fritters (Burkina Faso); <i>Acara</i> : bean fritters (Benin)
<b>Canned food items:</b>		
(canned fish and meat)	<b>Sauce</b> The canned fish and meat are incorporated to a sauce that accompanies the cereal dish or the stiff porridge.	Different traditional sauces with local ingredients
Canned fish and meat	<b>Sandwich spread</b> The canned fish and meat can be used as a sandwich spread.	
<b>Oil:</b>		

Vegetable oil	<b>Sauce</b> The vegetable oil is used to prepare a sauce which will be made with local ingredients such as vegetables (dried/fresh), vegetable leaves (dried/fresh) and condiments.	Different traditional sauces with local ingredients
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### Annex 7 - Checklist for Designing and/or Evaluating SFP Rations

	<i>Ration</i>	<i>Comments on the ration</i>
Nutritive value (within range): <ul style="list-style-type: none"> <li>● Energy</li> <li>● Protein</li> <li>● Fat</li> </ul>		
Number of commodities		
Risk of irregular supply when item locally processed <b>("High" or "Low")</b>		
Preparation/cooking time in the school <b>("Reasonable" or "High")</b>		
Hygiene in food preparation in the schools <b>("Adequate" or "Unacceptable")</b>		
Local food habits respected <b>("Yes" or "No")</b>		
Micronutrients		
Storage/shelf-life		
Cost (FOB Price in US\$) cents/daily ration		

Remarks:		
----------	--	--

**N° commodities:**

*Half-day Schools:* High > 4; Reasonable up to 4;

*Day Schools:* High > 5; Reasonable up to 5;

*Boarding Schools:* High > 6; Reasonable up to 6

**Micronutrients** (Vitamin A, Iron and Iodine):

*Poor* = less than a quarter of requirements;

*Acceptable* = up to half of requirements;

*Good* = over half of requirements

In addition, for boarding schools: indicate which of the other micronutrients (e.g. Vitamin C) are below a quarter of requirements.

**Cost:**

*Half Day Primary:* Expensive = cost > 7 US cents;

*Day Primary:* Expensive = cost > 14 US cents

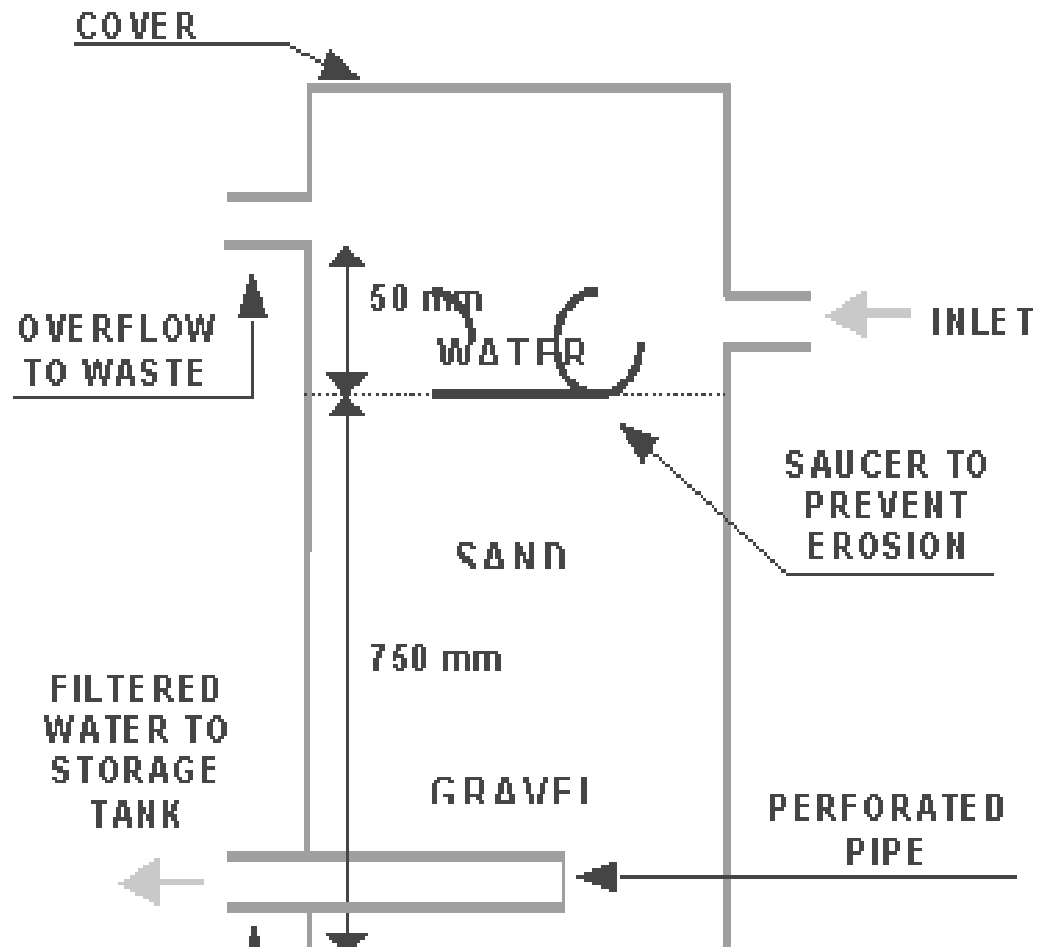
*Primary Boarding:* Expensive = cost > 22 US cents

*Half Day Pre-Primary:* Expensive = cost > 6 US cents;

*Day Pre-Primary:* Expensive = cost > 12 US cents

**Annex 9 - Simple Technology for Filtering and Disinfecting Water at School*****Filtration***

## PACKED DRUM FILTER



Turbidity can be caused by silt, sand or mud as well as by bacteria and other germs. *Turbid (cloudy) water should be filtered before it is chlorinated.* There are various types of filters which not only reduce the turbidity but also inactivate most pathogens present in the water. Where "commercial candle filters" are not available in the market, household filters can be prepared as

displayed in the figure showing a packed drum filter. Such a filter can be made with simple materials: a drum (e.g. an empty 200 litre oil drum), a pipe fitting, a tap, gravel and sand.

### **CHLORINATION**

1) First step: preparing a stock solution of chlorine)

One of the following products should be added to 1 litre of water to obtain a 1% concentration of available chlorine:

<b>Product (percent concentration by weight of available Chlorine)</b>	<b>Amount</b>
Calcium hypochlorite (70%)	15 g (1 heaping tablespoon)
or Bleaching powder or chlorinated lime (30%)	30 g (2 heaping tablespoons)
or Sodium hypochlorite (5%)	250 ml (1 teacup)
or Sodium hypochlorite (10%)	110 ml (1/2 teacup)
or Javelle water (1%)	Is itself a 1% stock solution

Where these concentrations of chlorine are not available in the local market, the amount used can be adjusted according to available concentrations. The stock solution should be kept in a cool place, in a closed container that does not admit light. As the stock solution loses effectiveness with time, it should be used no later than one month after it has been prepared.

2) Second step: using the stock solution to prepare safe water

Water should be added to the stock solution to ensure proper mixing:

<b>Water</b>	<b>Stock solution</b>
1 litre	0.6 ml or 3 drops
10 litres	6.0 ml or 30 drops

100 litres	60.0 ml or 4 tablespoons
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## Sample checklist for examination of health and nutrition issues during school visits

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This form has been prepared as a master sample and should be adapted to specific country conditions when found necessary. Please study it carefully before starting field visits.

The guiding principles of interview methodology laid down in the Monitoring and Evaluation Manual for School Feeding Projects should be consulted. Below is brief explanation regarding the design of this questionnaire and its utilization.

- Wherever possible, answers have been included to facilitate recording, however all questions should be asked as open-ended questions; i.e., the answers should not be suggested to the interviewee.
  - Under some sections, such as Water Supply and Sanitation, some of the questions are intended for reply by the interviewee (e.g., Is water filtered?), the answer being additionally verified through observation (e.g., interviewer to request seeing the filtering system), while others do not require interviewing but should be answered based on direct observation of the interviewer (e.g., Is the well covered with a lid?). The section on Food Preparation Area/Food Storage is likewise based mostly on direct observation while visiting the relevant premises, except for the questions regarding fuel (how procured? its cost per month?).
-

PROVINCE: \_\_\_\_\_

DISTRICT: \_\_\_\_\_

LOCATION (name of village or municipality):  
\_\_\_\_\_

TYPE OF LOCATION: \_\_\_\_\_ Urban \_\_\_\_\_ Rural

DATE OF VISIT: \_\_\_ / \_\_\_ / \_\_\_ day / month / year

**1. BASIC SCHOOL INFORMATION**

Type of school: \_\_\_ Pre-primary \_\_\_ Primary \_\_\_ PP &amp; P \_\_\_ Secondary

What is the age range of children? \_\_\_\_\_ To \_\_\_\_\_ years

Mode of operation of school? \_\_\_ Day \_\_\_ Half-day

Does the school have boarding facilities? \_\_\_ Yes \_\_\_ No

How many villages (or localities) does the school serve? \_\_\_\_\_

How far is the farthest one? \_\_\_\_\_ Km

<i>Type of Student<sup>a</sup></i>	<i>N° Enrolled</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
	At the time of visit Last year			
	At the time of visit Last year			

<sup>a</sup> Day, Half-day or boarding

Is there a parent/teacher association? \_\_\_ Yes \_\_\_ No

**2. SCHOOL CANTEEN MANAGEMENT*****Coverage of the School feeding Programme***

Is the school covered by the WFP-assisted SFP? \_\_\_ Yes \_\_\_ No

If yes:

For how many years? \_\_\_\_\_

For how many children this year? \_\_\_\_\_

[If this N° not the same as the total enrolled]

Do you select children?  Yes  No

If yes:

What selection criteria do you use? \_\_\_\_\_

\_\_\_\_\_

### *Community's Involvement*

Do parents make **financial contributions** to the school?

Yes  No

If yes:

How much per child and per month?: \_\_\_\_\_

Do all parents pay?  Yes  No

If no:

About how many did not pay last month? \_\_\_\_\_%

Why? \_\_\_\_\_

How much do you gather per month? \_\_\_\_\_

What are the main expenditures:

Fresh foods (such as): \_\_\_\_\_

Condiments

Fuel

Transport of donated food

Payment of cooks

Kitchen utensils

Other: \_\_\_\_\_

Is payment of a contribution a precondition for benefitting from school feeding?

Yes  No

Do parents make **contributions in kind**?

Yes  No

If yes, explain: \_\_\_\_\_  
\_\_\_\_\_

Are the cooks?

- Volunteers
- Paid in food aid
- Paid in cash

If paid in cash, Who pays them:

- PTA funds
- The Ministry
- Other: \_\_\_\_\_

How much per month: \_\_\_\_\_

***Food Management***

How many and what type of meals are served?

- A meal before classes start: \_\_\_\_\_
- A mid-morning meal: \_\_\_\_\_
- Lunch: \_\_\_\_\_
- Dinner: \_\_\_\_\_

Who is responsible for food storage and record keeping?

\_\_\_\_\_

How frequently do you receive food?

- Monthly
- Quarterly
- Other: \_\_\_\_\_

Is there a record of food receipts?  Yes  No

If yes (Interviewer to copy from school records):

\_\_\_\_\_

<i>Commodities</i>	<i>Last receipt (Kg)</i>	<i>Previous receipt (Kg)</i>

Was **one or more commodities missing** over last four food deliveries?

\_\_\_ Yes \_\_\_ No

If yes:

Which food(s)? \_\_\_\_\_

Any explanation? \_\_\_\_\_

\_\_\_\_\_

Did this affect the number of daily meals? \_\_\_ Yes \_\_\_ No

If yes, explain: \_\_\_\_\_

\_\_\_\_\_

Did this affect the quality of meals? \_\_\_ Yes \_\_\_ No

If yes, explain: \_\_\_\_\_

\_\_\_\_\_

Was the amount of one or more commodities less than needed?

\_\_\_ Yes \_\_\_ No

If yes:

Which food(s)? \_\_\_\_\_

What actions did you take:

\_\_\_ Did you reduce the daily ration? \_\_\_ Yes \_\_\_ No

---

Did you reduce the number of feeding days?  Yes  No

Did you reduce the number of beneficiaries?  Yes  No

**Adherence to Ration Scale**

Is there a record of daily food utilization?  Yes  No

If yes (interviewer to copy the total amount utilized per day “T” for each commodity for the last five days):

Days	Commodities											
	T Kg	P g	T Kg	P g	T Kg	P g	T Kg	P g	T Kg	P g	T Kg	P g
Day 1 N°fed:____												
Day 2 N°fed:____												
Day 3 N°fed:____												
Day 4 N°fed:____												
Day 5 N°fed:____												

T = total amount utilized; P = Amount per person (i.e. T divided by N°fed) to be computed later by interviewer

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Do commodities include locally processed foods such as:

- Blended food
- Biscuits
- Bread

If yes:

Was there any interruption in delivery this year?  Yes  No

If yes, how many days so far?: \_\_\_\_\_

Comments (on locally processed food): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**General Comments on Food Management:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**3. QUESTIONS TO TEACHERS ON HEALTH ISSUES**

Do you undertake any of the following health-related activities?

Distribution of deworming drugs  Yes  No

If yes:

Which drug: \_\_\_\_\_

How frequently: \_\_\_\_\_

Supervision of latrine cleaning  Yes  No

Other: \_\_\_\_\_

Are health and nutrition education included in the curriculum?

Yes  No

If yes, which subjects for which grades?

Subject

Grade


What are the **four main health problems** which you think cause absenteeism among children (and/or which school-age children complain of frequently)?

---



---

Are there any posters with health and nutrition messages?

\_\_\_ Yes \_\_\_ No

#### 4. WATER SUPPLY AND SANITATION

##### *WATER SUPPLY*

Type of water source and its location:

Is water supply available **on the school premises**?

\_\_\_ Yes \_\_\_ No

What is the type of water source?

\_\_\_ Municipal piped water

\_\_\_ Groundwater source: \_\_\_ Dug well \_\_\_ Borehole \_\_\_ Spring

\_\_\_ Rain water collection

\_\_\_ Water drawn directly with buckets from a nearby river or lake

Adequacy of water source: (Choose relevant set of questions among the following 4 items)

##### *1. Municipal piped water*

Is the quantity of water supplied sufficient for the needs of the school?

\_\_\_ Yes \_\_\_ No

##### *2. Wells*

Is the well **covered** with a lid?

\_\_\_ Yes \_\_\_ No

Is the well **protected** from animals (a fence)?

\_\_\_ Yes \_\_\_ No

Is water-lifting system (bucket, rope or pump) **accessible** to users?

\_\_\_ Yes \_\_\_ No

Is the well more than 30 m away from any source of contamination (latrines)?

\_\_\_ Yes \_\_\_ No

3. *Springs*

Is the spring's inspection **protected with a lid**?  Yes  No

Is the spring **protected** from animals (a fence)?  Yes  No

Is the spring more than 30 m away from any source of contamination (latrines)  
 Yes  No

4. *Rainwater*

Is the rainwater collection surface **free** from weeds and dirt?  
 Yes  No

**Storage reservoir**

Are the vents and overflow pipes protected by grilles?  
 Yes  No

Is rainwater prevented from entering the reservoir?  
 Yes  No

Was the reservoir cleaned and disinfected over the last six months?  
 Yes  No

**Water quality**

Is water filtered?  Yes  No

Is chlorination carried out continuously?  Yes  No

Is there an effective control of free residual chlorine?  Yes  No

Are bacteriological tests conducted regularly?  Yes  No

**SANITATION**

Is the school connected to a sewage system?  Yes  No

Is the school served with a septic tank?  Yes  No

If the answers to the above are no:

Are there latrines on the school premises?  Yes  No

If yes, what type?  Pit latrine  VIP latrine  Flush toilet

Are there separate latrines for girls and boys?  Yes  No

---



**Assessment of food quality in the storage room:**

Dry foods (cereals, pulses and BF):

Damaged by rodents or insects  Yes  NoDamaged by mould  Yes  NoDirt present in package  Yes  No

Canned foods

Swollen cans  Yes  NoHoles in cans or leakage  Yes  NoUnlabelled cans  Yes  No

Vegetable oil

Rancid (stale taste or smell)  Yes  NoContains foreign material  Yes  No**Assessment of the food preparation and serving area:**Is close to water source (i.e. within 5 meters)  Yes  NoIs well ventilated  Yes  NoIs clean (availability of soap and detergents)  Yes  NoIs far from defecation areas  Yes  No**Assessment of cooking facilities:**

Type of stove used \_\_\_\_\_

Type of fuel used \_\_\_\_\_

How is it procured (e.g. bought or brought by children)? \_\_\_\_\_

\_\_\_\_\_

How much is used per month? \_\_\_\_\_ Kg

Cost per month \_\_\_\_\_

Other remarks: \_\_\_\_\_

**Assessment of proper food handling:**

- Food cooked thoroughly (bubbling)  Yes  No
- Food cooked immediately before serving it to children  Yes  No
- If food cooked in advance, it is reheated thoroughly  Yes  No
- Raw foods (e.g. poultry) kept separate from cooked foods  Yes  No
- Cooked foods kept in closed containers until serving  Yes  No
- Are there posters with hygiene messages in the school?  Yes  No

**6. INTERVIEW OF COOKS**

Have you received any training on food handling during the last two years?  Yes  No

Do you wash your hands regularly before preparing food?  Yes  No

List the three main problems you face in preparing the food, starting with the most serious one (interviewer to put 1 next to most serious, etc):

Lack of water

Lack of fuel

Lack of utensils

Lack of cleansing material (soap, detergents)

Shortage of one or more ingredients

Other: \_\_\_\_\_

Did you have a health check up this year?  Yes  No

**7. INTERVIEW OF HEALTH STAFF**

(Interview the health staff in the nearest health facility)

Do you visit the school for health activities?  Yes  No

---

If yes:

How frequently?

Once a year    Twice a year    Other: \_\_\_\_\_

For what activities?

Health check ups

Immunizations

Distribution of deworming drugs

Distribution of supplements (Vit A, iron)

Health & nutrition talks

Supervision of hygiene

Other: \_\_\_\_\_

What are the five main health problems for which school-age children visit you?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What is your estimate of the proportion of school-age children who suffer from the following health/nutritional problems?

Anaemia: \_\_\_\_\_ %

Underweight: \_\_\_\_\_ %

Intestinal parasitic infections: \_\_\_\_\_ %

Other: \_\_\_\_\_ %

### ***SUMMARY OF INFRASTRUCTURE ASSESSMENT***

How would you rate the state of water and sanitary facilities today [based on observation on the day of the visit]:

Water supply:

Type of source                       Poor    Acceptable    Good



## Sample reporting system for a deworming intervention

---

In each school covered by the programme, a record should be kept by the trained school teacher responsible for delivering the drugs to children (an example is given below):

<i>Name</i>	<i>Age</i>	<i>Sex</i>	<i>Grade</i>	<i>1st treatment</i>	<i>2nd treatment</i>	<i>3rd treatment</i>	<i>Total</i>

The designated school teacher would be responsible for reporting to the district coordinator. The following data should be incorporated into the SFP's M&E reporting forms:

### ***Supplies***

N° of tablets in stock: \_\_\_\_\_

N° of tablets distributed: \_\_\_\_\_

N° of tablets remaining in stock: \_\_\_\_\_

N° of tablets remaining in stock is below the total number of enrolled children?

\_\_\_ Yes<sup>1</sup>     \_\_\_ No

### ***Treatment***

N° of enrolled boys who received the drug: \_\_\_\_\_

N° of enrolled girls who received the drug: \_\_\_\_\_

Coverage of boys<sup>2</sup>: \_\_\_\_\_ %

Coverage of girls<sup>2</sup>: \_\_\_\_\_ %

Overall coverage (boys + girls)<sup>2</sup>: \_\_\_\_\_ %

N° of nonenrolled children who received the drug<sup>3</sup>: \_\_\_\_\_

---

The reporting frequency should be the same as the remaining M&E data, i.e. quarterly. However, as deworming is conducted either twice or three times a year, it is understood that if no treatment is provided in a given quarter, the above section of the M&E reporting form for that quarter would be left blank.

These data should be compiled at district level. Schools reporting a coverage below 80% of enrolled children should be identified and visited by the district coordinator together with one of the trained district health staff.

At the end of the school year, the designated school teacher will compute and report on the following:

### ***Project Implementation Report*** <sup>4</sup>

#### ***Supplies***

N° of tablets distributed: \_\_\_\_\_

N° of tablets remaining in stock at the end of school year: \_\_\_\_\_

#### ***Treatment***

	N° enrolled	Received 3 doses		Received 2 doses		Received only 1 dose	
		N°	%*	N°	%	N°	%
Boys							
Girls							
Total							
*	$\frac{\text{N° enrolled school children who received three tablets during the year}}{\text{Total N° of children enrolled in the school}} \times 100$						

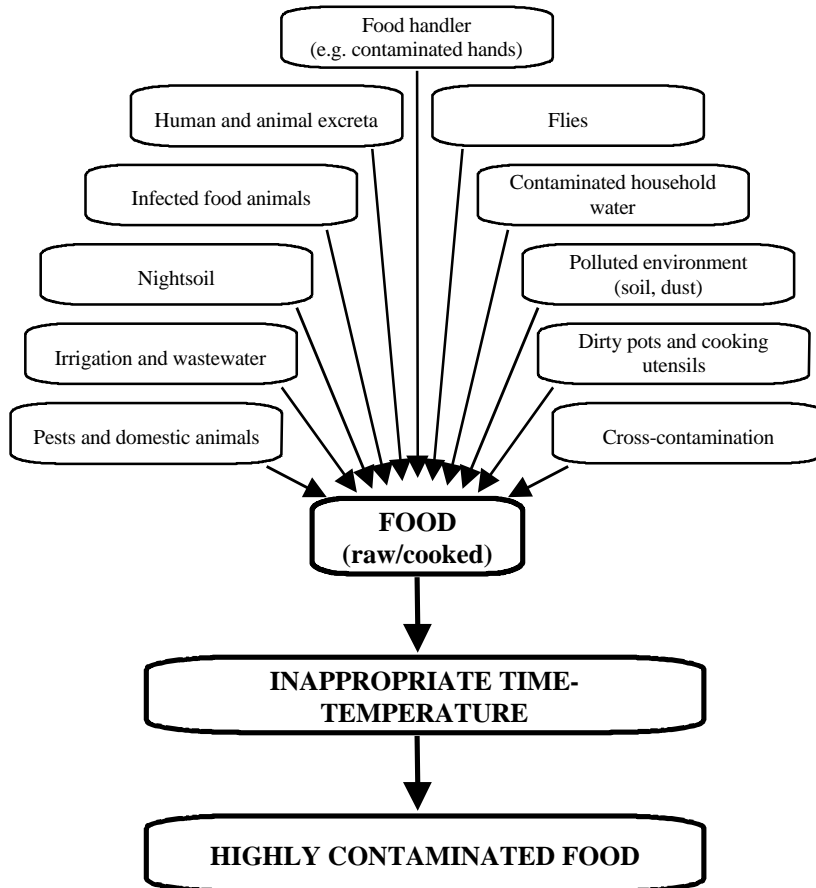
The district coordinator should compile data from all schools in the district. Annual reports should show averages for the district for each of the above indicators. In addition, the district report should include the following:

N° and percentage of schools in which the percentage of enrolled school children who received all three doses is above 80% (**i.e. good performance**).

N° and percentage of schools in which the percentage of enrolled school children who received only one out of three doses is above 25%. (**i.e. poor performance**).

**Notes:**

- <sup>1</sup> If yes, make sure to collect enough tablets from the distribution point well before the next treatment session
  - <sup>2</sup> 
$$\frac{\text{N}^\circ \text{ of enrolled "boys" who received the drug}}{\text{Total N}^\circ \text{ of enrolled "boys"}} \times 100$$
  - <sup>3</sup> Proxy indicator for outreach/community involvement
  - <sup>4</sup> The following should be incorporated into the SFP's second of the two yearly Project Implementation Reports (PIR).
-

**SOURCES OF FOOD CONTAMINATION**

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## Checklist for the Safety of Food Preparation in WFP - Assisted Schools [1](#)

### 1. Food cooked thoroughly?

Raw foods may be contaminated with disease-causing organisms. These can be killed by thorough cooking.

*Raw foods should be thoroughly cooked until "piping" hot.*

---

### 2. Cooked foods eaten immediately?

When cooked foods cool to room temperature, microbes begin to proliferate. The longer the wait, the greater the risk.

*Cooked foods should be eaten as soon as they come off the heat.*

---

### 3. Cooked foods carefully stored?

Microbes thrive in cooked food kept at ambient temperatures and quickly proliferate to disease causing levels.

*If food is prepared in advance, it has to be kept hot until served.*

---

### 4. Cooked foods reheated thoroughly?

Microbes may develop during storage (proper storage slows down microbial growth but does not kill the organisms).

*Stored cooked foods should be reheated until "piping" hot.*

---

5. **Locally produced foods safe?**

Fresh fruits and vegetables may be contaminated with disease-causing organisms, especially when untreated waste water is used for irrigation or untreated nightsoil is used for fertilization.

*Fresh fruits and vegetables should be thoroughly cooked.*

---

6. **Contact between raw foods and cooked foods avoided?**

Safely cooked food can become contaminated through even the slightest contact with raw food.

*Raw food or utensils used in preparing raw foods should not come in contact with cooked food.*

---

7. **Food handlers wash their hands?**

The hands are one of the most important vehicles for transfer of disease-causing organisms from faeces, animals, raw foods, skin or other sites to food.

*Hands should be washed thoroughly before starting to prepare food and after every interruption.*

---

8. **All kitchen surfaces clean?**

Foods are very easily contaminated. Food preparation premises should be absolutely clean.

*Any surface used for food preparation must be kept clean*

---

9. **Foods protected from insects, rodents and other animals?**

Animals frequently carry pathogenic microorganisms

*Foods should be covered or stored in closed containers*

---

10. **Safe water used?**

Safe water is just as important for food preparation as for drinking.

*Water should be filtered and chlorinated or boiled before adding it to food.*

---

1. Adapted from "The WHO Golden Rules for Safe Food Preparation" [Source: *Health Surveillance and Management Procedures for Food-handling Personnel*. Report of a WHO Consultation. World Health Organization, Geneva, 1989 (WHO Technical Report Series, N° 785)].

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School feeding has always been one of the most important ways of using food aid for education, both for WFP and other food aid donors. At the time when WFP was established, school feeding was specifically mentioned as a priority area for WFP support.<sup>1</sup> In 1993, pre-primary and primary school feeding projects accounted for more than half of all WFP development commitments (132 million dollars out of a total of 253 million dollars).

Despite the broad appeal of school feeding programmes (SFPs), the theoretical base and justification for providing food to children at school is often not fully understood. This chapter, therefore, attempts to provide an overview of existing research on the effects of school feeding interventions on different educational variables (access to and attendance at schools; children's learning capacity; other aspects) and to draw conclusions as to the continued justification of investing WFP food aid in this type of programme. The text concentrates on some of the most interesting and scientifically valid studies and reviews but does not claim to present an exhaustive treatment of the subject.

## **School Feeding and Access to Education**

The decision to enrol a child at school and, thereafter, for the child to attend regularly is influenced by many factors: the perceived value of education, the availability of employment opportunities, the direct and indirect

costs of schooling, the availability and quality of school facilities etc.

Several studies have examined the role of school feeding in stimulating enrolment and increasing attendance. They used techniques such as measuring changes in enrolment and attendance when an SFP is interrupted or terminated; looking at school attendance and enrolment in comparable schools with and without an SFP; or observing possible changes in student numbers and daily attendance after introduction of an SFP. The more sophisticated of these studies use research designs which permit assessing the relative importance of different variables, including school feeding, for children's access to schools.

In 1984, an evaluation was conducted of the government school feeding programme in Tamil Nadu, India.<sup>2</sup> This programme provided a nutritious free meal to children below the poverty line in the age group two to 15. The researchers used household survey data and records kept at schools, day care centres and village offices to assess changes in the rural socio-economic environment in general, and in children's education in particular, resulting from the introduction of the SFP. The study found a highly significant improvement in school participation due to school nutrition. School feeding clearly helped to increase enrolment at primary school and to promote continued education beyond the elementary level. However, the results also suggested that a stronger incentive was needed to support high school education, as it involves higher opportunity cost. The special interest of this study lies in its analysis of the income-transfer effect of school feeding, which was found to be most significant amongst agricultural labourer households (i.e., low income, relatively high opportunity cost associated with sending children to school).

A study carried out in 1993 for the Ministry of Education in Morocco examined the role of various factors in the schooling of children in rural areas. These factors included the existence of school canteens.<sup>3</sup> A sample of 1,600 households was identified, and household interviews were conducted covering aspects such as:

- i. identification of school facilities in the catchment area;
- ii. family composition;
- iii. socio-economic situation of the household;
- iv. family opinions on the value of education and on factors hindering children's schooling; etc.

The researchers assessed the influence of the existence of a school canteen both on children's access to education and on their retention. It was found that the likelihood of children (seven to 12 years age group) enrolling at primary school was significantly higher if at least one of the schools in the catchment area was equipped with a full-scale canteen. This effect was even more important with girls. The correlation held true only for full-scale canteens, whereas the presence of a simple canteen did not significantly correlate with enrolment. The findings also indicated that the functioning of a full-scale canteen was a positive factor for retention. While these findings are impressive, it is not explained exactly in which way the existence of a school canteen facilitates enrolment. It could be assumed, however, that it is the income transfer effect of the school meals which produces this result.<sup>4</sup>

In a review of evaluations of US bilateral food aid programmes (PL 480 Title II) spanning the years 1980-85, The

United States Bureau for Food for Peace and Voluntary Assistance came to the following conclusions regarding school feeding programmes: while certain evaluations had used flawed methodology and results were not always conclusive, several studies did present evidence of improved enrolment and attendance thanks to school feeding. SFPs also seemed to have a greater impact on girls than boys in certain circumstances (e.g., where female enrolment was significantly lower than that of boys and where girls' labour at home was particularly valued). The document cites a study from India which found a positive association between school feeding and enrolment as well as attendance, especially for girls and scheduled castes and particularly in those areas that were neither the very poorest nor the most affluent.

In 1986, Beryl Levinger published a comprehensive review of studies on the educational effects of school feeding programmes in developing countries. Amongst many others, she cites a 1982 evaluation of the PL 480 Title II programme in the Dominican Republic. This school lunch programme, which had started in 1962, was interrupted abruptly in 1979 when donated commodities were no longer available. The researchers collected data both through teacher interviews and from school records. Their findings on the impact of the feeding disruption included the following: i) about one-fourth of the children who would otherwise be in school dropped-out; ii) the decline in enrolment was lowest for the first grade and highest for the sixth grade; iii) for the lower four grades, girls' enrolment declined more dramatically than that of boys (this seemed to have been more significant in rural than in urban schools).

Levinger's review of literature on school attendance and enrolment confirms the design weaknesses and contradictory findings of many studies. At the same time, she concludes that SFPs probably do make a difference in enrolment and attendance if their design takes into account the environment in which they operate. This includes, for example, the need for programme regularity; the importance of parent education and involvement; and the provision of rations with a sufficient financial/income transfer value to offset opportunity costs hindering children's access to schools. Levinger also concludes that SFPs should be targeted to poor (although not too poor), stable, rural areas where enrolment and attendance are relatively low. The focus on "borderline" communities in economic and educational terms is based on the outcome of several studies from such countries as Kenya, the Philippines, Colombia and Guatemala. These findings include the fact that children from better-off homes attend school more regularly, hence are less likely to be influenced by an SFP (Kenya, Philippines, Colombia). On the other hand, where poverty and the need for child labour are particularly high, the financial value of school meals needs to be very significant to offset the opportunity costs of schooling, if this is at all possible (Guatemala). Similar conclusions can also be drawn from the Tamil Nadu SFP evaluation mentioned above.

The conclusion that most of the research on school feeding programmes, despite limitations in design and validity of findings, supports a positive effect of SFPs on school attendance and enrolment is shared by other authors who have reviewed existing literature in this field.<sup>5</sup>

### **School Feeding, Health and Nutrition**

In the early years of SFPs, objectives often focused on general improvements in the nutritional status of

participating children and alleviation of malnutrition. Increasingly over the years, however, research has documented that malnutrition among schoolchildren is the result of a multiplicity of factors, not merely limited to caloric intake. Moreover, such studies have revealed the intricate interrelationships among health, nutrition and education. An overview of findings follows.

The major health conditions that have been shown to affect school attendance and performance include, inter alia, nutritional deficiencies (mainly protein energy malnutrition or PEM, iron deficiency anaemia, vitamin A deficiency or VAD, and iodine deficiency disorders or IDD) and infectious diseases (in particular helminthic or intestinal parasitic infections).

PEM, which results from the cumulative effects of inadequate food intake (both in quantitative and qualitative terms) and of repeated infections, affects over 190 million children under five years of age.<sup>6</sup> Several studies have shown significant negative effects of PEM during infancy and the preschool period on cognition during later schooling.<sup>7</sup> Likewise, there is conclusive evidence on the effects of iron deficiency anaemia, which affects over 50 percent of preschool children worldwide, on physical growth and on cognitive performance.<sup>8</sup> VAD, with approximately 13 million children estimated to have some clinical eye signs of deficiency, is the most common cause of preventable childhood visual impairment and eventual blindness, and most likely keeps many children from entering school or interferes with their learning in the classroom. The impairments to physical and mental development resulting from IDD, which pose a public health problem in 118 countries and affect about 60 million schoolchildren worldwide, are also well established. Finally, although not a nutritional deficiency per se, the effects of temporary hunger in the classroom (resulting from missing breakfast after an overnight fast and having to walk long distances to school on an empty stomach) on cognitive performance have also been shown, and are discussed in more detail in a subsequent section.

With school-age children being either affected by or vulnerable to nutritional deficiencies, school feeding programmes were therefore traditionally conceived as "nutritional interventions" aiming at improving nutritional status, measured primarily through increments in height and weight. However, while the effects of poor health and nutrition on school enrolment, attendance and performance are well established, the effects of school feeding interventions on nutritional status are less well documented and show inconsistent results in both developed and developing countries.

Frequent (i.e., five days/week) and long-term participants (i.e., older children who participated in the programme since entering school) in the School Lunch Programme in the United States had **higher weights for their age**, (although slight) than other participants.<sup>9</sup> Another longitudinal study comparing participants and non-participants in the School Lunch Programme in England and Scotland did not show a relationship between **rate of growth (height increments)** of children and uptake of school meals, except for children from the poor socio-economic strata whose mothers were working outside the home.<sup>10</sup> In Jamaica, a study was undertaken to evaluate the effects of a school breakfast consisting of either a glass of milk and a cake (380 kilocalories and 13 grams protein) or a glass of milk and a patty (730 kilocalories and 25 grams protein). The school breakfast, while failing to produce **weight increments** in a group of children who initially had poor levels of school achievement, attendance and nutritional status, succeeded in addressing temporary hunger, contributing to significant improvements in attendance and school achievement.<sup>11</sup>

The use of diverse evaluation methodologies, including different nutritional indicators, the differences in the types of meals and their nutrient content relative to requirements, and the inclusion of a varying number and type of intervening factors in the design of these studies, render comparison of general conclusions difficult. Furthermore, the inconsistency of results is not surprising in view of the multiplicity of interrelated factors affecting nutritional status, in particular infections (discussed below) and the difficulties in isolating the effects of any individual vertical intervention. For instance, the aforementioned studies allude to other determinants of nutritional status such as parents' education, family income and mothers' employment as playing a more predominant role than school feeding.

It must also be noted that the quality and quantity of the school meals, which vary widely across programmes, have not always been taken into account. Although additional nutrient intake expected from school meals may in fact be less than anticipated due to substitution of school meals for part of the children's usual diet, some studies have shown that the quality of school meals plays a role in both nutritional and educational grounds. For example, a comparison of children receiving two types of school lunches in India revealed that over a six-month period children receiving the lunch providing higher calories, protein and micronutrients had significantly greater weight and height increments than the other children.<sup>12</sup> In Chile, educational achievement was found to be significantly and positively correlated with the frequency of consumption of dairy products and with nutrient intake, in particular protein and calcium.<sup>13</sup>

The burden of disease during the studies' duration is not mentioned. This is particularly relevant in developing countries where diarrhoeal diseases are responsible for one-quarter of child deaths, with over half of these children being malnourished.<sup>14</sup> Up to 70 percent of all diarrhoeal episodes may result from the ingestion of contaminated food or water. It must be also noted that about 400 million school-age children are infected with intestinal helminths,<sup>15</sup> which affect school performance both directly (for example, through disease-related absenteeism) and indirectly by contributing to malnutrition through interference with nutrient intake and utilization (for example, hookworm-related anaemia). Conclusive evidence exists on the nutritional and educational benefits of relatively inexpensive deworming interventions such as single or twice-yearly doses of an anthelmintic drug for the treatment of children affected by hookworm.<sup>16</sup> For example, Mebendazole, which is produced in generic form, is available at 0.027 dollars per dose. By decreasing infection intensity, and despite possible reinfection, one or two doses of Albendazole per year resulted in growth improvements in Kenyan school-age children living in areas where intestinal parasitic diseases and poor growth were prevalent.<sup>17</sup> In fact, WHO recommends treatment without prior individual screening where surveys of school-age children show a prevalence exceeding 50 percent.

In view of all the above, recent international and national education initiatives have focused on integrated school health and education interventions. The main elements of such interventions include:

- a. a healthy school environment (primarily but not exclusively adequate water and sanitation facilities);
- b. comprehensive school health education;
- c. comprehensive health services for students and staff which address priority health

- conditions (such as deworming campaigns);
- d. nutrition and food services (including school feeding programmes);
- e. mobilization of parents and communities.

### **School Feeding and Learning**

As described in the preceding section, SFPs cannot be expected to make a direct measurable contribution to combating malnutrition among schoolchildren. Attention has thus increasingly focused on school feeding's role in maximizing children's learning capacity through the relief of short-term hunger. Here, experts have met with more success in demonstrating positive effects. Qualitative information, gathered through interviews with teachers, parents and schoolchildren, strongly supports the role of school feeding in helping children to concentrate and assimilate knowledge. The impact is especially visible in cases in which children walk long distances to school having had little or no breakfast. Evaluation Mission reports of WFP's own SFPs are rich with such information. In addition, quantitative studies by various experts have produced similar results.

An example of an SFP evaluation with positive results is a study carried out in 1991 by Jarousse and Mingat [18](#) to assess the relative importance of different factors in the learning of primary students in Benin. Learning achievement was measured by comparing test scores in French and Mathematics at the beginning and end of the school year for students in grades two and five. The study found learning achievement to be much higher for children at those schools that had a school canteen; this relationship remained significant even when controlling for all other individual or environmental variables. The authors mentioned that similar studies with comparable results had been carried out in Burkina Faso and Togo. When looking at the possible explanation for such a positive relationship between learning achievement and the existence of a school canteen, the researchers identified two possibilities:

- i. improved nutrition of students because of school feeding, and
- ii. more regular attendance and thus more time spent in class.

Another positive SFP study is the work carried out in 1983 by McGregor et al. in Jamaica.[19](#) The study focused on rural secondary schoolchildren (average age 12 years) who were undernourished and had a record of irregular attendance and low achievement. Some of these children were given a breakfast, some received a syrup drink and some received no supplementation. All children were monitored over one term without intervention, then over a second term with intervention; thus, all students were their own control group. During the experiment the researchers collected data on attendance and achievement as well as anthropometric indicators. Children who received breakfast did not improve in weight, height or spelling but showed significantly better performance in arithmetic and also improved their attendance (the non-treated group actually dropped off in attendance).

However, some other SFP evaluations failed to provide clear evidence for a positive link between school feeding

and children's learning. For example, an evaluation of the school lunch programme in Orissa, India [20](#) compared the academic performance of boys participating in the SFP with those not participating. Using examination scores, the researchers found no significant difference between the two groups. Another study looked at the primary school feeding programme in Lesotho. [21](#) To test the effects of SFP participation on students' learning, the researchers used an intelligence test, teachers' reports and other data. The study did not observe any significant differences in intelligence tests or anthropometric measurements between participants and non-participants in the SFP. In an analysis of both studies, however, Levinger notes that none provided sufficient control for the socio-economic status of participating children. In the case of India, SFP schools had more children from a lower socio-economic status (more tribal students and students from lower castes). Thus, it could be argued that the school feeding programme actually helped to bridge the gap between the better-off non-SFP schools and the lower-status SFP schools, resulting in equal examination scores.

A comparative evaluation of school feeding programmes in Colombia, Kenya and the Philippines also included an assessment of SFP impact on the cognitive development of students in grades one and three. [22](#) The researchers compared non-SFP students with participating students; the latter group was further broken down into children with more and less exposure to the programme. All students were administered a test designed to measure their present intellectual activity. The study yielded positive but not fully conclusive findings regarding the effect of the school feeding programme on performance: while in about half of the surveyed schools there appeared to be a significant relationship between feeding and good grades, in the other schools there were few performance effects that could be attributed to SFPs.

Dr. Ernesto Pollitt carried out several reviews of existing research in this area for UNESCO. The latest and most comprehensive was published in 1990. He cites several studies (two from North America, one from Jamaica) where schoolchildren were administered various tests to assess their cognitive function after some of them had breakfast and others not. Study results suggested that temporary hunger caused children to be more easily distracted and to be inattentive in class. The study in Jamaica included a sample of children with a previous history of undernourishment (wasting and stunting); it appeared that this group was particularly vulnerable to missing breakfast and scored lower in most cognitive tests than children with no history of undernourishment.

On the whole, research that examines the effect of short-term hunger, nutritional status and school feeding on the cognitive function and learning achievement of students is, methodologically speaking, complex and thus not always conclusive. While there is significant evidence that short-term hunger affects children's cognitive function, many studies of ongoing SFPs failed to demonstrate noticeable improvement in children's learning, with some exceptions (Jamaica, Benin). There is widespread conviction, however, that such contradictions are more a sign of weakness in the design of existing SFP evaluations than a clear questioning of the effects of school feeding. [23](#) It is quite obvious that current nutritional status alone cannot be a sufficient explanation for achievements or shortcomings in children's learning, given the many other intervening variables (children's socio-economic background, school characteristics, etc.). At the same time, there is sufficient evidence to indicate that the effects of missing breakfast, particularly in already undernourished children (a widespread condition in the developing world), are serious enough not to be taken lightly. Even without a definitive answer to the question of whether SFPs make a significant difference in the cognitive development of students, the available evidence seems to illustrate more the need for additional research and improvements in existing SFPs (see below) than to warrant giving lesser priority to school feeding programmes in general.

## Secondary Benefits of School Feeding Programmes

The above review concentrated on the direct effects of school feeding programmes in facilitating access to and retention in schools as well as improving the learning capacity of students. However, in an effort to assess the all-round benefits of SFPs, it is worthwhile also to examine potential indirect effects of such programmes. Little actual research has been carried out, but the literature does list a number of plausible and positive secondary effects that merit closer study. For example, the preparation and distribution of school meals can be used as a setting for enriched and improved teaching-learning processes in school. Participants at a 1983 UNESCO seminar on this topic concluded the following: "It is abundantly clear...that school feeding activities provide valuable learning experiences which can be integrated into the total teaching/learning process in the school as well as the community to foster the achievement of important cognitive, affective and psycho-motor objectives in various subject areas, such as health, nutrition, science, mathematics, agriculture...language arts, social studies, music and performing arts." [24](#)

Another aspect that frequently comes up in reviews of SFPs is their potential to stimulate community participation in education. This is particularly important given the increased emphasis on decentralizing educational services and soliciting parents' support for construction, maintenance and management of schools. Lvinger's 1986 SFP review, for example, points out how communities often need to achieve a certain degree of organization in order to become eligible for an SFP (working together for the construction of storage, cooking and feeding facilities; distribution of tasks related to transport, preparation and allocation of food, etc.). [25](#) At the same time, success in this area may reinforce parents' belief that community organization can lead to concrete benefits. A UNESCO document on new approaches to SFPs reports on a WFP-assisted school feeding project in Madagascar whose design, from the beginning, included strong input from parents and the communities.[26](#) Parents' groups were to have major responsibility for finding funds for the SFP, assisting in its implementation and encouraging the school and community to produce additional foods. The longer-term goal of the project was that parents' contributions and stimulation of productive activities at schools would eventually allow for replacement of WFP-supplied commodities. However, this was later found to be over-ambitious.[27](#)

School feeding programmes can thus act as a vehicle to motivate parents to take a more active part in the organization of the school and the community at large. If properly designed, they can also provide the setting for community development activities such as creating employment opportunities (e.g., for cooks) or providing an outlet for local food production (local purchase of commodities, using locally processed foodstuffs, etc.).

## Conclusions

The existing literature concerning the effects of school feeding on education is not fully conclusive. While studies based on an appropriate experimental design usually succeed in capturing the positive effects of school feeding, most of the ordinary field evaluations of SFPs are too crude to yield significant results. However, this seems to

be mostly due to weak design (insufficient control over other intervening variables; lack of comparability between SFP and non-SFP schools; lack of sufficient baseline data, etc.) as well as the nature of the intervention itself and its ecological context. In fact, it is not easy to isolate the exact influence of one particular variable on, say, attendance in a setting where so many factors are at play (quality of school facilities, educational level of parents, other demands on children's time, quality of education provided, etc.). Moreover, certain important types of information are particularly difficult to obtain (e.g., intra-family behaviour).

Ernesto Pollitt recognized these difficulties in the context of measuring the impact of malnutrition on education: "Scientists have had serious limitations in assessing precisely the level of risk associated with malnutrition. This is not due to scientific negligence, but to the complexity of measuring, in the human context, the effects of a particular variable in a complex ecological setting." [28](#)

However, these difficulties need to be put into perspective. They are, in fact, frequent in socio-economic research and also encountered in studies on other aspects of educational development that are used as a basis for policy decisions. For example, the empirical evidence on the influence of school facilities or level of teacher training on children's schooling is still relatively limited; nevertheless, important investments are made in these areas. A paper by Behrman, discussing the dilemma of making policy decisions on the basis of imperfect information, argues as follows: "...because the empirical basis for policies that relate to the impact of health/nutrition on education is not as strong as would be desired is not a good reason to ignore what the better available studies suggest in this policy area." [29](#)

On the basis of the available information, the following conclusions can be drawn:

### ***Access, attendance***

School feeding programmes can be a valuable instrument for stimulating enrolment and regular attendance as well as for preventing drop-out (Morocco, India/Tamil Nadu), although probably to a lesser extent. SFPs work in this way primarily by transferring "income" to families. In this case, the value of the school food ration needs to be sufficiently high to offset the opportunity costs linked to schooling.

There is evidence that school feeding plays a particular role in increasing enrolment and attendance of girls (Morocco, India, Dominican Republic). How exactly school meals work in this way is unclear; one interpretation is that SFPs might be effective where schooling of girls is hindered by opportunity costs (girls having to work at home).

SFPs work best for enrolment and attendance in "borderline" communities, where poverty is high but not abject, and education not yet very well established.

For SFPs to reach their full potential, they should best be coordinated with other efforts to facilitate access to schooling and improve its quality.

### ***Health and nutrition***

In view of the well-established interrelationships between education, health and nutrition in early childhood and

school-age children, and their combined implications on economic and human resources development, interventions in pre-primary and primary schools should be considered a priority in countries and areas within countries where relevant indicators are unfavourable.

School feeding programmes should therefore be considered where the prevalence of nutritional deficiencies and temporary hunger is high and other indicators confirm poor availability and access to food (e.g., high level of household food insecurity).

In order to maximize the benefits of SFPs, priority should be given to their integration into comprehensive school education and health interventions, in particular their combination, when relevant, with intestinal helminths control programmes.

In view of the multiplicity of factors causing malnutrition and the relatively small (and possibly non-additional) nutritional input relative to total daily requirements of a school meal, vertical supplementary feeding programmes cannot be expected to yield significant changes in nutritional status.

On the other hand, with careful planning of both ration composition and complementary health/nutrition activities, SFPs may play a role in counterbalancing to some extent deficiencies in the regular diet, particularly with respect to micronutrients.

### ***Learning***

There is sufficient evidence to suggest that school feeding can enhance the cognitive function of children by offsetting the effects of short-term hunger. In order to be most effective in this way, feeding should take place as early in the day as possible. School snacks thus appear more appropriate than full meals, which also take longer to prepare.

School feeding appears to be most effective in this way amongst already undernourished children.

The size and composition of the ration needs to be based on careful analysis of local nutritional conditions.

In order to enhance the impact of SFPs on children's learning, the programmes should be made part of a larger school health and nutrition intervention. Possibilities include: enriching school meals with micronutrients, deworming, providing safe water and sanitary facilities to schools, and offering health/nutrition education.

### ***General conclusions***

Programme regularity and sound programme management are basic conditions for any SFP to be effective. [30](#)

It is important to involve local communities in the operation of an SFP and make them aware of its role and benefits. At the same time, school feeding programmes lend themselves particularly well as a vehicle for stimulating community involvement in education.

In general, targeting schools or geographic areas is preferable to targeting individual children within schools.

This latter practice may result in jealousy amongst students and even parents, ration sharing (thus diluting nutritional impact) or reducing important educational payoffs such as commitment by parents and teachers or integration of feeding with cognitively oriented activities. In-school selection further presupposes the availability of detailed information about each student (e.g., parents' income, nutritional status, etc.), a condition which is difficult to meet in many countries.

It may not always be possible, or cost-effective, to try to achieve multiple objectives in one programme. For example, an early morning snack may be nutritionally sufficient for short-term hunger alleviation but not "financially" sufficient for stimulating enrolment and attendance. Where the emphasis is mostly on increasing access to schools, with no nutritional problems to be addressed, food could even be provided as take-home rations, eliminating the need for cooking and food distribution at the school level. A careful, case-by-case assessment of needs should therefore precede the decision on priority of objectives and possible interventions. Each intervention should be designed in accordance with its objectives, including targeting criteria, ration size and composition, type of meal to be provided (snack, lunch, both) as well as complementary activities (training of school staff and parents; other school health and nutrition interventions; other interventions to address obstacles to enrolment and attendance, etc.).

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## Footnotes

<sup>1</sup> The FAO Conference Resolution 1/61 of 24 November 1961 states that "In the administration of the programmes, attention should be paid to...assisting in pre-school and school feeding."

<sup>2</sup> Babu, Hallam (1989).

<sup>3</sup> These canteens are of two types: i) full-scale (cantine complète avec réfectoire), and ii) simple (cantine simple, informelle).

<sup>4</sup> This interpretation is based on the following two observations: the "pull factor" of school feeding is significant only in the case of full-scale canteens which provide more and better food and thus higher income transfer. The study also found that the need for children to help with domestic chores or earn money is detrimental to their schooling, particularly with girls (who are also the most perceptive to the existence of a canteen); these opportunity costs could be partly offset by school feeding.

<sup>5</sup> See, for example, Jamison/Leslie, 1990; Pollitt, 1990.

<sup>6</sup> FAO/WHO. Nutrition and Development: A Global Assessment. FAO/WHO International Conference on Nutrition, 1992, ICN/91/INF/5. Food and Agricultural Organization, Rome and World Health Organization, Geneva.

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<sup>14</sup> FAO/WHO Nutrition and Development: A Global Assessment, *op. cit.*

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<sup>16</sup> Stephenson, L.S., *et al.* Weight gain of Kenyan schoolchildren with hookworm, *Trichuris trichiuria* and *Ascaris lumbricoides* infections is improved following once- or twice-yearly treatment with Albendazole. *Journal of Nutrition*, 1993, 123:656-665.

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<sup>17</sup> *Ibid.*

<sup>18</sup> Jarousse, J.P. and Mingat, Alain. Evaluation Analytique de l'Enseignement Primaire au Benin, UNESCO, Paris, 1991; Mimeo.

<sup>19</sup> Powell, C., Grantham-Mcgregor, S., Elston, M. *op. cit.*

<sup>20</sup> Roy and Rath, 1970, cited in: Levinger, 1989.

<sup>21</sup> Kanno, 1973, cited in: Levinger, 1989.

<sup>22</sup> Company, 1977, cited in: Levinger, 1986.

<sup>23</sup> See, for example, Pollitt, 1990; Levinger, 1986 and 1994; UNESCO, 1991.

<sup>24</sup> UNESCO, 1983, page 21.

<sup>25</sup> A practical example for this from WFP's work is the school feeding project in Namibia, where communities had to actively apply for inclusion in the programme.

<sup>26</sup> Claude: School feeding and development in Madagascar; in: UNESCO, 1986, pages 21-53.

<sup>27</sup> See findings of a management review mission fielded by WFP in 1988.

<sup>28</sup> Pollitt, 1984.

<sup>29</sup> Behrman, 1994, page 24.

<sup>30</sup> It should be kept in mind, however, that the reality in LDCs, where WFP is expected to concentrate its efforts, often makes it difficult to fully meet these conditions (transportation difficulties; weak institutional capacity of governments resulting in poor administration and record keeping, etc.).

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## School Feeding Handbook

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*To combat hunger and poverty and improve the quality of life of the most vulnerable are central goals in WFP's development and emergency efforts and are enshrined in its Mission Statement. Education, while not a panacea in itself, contributes in many ways to reaching these goals, by furthering macro-economic growth, improving living standards at the household level and positively influencing other social indicators.*

### **Education and Economic Growth**

Research over the years has forcefully demonstrated the impact of education on economic growth. Education has been shown to contribute to increasing the productivity of workers, since literate workers are more likely to seek ways to improve their work and to adapt to changing situations. This is particularly important in situations of rapid change and development, which require an increasingly skilled and flexible workforce. Education also contributes to integrating more women into the world of work. As literacy levels of a population rise, the percentage of women in the work force increases, since educated women are more motivated and better equipped to seek employment.

Analyses comparing the cost of education to its benefits have confirmed that investments in the education sector are highly justified by their pay-offs, both to the society at large and to the individual. Many studies suggest that investments in human capital, particularly in education, are more conducive to economic growth than investments in physical capital. Benefits have been shown to be particularly high for primary education. In one multinational study the social rate of return averaged 27 percent for primary and between 15 and 17 percent for secondary education; the private returns were 49 percent and 27 percent for primary and secondary education, respectively.<sup>1</sup> It was also found that the returns to education, in developing countries are higher than

in more advanced countries.

It must be kept in mind, however, that macro-economic achievements do not automatically result in better living conditions at the household level. Thus, macro-economic development cannot be seen as an end in itself but rather as a driving force to create the necessary conditions for social progress and reduced poverty.

### **Education and Improvements in Income at the Household Level**

Education is associated in many ways with improvements in the economic situation and living conditions of families. For example, a survey of 89 developing countries showed that there were parallel increases in the literacy level of a population and family incomes. In countries with an adult literacy rate of around 40 percent, GNP per capita averaged 210 dollars;<sup>2</sup> in those countries with at least 80 percent literacy rates, GNP per capita was 1,000 dollars and above. Basic education can thus help families earn higher incomes and make better use of their earnings through informed consumption choices and improved household management.

Education, particularly primary education, also increases the chances of self-employment. Given the importance of the informal sector in the developing world, this is a significant aspect. Basic education not only provides the essential skills of reading, writing and computing, along with some technical know-how or basic business skills; educated people are also often more self-confident (this is particularly important for many women) and have better access to relevant information.

Since the larger part of the population in the developing world is engaged in subsistence agriculture, the effects of basic education on agricultural productivity have been an important policy issue and the subject of much research. One study by the World Bank - based on eighteen surveys carried out in thirteen countries - found that a minimum of four years of primary education increased farmers' productivity by an average of 8.7 percent for all countries, and 10 percent for those countries undergoing modernization and growth. Moreover, education, particularly literacy and numeracy, is often a prerequisite for introducing more modern farming techniques (fertilizers, irrigation, etc.).

Several studies have shown that the spread of basic education helps to reduce income disparities within countries. As the educational level of the labour force increases, income is redistributed. The educational level of populations has been demonstrated to be inversely related to the proportion of people living below the poverty line; this is particularly true of rural areas.

### **Indirect Ways in Which Education Helps to Reduce Poverty**

Apart from the immediate concerns of whether families are able to grow enough food to sustain themselves, or earn sufficient income to buy food, the extent of poverty and hunger in a population is also determined by many "indirect" factors that, in turn, are influenced by education.

One area that has recently received renewed attention is population dynamics. When the population is too large or increases too rapidly in relation to available resources, per capita income declines, employment opportunities

decrease, urban problems are exacerbated, the environment deteriorates and the costs of providing basic social services, including schooling, rise. Education is essential for any effort to contain the rapid population increase. There are clearly established inverse correlations between increases in female literacy and declining fertility and infant mortality rates. For example, in developing countries with a female literacy rate of less than 20 percent, each woman has on average six children; where female literacy has reached 80 percent and more, this figure drops to 2.7. Other studies have shown that on average one additional year of schooling for a mother results in a reduction of almost one percent in child or infant mortality rates. Better educated mothers and fathers are more open to family planning and better able to look after their children's health and nutrition. At the same time, with more children reaching adulthood, parents no longer feel the need to ensure their own "social security" by having many children.

Education also has benefits for the overall well-being of the family. In fact, education often acts as a catalyst for people to benefit from improvements in health or nutrition or to live in greater harmony with their environment. Thus, as the educational level of a population increases, the chances of living a healthy, productive life rise. This is evidenced, for example, in a survey of 106 developing countries, where strong, positive correlations between adult literacy rates and life expectancy at birth were found.

Last but not least, education plays a key role in another area indirectly linked to reducing poverty and hunger, namely social cohesion and integration. Education equips the individual with the necessary tools for continued learning, critical thinking and social awareness. Educated adults have better access to information, can make more informed choices and tend to be more active in exercising their civil rights.

### **Conclusions**

Education, particularly basic education (early childhood development, primary education, adult literacy) makes an important contribution to alleviating poverty and hunger and improving people's lives. This was reconfirmed recently by the world community in a series of major meetings where governments pledged their commitment to improving education - from the World Conference on Education for All (Jomtien, Thailand, 1990) to the World Summit for Social Development (Copenhagen, Denmark, 1995) and the Fourth World Conference on Women (Beijing, China, 1995). Participants at the Copenhagen Summit, for example, recognized that "the satisfaction of basic human needs, including education, is an essential element of poverty reduction" and committed themselves to "promoting and attaining the goals of universal and equitable access to quality education". The Copenhagen Programme of Action includes a point of particular interest to WFP, namely the importance of "facilitating access to education for people living in poverty...by providing social services, such as meals...as incentive for families...to keep children in school...".

Basic education, especially for women and girls, is thus amongst the wisest investments that governments and donors, including WFP, can make to improve the physical, social and economic conditions of the poor. WFP committed its support to the Strategic Objectives adopted at the Beijing Conference to provide universal access to basic education and ensure completion of primary education by at least 80 percent of primary school age children.

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#### Footnotes

1 The social rate of return compares changes in workers' productivity, as expressed in life-time earnings, to the social cost of education (teachers' salaries and other recurrent costs, value of school buildings and equipment, opportunity costs to society, etc.); private rates of return imply the same calculation but take into account only private costs of education (expenditure on books, fees, uniforms, opportunity costs as expressed in income foregone by the individual, etc.).

2 All monetary values are expressed in United States dollars, unless otherwise stated.

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# School Feeding Handbook

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*The general theories and research findings concerning food aid to education, presented in Chapter II, serve as the backdrop for the formulation, execution and evaluation of WFP school feeding activities. It is neither necessary nor useful to reiterate these known principles in each individual project which is formulated. Rather, efforts should be directed toward ensuring that each project is soundly designed and effectively implemented so as to maximize the likelihood of positive impact.*

*Following are the principles which will guide the formulation of WFP-assisted projects in the education sector:*

### **Institutions Eligible for WFP Assistance**

The principal channel for provision of WFP assistance is through state-supported primary day schools. Pre-primary schools are also eligible for WFP assistance. WFP will not provide assistance to secondary day schools.

Exceptions to the above may be made for boarding schools (primary and secondary) serving clearly identified poor populations which would otherwise not have access to education (for example, in nomadic zones; girls' hostels in areas with particularly low education of girls; sparsely populated areas in which schools are widely dispersed). These will be considered on a case-by-case basis.

Assistance to teachers and teachers' aides in participating schools is not to be provided in the form of a salary supplement.

Teacher training institutes are not eligible to receive WFP assistance.

### **Problem Analysis**

The general guidance on carrying out problem analysis during Appraisal and deriving project objectives therefrom is provided in the Project Design Manual and is applicable here as well. Specifically, Appraisal of projects in the education sector should include examination of the following:

- a. achievements with regard to access (enrolment ratios) and retention (attendance; drop-out) in primary education broken down by gender, region and socio-cultural groups to the extent possible;
- b. factors explaining the above rates;
- c. extent of short-term hunger;
- d. factors contributing to short-term hunger;
- e. geographic dispersion of schools (i.e., average distances of schools from homes of students covered);
- f. specific cultural practices affecting enrolment/attendance, especially of girls (e.g., seasonal farm labour needs; early marriage; migration of parents with/without children; parents' preference for private schooling for boys).

The above listing is not exhaustive; individual appraisal missions should of course be sensitive to and examine in-depth any other factors having a direct bearing on education and the potential role of WFP. Once problems are identified, the potential role of WFP food aid to help overcome them should be carefully assessed. If such a role can be seen only in certain regions, or among certain population groups, this should be clearly specified.

## Objectives

### *Long-term objectives.*

These are to be stated in terms of support to Government overall programmes related to education and to household food security, citing specifically the goal(s) most relevant to the WFP intervention. WFP's objective will not be to replace government resources in education or food security programmes, but to supplement government resources where (and only where) those resources have been adequately and appropriately committed.

### *Immediate objectives.*

The formulation of immediate objectives takes into account the large number of interrelated factors which determine nutritional and educational outcomes. Although it is not possible to establish universal objectives, there is to be consistency in the manner in which objectives are stated in WFP projects. In each project, immediate objectives are derived directly from the Problem Analysis, applying the following principles:

- In cases in which a rigorous analysis of the country situation demonstrates the likelihood that provision of food will have an effect on enrolment, attendance or drop-out, the immediate objective will be stated as follows: "To **contribute** to the [**specific expected change(s)**, e.g., improvement of primary school enrolment; stabilisation of attendance rates across regions; reduction of afternoon absenteeism]." Expected changes must be quantified (i.e., targeted percentage of increase) only in cases in which comprehensive and valid data exist upon which to make such calculations.
- With regard to scholastic performance and short-term hunger, if justified by the Problem Analysis, the objective will be stated as follows: "To improve children's capacity to concentrate and assimilate information by relieving short-term hunger."
- Improvement in nutritional status will not appear as an objective in WFP-assisted school feeding activities.
- WFP assistance aims at reducing disparities where these are gender-related and may, in some cases, be aimed at reducing geographical disparities (urban/rural; inter-regional) in access to education. When fully justified in the Problem Analysis, the objective will be stated in the following manner: "To contribute to reducing disparities in [state particular problem, e.g., enrolment, attendance rates] between/among [state specific areas]." Expected changes are not required to be quantified.
- Provision of food rations to cooks, kitchen helpers and other non-teaching staff will not appear as project objectives. When such measures are included, they are considered to be project implementation mechanisms and will be described accordingly under the

appropriate section in project documentation. However, as a general principle, provision of such support by WFP is discouraged and should be covered by government or community contributions.

- In special cases in which boarding schools are approved to receive WFP assistance, objectives will be formulated as follows: "To contribute to increasing enrolment of [specify: children of nomadic families; girls; other target group] by allowing boarding schools to operate at full capacity throughout the entire school year."
- While all WFP-assisted education projects are designed with health and nutrition considerations in mind, in certain cases these objectives will be explicitly stated. This will occur when certain types of activities are included as significant project components. Such activities would include, for example: i) interventions having nutrition or health objectives which are linked directly to the distribution of WFP rations (e.g., provision of micronutrients, deparasitization.); ii) activities aimed at improving knowledge and practice of health/nutrition principles (e.g., education sessions for parents; special courses for teachers).

### **Role and Functions of Food Aid**

The role and functions of food aid depend upon the problems identified and objectives established in individual projects. In most cases, the primary roles of WFP assistance in school feeding activities will be: a) to provide a nutritional supplement to school children coming from households in a **specifically targeted** group; b) to encourage families to enrol/maintain their children in school.

Only in very rare cases will the role of WFP food aid be to generate budgetary savings. This would occur only when actual allocations exist in Ministry of Education budgets and, moreover, their replacement with WFP food can be documented. In such cases, expenditures of released funds will be tracked and reported to WFP.

Budgetary support (i.e., where no savings are generated) will be provided in exceptional cases, to be decided on an individual basis. Most often this will occur, when boarding schools are approved for WFP support.

### **Government Commitment**

Requests for WFP assistance will be approved only in cases in which governments have demonstrated - through promulgations of policies, programmes and financial commitment within their means - that high priority is accorded to human resource development through basic education, as reflected in the World Declaration on Education for All (Jomtien) and the Platform for Action of the Fourth World Conference for Women (Beijing). Projects are supported by WFP but are fully "owned" by the Government, which assumes responsibility for project implementation including provision of project management staff and necessary supporting infrastructure. Throughout the entire period of execution, demonstration of government ownership of the WFP-assisted project

is a precondition for continued support.

## Targeting

Targeting pertains to both project formulation (identification of appropriate criteria for selection of beneficiaries) and project implementation (effective application of the criteria). The soundness of WFP-assisted projects will be evaluated in light of both these aspects of targeting.

As a general rule, targeting within education projects will be conducted at the level of geographic areas, with no selection of individual pupils within schools. The only possible exception to this principle may be when the effectiveness of an incentive for a particular category (e.g., girls) can be demonstrated. Such activities would be implemented on a pilot basis until positive effects can be clearly documented and barring any unintended negative effects. In all projects, specific criteria for targeting will be agreed upon with the Government during project formulation, taking into account government priorities as well as WFP policies and resource availability. These criteria will be clearly spelled out in the project summary, along with details of how and by whom they will be applied.

Targeting of geographical areas will be based upon analysis of the country situation and the problems which food aid is addressing. Selection criteria will be chosen from among the following (to the extent that data are available): i) gender-specific rates of enrolment and attendance; ii) gender-specific indicators of educational efficiency such as drop-out, promotion and repetition rates; iii) household food security indicators; iv) average distance of schools from homes of pupils; v) regional and/or household socio-economic and nutritional indicators.

All rural schools (and peri-urban schools to be decided on a case-by-case basis by WFP) in the targeted geographic area are potentially eligible for WFP assistance. The participation of individual schools will be approved through the following process: minimum standards will be set (in consultation with Government counterparts, and with input from appropriate United Nations and bilateral agencies) regarding hygiene, physical infrastructure and conditions conducive to learning. Schools within the targeted area will be invited to apply for participation in the project. Before the application is approved, WFP will verify that the minimum conditions are met. For those not qualifying, support would be provided to the extent possible to bring the schools up to the standard. When such needs go beyond the scope of WFP's capacity, schools will be encouraged and assisted to mobilize other sources of support.

Project M&E systems will include procedures for monitoring the continued relevance of the targeting criteria as well as their effective application. Compliance of participating schools with the minimum standards agreed upon will also be monitored, including checks to ensure that increased enrolment is not having negative effects on the learning environment (e.g., overcrowding in classrooms, insufficient infrastructure). Input from UNESCO will be sought on an ongoing basis.

### **Ration Composition and Food Distribution**

The composition and size of rations in individual projects will be determined, by the availability of WFP commodities and resources, taking into account the following factors:

#### **Size of ration.**

- . The following average daily requirements for energy and protein within school populations (sexes combined) will be used for planning purposes:

- pre-school children                      (3 - 5 years) 1600 kilocalories 32 grams protein\*
- schoolchildren                            (6 - 12 years) 2000 kilocalories 40 grams protein\*

\* average protein from a rural diet with digestibility of 85%.

- b. It is recommended that 10 percent of the energy intake should come from fat;
- c. Subject to prevailing conditions, the following total (i.e., WFP together with other contributions) daily rations are recommended:
  - i. in schools having one daily session: ration to cover approximately 30-45 percent energy and 60-70 percent protein requirements;
  - ii. in schools having morning and afternoon sessions: ration to cover approximately 60-75 percent energy and 80-90 percent protein requirements;
  - iii. for boarding schools: ration to cover 100 percent energy and 100 percent protein requirements.

#### ***Timing of food distribution.***

Timing will be determined on the basis of the problems identified (e.g., lack of breakfast, afternoon absenteeism) and objectives fixed for the project. To the extent possible, school meals will be timed so as to minimize the possibility that they substitute meals provided at home.

In many situations, food intake at the beginning of the schoolday is desirable. The meal should be light, to provide an "energy boost" without inducing drowsiness, and quick to prepare in order to facilitate early distribution. Milk, technically very suitable, has a prohibitive cost. As an alternative, "cereal drink" (an instant drink prepared from fortified blended food, sugar and flavouring) may be considered.

#### ***Choice of commodities.***

The following factors will be taken into account in the selection of commodities for the food basket:

- a. local dietary habits;
- b. balanced nutritional composition and/or attractiveness depending on project objectives;
- c. low preparation effort and minimal time requirement;
- d. maximum fuel efficiency;
- e. minimal environmental disruption.

A list of examples of different types of rations will be made available.

***Educational value.***

The selected foodbasket should be appraised in view of possible educational value in connection with nutrition education.

***Logistic requirements.***

Consideration will be given to distribution and storage requirements as follows:

- a. suitability of commodities for means of transport available;
- b. adequate shelf-life to reduce transport needs;
- c. potential safety of commodities, resistance to easy deterioration and infestation;
- d. preferably the food basket should not contain more than four commodities.

Commodities such as bread require daily delivery; this will only be feasible when the bakery is close to the school. Fruits and vegetables cannot be transported over long distances. Cereal flours and blended foods have a shelf-life limited to a few months.

***Specific health conditions.***

Where prevalence of intestinal helminths among school-age children exceeds 50 percent, provision of a single-dose, broad-spectrum anthelmintic without prior individual screening is recommended by WHO. Such conditions can justify deworming interventions as part of the WFP contribution to the SFP. Anthelmintic drugs would be given two to three times during the school year.

Deficiencies of micronutrients, relevant to learning ability, may call for fortified commodities in situations where supply of micronutrients through regular sources like vegetables and fruits is not possible. For the supply of micronutrients, fortified blended food is a suitable vehicle.

### ***Hygiene and food safety.***

Schools receiving WFP assistance will be required to meet and maintain minimum hygiene and food safety standards. A general checklist of standards will be elaborated jointly by WFP and WHO for consideration during project appraisal and implementation.

Cost-effectiveness of ration.

The cost-effectiveness of the ration is important in relation to sustainability and eventual take-over by national authorities. The utilization of local commodities and processed foods will be given due consideration in accordance with WFP general policy on these issues.

Indicative values of ration costs (for WFP in FOB prices): per pupil per school year: in range 12-20 dollars.

In planning total food needs, the following factors must also be taken into account:

- . expected changes in number of students to be fed due to enrolment increase, reduced absenteeism;
- b. accepted sharing of the food with cooks and teaching staff.

For more information on the above issues please refer to the "Health and Nutrition Manual"

### **Sustainability and Phase-Out**

Poverty alleviation programmes are potentially as open-ended as the poverty they are seeking to alleviate. In light of this fact, and of WFP's increased focus on aid to LDCs, a rigorous yet realistic approach towards the issue of "long-standingness" has been adopted. This approach strikes a balance between respect for the principle of "government ownership" of projects with a recognition of the existence of mitigating circumstances in certain countries. Such circumstances may be transitory (e.g., structural adjustment, civil strife) or chronic (drought-proneness, unfavourable geographic conditions). In certain cases, it may be appropriate for WFP to provide support to (different cohorts of) students attending primary schools over a long period of time. Such cases will be carefully scrutinized on a regular basis; moreover, they will be almost without exception in LDCs.

Beginning in 1996, all ongoing WFP-assisted projects in the education sector will be subject to a periodic review (every two to three years) aimed at confirming continued government commitment to the provision of primary education for all children. The Review will be based upon the premise that the government has placed high

priority on primary education, and will examine the extent to which this priority is reflected in budget allocations and appropriate policies and actions. While increased financial allocation to the sector is an important indicator of commitment, it is not considered the sole indicator.

Particularly in LDCs, when extenuating circumstances exist, it may not be possible for governments to increase their budgetary allocations to the social sectors beyond a certain limit. In such cases, if WFP assistance is to be continued, a clear and unequivocal explanation of the factors impeding increased Government financial participation must be provided. At the same time, other indicators of commitment must be demonstrated. These may include allocation of funds from external sources (United Nations, World Bank) to support primary education; promulgation of policies promoting primary education (tax incentives for families; waiving or subsidizing of fees for tuition, books.) Particular weight will be given to the undertaking of activities aimed at ensuring access to primary education for girls.

The periodic review will be conducted by WFP Country Offices in collaboration with government counterparts and will make recommendations concerning the scope of WFP assistance to the concerned country in the subsequent three-year period. In addition to the documentation of government commitment described above, the review will include an assessment of the continued validity of the rationale for assisting the sector in the country (updating Problem Analysis as appropriate) and specific evidence of ways in which the project has evolved to meet country conditions. The latter will demonstrate progressive shifting of targeting to the more disadvantaged areas if this has not yet occurred.

As resource constraints become more acute, decisions concerning continued support to projects in education or any other sector will become more difficult. The tension between political, cost-effectiveness, and humanitarian factors will be more evident. Criteria will need to be developed to assist in making especially difficult decisions (for example, whether to continue to expand a school feeding activity or to allocate resources to a new and promising project in another sector).

### **Community Participation**

Active participation of communities, in particular through parents' associations, is encouraged in all WFP projects in the education sector. As a general rule, the essential services required for operating a school feeding programme - cooks, kitchen helpers, guards - should be covered by the community, either by providing such services itself or by contributing cash to compensate those engaged to perform the services. When communities/parents' associations choose the latter approach, provisions may need to be made to accommodate families who are too poor to make even a nominal contribution.

Besides the essential services described above, broader community participation will be built into projects whenever feasible. Project formulation will include an assessment of the potential for incorporating various types of participation, including but not limited to: i) construction of simple school canteens using local materials; maintenance of school canteens; ii) assistance in delivery/storage of WFP commodities; iii) contributions in cash or in kind to school canteens; iv) co-management of canteens with school personnel; v) management of funds in cases where a nominal payment is made by pupils for the meal. In some cases it may be appropriate to involve

local NGOs in mobilizing parents and communities for such activities.

As part of the Implementation Strategy, Project Summaries will include a description of the activities identified. The following will be taken into account in preparing this: i) the need to avoid potential tension between teaching staff, accustomed in many countries to fully controlling all school activities, and community groups; ii) the potential for the school canteen to serve as a catalyst for mobilizing communities. The role of women community members will also receive special attention, bearing in mind the need to ensure that they not only carry out much of the canteen-related work (as has traditionally been the case) but that they are also full participants and have a substantial say in parents' associations, food management committees and the like.

As a general rule, food-for-work components will not be included in school feeding activities. Community mobilization of a voluntary nature is appropriate for the kinds of activities likely to be undertaken. When communities express an interest in carrying out larger-scale, more complex activities requiring technical and other inputs (e.g., construction of infrastructure), WFP will assist in the identification of suitable mechanisms and/or additional funding sources. (In some cases, this will be a separate WFP-assisted FFW project.) There may, however, be cases in which subsidiary activities which are relatively simple, and for which local capacity exists, may be associated with WFP education projects. Examples include small-scale bakery or food processing enterprises. The feasibility of such proposals will be assessed on an individual basis.

### **Coordination with other Donors/Government**

The WFP mission statement clearly specifies that if food assistance is to be effective, "food aid should be fully integrated into the development plans and priorities of recipient countries and coordinated with other forms of assistance." The statement goes on to reiterate WFP's commitment to working closely with United Nations and other development agencies. The need to do so is especially critical in all projects, including school feeding, where it is recognized that the benefits of food aid can be enhanced by combining it with other inputs (e.g., activities aimed at facilitating access to education and improving its quality; other school health and nutrition interventions).

The formulation of WFP-assisted projects in the education sector will be based upon extensive coordination with United Nations and bilateral agencies, considering possibilities such as co-financing. In particular, opportunities will be sought to collaborate with agencies having common concerns and target groups, for example UNICEF. Such an approach will become even more appropriate as WFP proceeds in the preparation of country strategy outlines as well as the move toward the programme approach.

### **Gender**

A key principle underlying all WFP assistance is to ensure that both men and women have equal access to the means to improve their physical, social and economic well-being. In the education sector, this means that all WFP-assisted projects should be aimed at the eventual elimination of gender imbalances in basic education,

adult literacy and provision of skills training. This entails adherence to the WFP commitment at Beijing that at least 50% of resources going to education projects are allotted to benefit girls and women. Individual projects at the country level will be prepared in accordance with this commitment.

Terms of reference for appraisal of projects in the education sector will include an analysis of gender issues in education. This concerns an assessment of the existence and degree of possible gender gaps as well as the identification of factors causing these gaps, particularly the principal obstacles to education of girls. These obstacles will be specified as precisely and detailed as possible in the reports of the Appraisal Missions (for example, it is not sufficient to state that obstacles are "cultural"; rather, an explanation for educational gender gaps is to be given to the extent possible: pressure for early marriage of girls, unacceptability of mixing boys and girls in one classroom, school facilities not adapted to the special needs of girls, lack of female teachers, etc.).

As a complementary goal of school feeding, such activities will be used as a vehicle to promote WFP's gender commitments in education by raising awareness, at government and community level, on the importance of educating girls and taking positive action to improve the status of girls and women within the assisted communities (information and sensitisation campaigns for parents; include gender issues in training courses carried out under a school feeding activity; ensure full participation of women in school feeding committees; discuss gender issues during regular school visits; etc.). In this way, advantage will be taken of the community-mobilisation potential of school feeding activities (see Chapter II "Secondary benefits of school feeding programmes").

Where the Problem Analysis shows the existence of significant gender gaps in access to and completion of basic and primary education, as well as in adult literacy and skills training, WFP education projects will include specific activities to address these imbalances. These may include, for example: assistance to girls' boarding schools, special food incentives to girl students, support to training of female teachers or improvements in school infrastructure. Relevant immediate objectives will be formulated accordingly. Close co-ordination with relevant activities of other UN agencies or NGOs will be sought.

In all WFP projects in the education sector, specific measures will be put into place to track the share of benefits and resources going to girls and women as well as the gender-related effects (intended and unintended) of project activities. Projects will also monitor general developments with regard to women's and girls' education, including relevant government policies and action. This will be done for all types of education projects, regardless of whether or not they have immediate objectives directly related to girls' and women's education. All reporting systems will include a provision for disaggregating statistical data by gender; when qualitative data collection techniques are used, gender analyses will also be carried out.

### **Monitoring and Evaluation**

The overall M&E approach for WFP-assisted projects in the education sector will be based upon the following principles:

- High priority will be given to establishing systems for the accurate and timely tracking of commodity

movements, and of compliance with implementation strategy as spelled out in the Plan of Operations (including application of targeting criteria).

- With regard to project effects, a minimum number of indicators will be derived from immediate objectives. For the most part, assessment of project medium- and longer-term effects will be based upon principles of plausible inference: as the relationships between an intervention (e.g., school feeding) and a desired outcome (e.g., school enrolment, attendance) are demonstrated (see Chapter II), it is assumed that these same effects occur each time similar interventions are carried out. There is no need to demonstrate the validity of these relationships in each individual project. (The attempt to do so is in fact not a wise allocation of resources, which should be devoted to enhancing the effectiveness of implementation.)

- In all projects, statistical information will be reported on a regular basis on commodity shipments and distribution; numbers of beneficiary schools and enrolment; numbers of beneficiaries by gender and by category. When immediate objectives make reference to attendance, an assessment will be made of the feasibility of collecting statistical information in individual cases, since national educational statistics rarely collect such information on a regular basis. Quantitative data on attendance will be included in the project M&E system only when it is judged possible to collect reasonably reliable data with minimal additional burden to school staff.

- Qualitative information, collected through the rigorous application of established methodologies such as rapid assessment techniques, is considered to constitute sufficient demonstration of project effects for evaluative purposes. Qualitative information will also be gathered through techniques such as beneficiary contact monitoring on community participation in SFPs.

- A limited number of projects may be selected for more intensive studies of effects and impact, using both quantitative and qualitative techniques of data collection. Such studies, which may also be designed to examine specific issues of interest, will be carried out by the WFP Office of Evaluation (OEDE) and/or outside experts contracted for the purpose.

WFP will provide financial support for the essential costs of putting into place M&E systems and executing small-scale beneficiary studies. Specific needs will be identified during project appraisal; an M&E budget will be prepared and reviewed by the WFP Projects Committee as part of the project summary approval process. As a general rule, costs which may be covered through the M&E budgetary allocation include: counterpart training in M&E (which may also receive complementary support through training funds); local consultancy costs for M&E design and special studies. Whenever possible, material inputs (e.g., vehicles, motorcycles) should be provided through non-food items. Computer equipment will be purchased through the M&E allocation only in exceptional cases, as basic equipment should ordinarily be covered by governments' commitment.

For more specific information on the above please consult the "Monitoring and Evaluation Manual"

## **Monetization**

WFP's general principles concerning monetization will be observed. Moreover, monetization will occur only in cases in which it is absolutely necessary for the project to be implemented effectively, i.e., in which inputs to be financed through monetization could not be procured through other sources, and in which WFP is unable to transfer directly the needed cash (thereby avoiding administratively burdensome and sometimes cost-ineffective monetization arrangements). Monetization will not be carried out to cover activities such as construction of educational infrastructure, which should be undertaken through co-financing with appropriate organizations.

## **Emergency and Refugee Situations**

Provision of food assistance through schools can in some cases be a way of addressing two overlapping aspects of WFP's mandate: support for economic and social development; and saving lives in refugee and emergency situations. Although WFP's experience to date has been relatively limited, new approaches will be tried during the late Nineties to ensure that full advantage is taken of this potentially effective way of using food aid.

Evidence suggests that SFPs may be one of the best means of providing food to vulnerable groups during drought situations or civil strife. Often, schools are among the only institutions which continue to operate; moreover, providing food to pupils ensures that at least some vulnerable groups are protected from hunger. WFP will seek opportunities to employ this mechanism whenever appropriate, carefully monitoring effectiveness and drawing lessons for future assistance.

A more cautious approach will be taken to providing school feeding to refugee groups, given the political sensitivities regarding Government policies and host populations. The same is true for internally displaced populations, although school feeding may be an alternative in cases where the reasons for displacement are primarily economic. In all such cases, any provision of WFP assistance through the education sector will be carried out in close consultation with the Government in an effort to balance social, political, and humanitarian concerns.

## **Conclusion**

The formulation process for WFP-assisted projects will be carried out according to the above principles, and will result in the preparation of a Project Summary in which specific mechanisms for implementation will be spelled out. The final quality check on Project Summaries will be aimed at ensuring internal consistency and feasibility of the project's approach. The Plan of Operations, which constitutes the formal agreement between WFP and the Government, will clearly identify the financial, technical and institutional responsibilities of each party.

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# School Feeding Handbook

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